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

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

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	Cost to Complete	Total Cost
Total Program Element (PE) Cost		0	0	79959	71887	62593	75059	52304	21576	Continuing	Continuing
S24	ARMY SIAP SYSTEMS ENGINEERING	0	0	14769	9823	9804	9798	9813	0	Continuing	Continuing
S25	ARMY SIAP OPERATIONAL INTEGRATION	0	0	2816	2888	2960	3037	2944	2942	Continuing	Continuing
S26	ARMY SIAP IMPLEMENTATION	0	0	10830	15718	26471	40661	16682	883	0	111245
S27	JOINT DISTRIBUTED ENGINEERING PLANT (JDEP)	0	0	3692	3378	3455	3437	0	0	Continuing	Continuing
S32	JOINT SIAP SYSTEM ENGINEERING	0	0	47852	40080	19903	18126	22865	17751	Continuing	166577

A. Mission Description and Budget Item Justification: This Program Element provides funding for integration of Army Theater Air and Missile Defense (TAMD) Family of systems. The Army Family of Systems comprises a broad range of systems acquired individually to support complementary missions. To provide this integrated capability, the Program Executive Office, Air and Missile Defense (PEO AMD) must ensure that operational effectiveness and acquisition efficiency are achieved. Requirements must be integrated within the Army and also address joint needs. The Joint Distributed Engineering Plan (JDEP) will provide the capability to address Joint and Service system interoperability performance in a system-of-systems environment. The funding in this project provides for Army participation in this activity. The Single Integrated Air Picture (SIAP) is the culmination of four services SIAP developmental efforts into an objective joint capability. The engineering will fuse near real time and real time data to support situational awareness, battle management and target engagements across theater air and missile defense systems. This Program Element will integrate requirements within the Army and address joint needs. This program supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

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

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

B. Program Change Summary	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2003)	0	0	0	0
Current Budget (FY 2004/2005 PB)	0	0	79959	71887
Total Adjustments	0	0	79959	71887
Congressional program reductions				
Congressional rescissions				
Congressional increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			79959	71887

FY04/FY05 funds transferred from PE 603305A and PE 603308A to support the Air and Missile Defense Systems Engineering effort.

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

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S24**

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	Cost to Complete	Total Cost
S24	ARMY SIAP SYSTEMS ENGINEERING	0	0	14769	9823	9804	9798	9813	0	Continuing	Continuing

A. Mission Description and Budget Item Justification: The establishment of a Single Integrated Air Picture (SIAP) capability is a critical enabler for many Army and Joint mission areas. Army execution of the SIAP effort requires the establishment and maintenance of an Army Air and Missile Defense (AMD) integrated engineering structure, the management and coordination of Army SIAP activities with numerous Army stakeholders and technical management of Army SIAP tasks. SIAP requires the development of Army integration engineering infrastructure to effectively support joint integration engineering activities.

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Program Management / Systems Engineering	0	0	7144	5523
Test and evaluation / Models and Simulations	0	0	4425	2584
Interoperability Assessments / Implementation Planning	0	0	3200	1716
Totals	0	0	14769	9823

B. Other Program Funding Summary: Not applicable for this item.

FY03 funding for this effort in PE 0603308A, Project 99A.

C. Acquisition Strategy: Not applicable for this item.

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S24

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Systems engineering support for the development of an integrated SIAP capability	Various	Varous	0	0		7144	1-4Q	5523	1-4Q	Continue	12667	0
Subtotal:			0	0		7144		5523		Continue	12667	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management and Implementation Planning in support of a SIAP	Various	various	0	0		3200	1-4Q	1716	1-4Q	Continue	4916	0
Subtotal:			0	0		3200		1716		Continue	4916	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S24

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Live test and modeling and simulation support for SIAP	various	various	0	0		4425	1-4Q	2584	1-4Q	Continue	7009	0
Subtotal:			0	0		4425		2584		Continue	7009	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			0	0		14769		9823		Continue	24592	0

Schedule Profile Detail (R-4a Exhibit)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S24

Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Coordinate and integrate SIAP requirements into Army and Joint systems.			1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

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

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S25**

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	Cost to Complete	Total Cost
S25	ARMY SIAP OPERATIONAL INTEGRATION	0	0	2816	2888	2960	3037	2944	2942	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project funds the coordination of Single Integrated Air Picture (SIAP) requirements with the operational community: verification that operational requirements exist to support technical specifications and any subsequent changes; integration and coordination of army operational requirements for SIAP with the user community; determination of which implementation options/roadmaps provide the maximum warfighting benefits; development of the operational view within the Theater Air and Missile Defense (TAMD) integrated architecture; identification of existing and/or required modeling and simulation capabilities to support SIAP; and integration of hardware-in-the-loop and associated assessments and analysis. These products/tasks are required to ensure a specific, focused effort that integrates SIAP with weapons, sensors, BMC3 and concepts of operations. This program also supports Aviation and Artillery attack operation systems and passive missile defense materiel solutions. This project supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Continue efforts for coordinating SIAP requirements with TRADOC Deputy Combat Developers (DCDs) to consolidate SIAP operational requirements across all four pillars, integrating SIAP requirements into current and evolving doctrine, identifying SIAP demonstrations and experiments that showcase Army interoperability, coordinating Army participation in TAMD joint interoperability exercises/demonstrations, assessing the models and simulations that support SIAP and developing the Army position on SIAP-related tools and supporting SIAP Task Force initiatives in resolving Joint Data Network (JDN) fixes. This project is funded in PE 0603305A in FY03.	0	0	2816	2888
Totals	0	0	2816	2888

B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
PE 603305A/TR4, Army Missile Defense Systems Integration	0	18695	0	0	0	0	0	0	0	18695

C. Acquisition Strategy: Not applicable for this item.

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S25

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Government support & support contracts	Various	Huntsville, AL	0	0		2816	1-4Q	2888	1-4Q	Continue	5704	0
Subtotal:			0	0		2816		2888		Continue	5704	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S25

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			0	0		2816		2888		Continue	5704	0

Schedule Profile Detail (R-4a Exhibit)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S25

Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Coordinate and integrate SIAP requirements into doctrine, demonstrations, experiments and exercises.			1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

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

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S26**

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	Cost to Complete	Total Cost
S26	ARMY SIAP IMPLEMENTATION	0	0	10830	15718	26471	40661	16682	883	0	111245

A. Mission Description and Budget Item Justification: The establishment of a Single Integrated Air Picture (SIAP) capability is a critical enabler for many Army and Joint mission areas. The SIAP Task Force, along with Service participation, is currently identifying deficiencies in the tactical data link systems. A list of fixes will be identified and addressed in incremental block designs. The funding identified in this project will be used to implement identified fixes into Army system platforms and to perform the engineering associated with implementation of these fixes.

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Perform engineering and analysis to determine impacts on systems performance of identified block 1 fixes and begin implementation of those fixes.	0	0	10830	0
Implement block 1 fixes into identified Army platforms. Begin engineering and analysis of identified block 2 fixes on system performance.	0	0	0	15718
Totals	0	0	10830	15718

B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
Army SIAP Systems Engineering (S24)	0	0	14769	9823	9804	9798	9813	0	0	54007
Army Operational Integration (S25)	0	0	2816	2888	2960	3037	2944	2942	0	17587
Joint SIAP Systems Engineering (S32)	0	0	47852	40080	19903	18126	22865	17751	0	166577

C. Acquisition Strategy: Not applicable to this item.

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S26

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Army Block Engineering and Implementation	Various	Various Army Organizations	0	0		9180	1-4Q	13318	1-4Q	0	22498	0
Subtotal:			0	0		9180		13318		0	22498	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S26

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Systems Testing of Block fixes	various		0	0		1650	1-4Q	2400	1-4Q	0	4050	0
Subtotal:			0	0		1650		2400		0	4050	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			0	0		10830		15718		0	26548	0

Schedule Profile Detail (R-4a Exhibit)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S26

Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Implement Block Changes in Army Platforms			1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

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

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S27**

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	Cost to Complete	Total Cost
S27	JOINT DISTRIBUTED ENGINEERING PLANT (JDEP)	0	0	3692	3378	3455	3437	0	0	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Joint Distributed Engineering Plant (JDEP) is a Navy proposed concept expanding their land-based Distributed Plant which assesses integration and interoperability problems (air and missile defense) of the fleet. This program will be used to evaluate interoperability of joint forces, test and evaluate interoperability of new acquisition systems, and engineering hardware and software to correct deficiencies and develop new capabilities. The initial focus of this program is directed toward integrated air defense. The program consists of individual combat systems distributed throughout the US connected with ATM/T1 telecommunication network(s) and distributed interactive simulation (DIS) protocols. The JDEP management structure consists of service execution cells. This funding provides for the Army involvement in the overall JDEP program. This effort supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
JDPE Test Event Participation	0	0	2118	1935
Communication Equipment	0	0	863	791
Operational Center Support: Support during JDEP testing and pre-event simulations.	0	0	711	652
Totals	0	0	3692	3378

B. Other Program Funding Summary: Not applicable for this item.

C. Acquisition Strategy: Not applicable for this item.

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S27

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

Remarks: FY02/FY03 costs are reflected in PE 0603305A, TR6

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Government support, contractor support and communication equipment			0	0		2276	1-4Q	1935	1-4Q	Continue	4211	0
Subtotal:			0	0		2276		1935		Continue	4211	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S27

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Government Support Costs & equipment			0	0		1416	1-4Q	1443	1-4Q	Continue	Continue	0
Subtotal:			0	0		1416		1443		Continue	Continue	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

Project Total Cost:			0	0		3692		3378		Continue	Continue	0

Schedule Profile Detail (R-4a Exhibit)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S27

Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Provide Army interface into the JDEP initiative.			1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

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

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S32**

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	Cost to Complete	Total Cost
S32	JOINT SIAP SYSTEM ENGINEERING	0	0	47852	40080	19903	18126	22865	17751	Continuing	166577

A. Mission Description and Budget Item Justification: A Single Integrated Air Picture (SIAP) is the product of fused, near-real-time data from multiple sensors to allow development of common, continuous, and unambiguous tracks of all airborne objects in the surveillance area. All airborne objects must be detected, tracked, and reported. Each object must have one and only one track identifier and associated characteristics to be incorporated into SIAP. Current systems do not provide this capability.

The SIAP Task Force (TF) is developing the tools and processes and performing the system engineering that will identify cost effective fixes to tactical data link systems. The resulting prioritized list of fixes will be addressed in incremental blocks designed to improve the SIAP. Each block will identify specific changes to be implemented in specific systems to improve the Joint Theater Air and Missile Defense Family of Systems SIAP capability. These blocks will identify the engineering specifications, supporting rationale (test results and analysis), and acquisition estimate expected to implement the changes. Once approved by the Joint Requirements Overview Council (JROC), implementation of these recommended changes are the responsiblity of the affected Service programs. Our products are the blocks themselves, and the integrated architecture that gives us the framework on which to build them.

Block 0 addressed the four joint warfighting shortfalls selected for their impact on the JDN, their applicability across the Services, and the engineering maturity reflected by interface change proposals already on-record with the Joint Interoperability for Tactical Command and Control system process. The change proposals addressed were: improved correlation/decorrelation, formation tracking/correlation, identification taxonomy and symbology, and an ID conflict resolution matrix.

Block 1 is addressing a set of Joint Data Network (JDN) deficiencies approved by United States Joint Forces Command (JFCOM) to provide warfighter benefits which can be implemented in the near- to mid-term. The issues being addressed are: further reduction of dual tracks, improved combat ID capability, improved data sharing (network capacity), and improved air picture for theater ballistic missile defense performance.

Block 2 is targeted at improving efficiency and throughput, and improving line-of-sight capability. The issues being addressed are host computer implementation consistency, distributed database consistency improvement, network latency reduction, interface with ground systems, and improving single and multi-unit missile defense performance.

The integrated architecture gives engineers a tool (with operations context and supporting engineering detail) to make smart decisions about what design functions produce the most bang for the buck in meeting Joint Battle Management Command and Control requirements. By using modern software development techniques, we can specify the performance within nodes and between nodes of a tactical network in a way that will increase

machine-to-machine precision and reduce integration costs in legacy and future combat systems.

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Block 0 - (FY04) Service implementation of Block 0 fixes in tactical weapon systems continues, monitor and assist the services in the implementation of block 0 fixes. Continue technical configuration of JROC approved solutions for Joint and NATO application. Conduct technical design reviews with affected weapon systems.	0	0	2181	0
Block 1 - (FY04) Implementation of Block 1 recommendation in Service systems begins. Monitor and assist the Services in the implementation of Block 1 fixes. Monitor technical configuration management of JROC approved solutions for Joint and NATO application. Conduct technical design review with affected weapon systems. (FY05) Implementation of Block 1 fixes in Service systems continues, monitor and assist the Services in the implementation of Block 1 fixes. Establish technical configuration management of JROC approved solutions for Joint and NATO application. Conduct technical design reviews with affected weapon systems.	0	0	4365	1812
Block 2 - (FY04) Refine planning and requirements, and begin engineering analysis for Block 2. Translate JROC validated requirements into equipment and computer programs with the Services and JFCOM. Coordinate design and solution development with the Services and Agencies. (FY05) Continue detailed engineering of Block 2 SIAP improvements. Monitor technical configuration management of JROC approved solutions for Joint and NATO application. Conduct technical design reviews with affected weapon systems.	0	0	13094	12681
Architecture - (FY04) Continue development of the SIAP Integrated Architecture. Expand engineering detail to capture additional tactical functionality and updated Joint Theater Air and Missile Defense (TAMD) requirements. Ensure that the Integrated Architecture functions as a Joint requirements engineering structure and decision making tool. Continue to update the behavior model to increase functional scope and begin aligning with other tactical data links. (FY05) Continue development of the SIAP Integrated Architecture. Expand engineering detail to capture additional tactical functionality and updated Joint TAMD requirements. Ensure that the Integrated Architecture functions as a Joint requirements engineering structure and decision making tool. Continue to update the behavior models to increase functional scope and begin aligning with other tactical data links.	0	0	17458	16304

Accomplishments/Planned Program (continued)	FY 2002	FY 2003	FY 2004	FY 2005
Systems Engineering Tools and Analysis - (FY04) Continue to evaluate the technical and warfighting benefits of the SIAP Block improvements. Update analysis tools to support modeling and simulation capabilities, hardware in the loop laboratories and data reduction of open-air live exercises. Coordinate with Joint Tactical Data Link Certification Agency for SIAP Block performance compliance with appropriate levels of approval. Collect, analyze and synchronize implementation opportunities with respect to individual Services and weapon systems. Plot predicted and fielded Joint Tactical Data Line performance capabilites and timelines. (FY05) Continue to evaluate the technical and warfighting benefits of the SIAP Block improvements. Update analysis tools to support modeling and simulation capabilities, hardware in the loop laboratories and data reduction of open-air live exercises. Coordinate with Joint Tactical Data Link Certification Agency for SIAP Block performance compliance with appropriate levels of approval. Collect, analyze and synchronize implementation opportunities.	0	0	6547	5435
Program Management - Continue to support SIAP TF infrastructure requirements such as rent, LAN (local area network), telephone, computers, VTC (video teleconferences) center rooms, office equipment, facilities management/construction.	0	0	4207	3848
Totals	0	0	47852	40080

B. Other Program Funding Summary: Not applicable for this item.

C. Acquisition Strategy: Not applicable to this project.

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S32

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Block 0	MIPR	Army - PEO AMD - Huntsville	0	0		327	1-4Q	0	1-4Q	Continue	327	0
b . Block 0	MIPR	Navy, Arlington - Virginia	0	0		327	1-4Q	0	1-4Q	Continue	327	0
c . Block 0	MIPR	Air Force ESC, Boston, MA	0	0		327	1-4Q	0	1-4Q	Continue	327	0
d . Block 0	MIPR	Marine MARCOR, Quantico, Virginia	0	0		109	1-4Q	0	1-4Q	Continue	109	0
e . Block 0	Various	Various	0	0		1091	1-4Q	0	1-4Q	Continue	1091	0
f . Block 1	MIPR	Army - PEO AMD - Huntsville	0	0		655	1-4Q	272	1-4Q	Continue	927	0
g . Block 1	MIPR	Navy, Arlington, Virigina	0	0		655	1-4Q	272	1-4Q	Continue	927	0
h . Block 1	MIPR	Air Force ESC, Boston, MA	0	0		655	1-4Q	272	1-4Q	Continue	927	0
i . Block 1	MIPR	Marine MARCOR, Quantico, Virginia	0	0		218	1-4Q	90	1-4Q	Continue	308	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S32

I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
j . Block 1	Various	Various	0	0		2182	1-4Q	906	1-4Q	Continue	3088	0
k . Block 2	MIPR	Army - PEO AMD - Huntsville, Alabama	0	0		1964	1-4Q	1902	1-4Q	Continue	3866	0
l . Block 2	MIPR	Navy, Arlington, Virginia	0	0		1964	1-4Q	1902	1-4Q	Continue	3866	0
m . Block 2	MIPR	Air Force ESC, Boston, MA	0	0		1964	1-4Q	1902	1-4Q	Continue	3866	0
n . Block 2	MIPR	Marine MARCOR, Quanitico, VA	0	0		655	1-4Q	634	1-4Q	Continue	1289	0
o . Block 2	Various	Various	0	0		6547	1-4Q	6341	1-4Q	Continue	12888	0
p . Architecture	MIPR	Army - PEO AMD, Huntsville, AL	0	0		2619	1-4Q	2446	1-4Q	Continue	5065	0
q . Architecture	MIPR	Navy, Arlington, VA	0	0		2619	1-4Q	2446	1-4Q	Continue	5065	0
r . Architecture	MIPR	Air Force ESC, Boston, MA	0	0		2619	1-4Q	2446	1-4Q	Continue	5065	0
s . Architecture	MIPR	Marine MARCOR, Quantico, VA	0	0		873	1-4Q	815	1-4Q	Continue	1688	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S32

I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
t . Architecture	Various	Various	0	0		8729	1-4Q	8152	1-4Q	Continue	16881	0
u . Block Development Engineering	MIPR	Army - PEO AMD, Huntsville, AL	0	0		982	1-4Q	815		Continue	1797	0
v . Block Development Engineering	MIPR	Navy, Arlington, VA	0	0		982	1-4Q	815		Continue	1797	0
w . Block Development Engineering	MIPR	Air Force ESC, Boston, MA	0	0		982	1-4Q	815		Continue	1797	0
x . Block Development Engineering	MIPR	Marine MARCOR, Quantico, VA	0	0		327	1-4Q	272		Continue	599	0
y . Block Development Engineering	Various	Various	0	0		3273	1-4Q	2717		Continue	5990	0
Subtotal:			0	0		43645		36232		Continue	79877	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S32

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Joint SIAP Engineering Support	Various		0	0		0	1-4Q	0	1-4Q	Continue	0	0
Subtotal:			0	0		0		0		Continue	0	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S32

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management Support	Various		0	0	1-4Q	4207	1-4Q	3848		Continue	8055	0
Subtotal:			0	0		4207		3848		Continue	8055	0
Project Total Cost:			0	0		47852		40080		Continue	87932	0

Schedule Profile Detail (R-4a Exhibit)

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S32**

Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Conduct SIAP Program			1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q