ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

COST (In Thousands)		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost		120173	109217	83063	128570	101847	72861	0	0	0	610900
E88	INTEGRATED FIRE CONTROL AIR MISSILE DEFENSE (CA)	42421	0	24961	42736	48894	50930	0	0	0	207796
S24	ARMY SIAP SYSTEMS ENGINEERING	14605	29013	10139	10171	10137	196	0	0	0	73522
S25	ARMY SIAP OPERATIONAL INTEGRATION	2709	5423	2921	3058	2968	2964	0	0	0	19977
S26	ARMY SIAP IMPLEMENTATION	10709	14903	26115	40938	16815	889	0	0	0	109827
S27	JOINT DISTRIBUTED ENGINEERING PLANT (JDEP)	3652	3165	3407	3460	0	0	0	0	0	13499
S32	JOINT SIAP SYSTEM ENGINEERING	46077	35814	15520	28207	23033	17882	0	0	0	165380
S34	AMD SYSTEM OF SYSTEMS ENGINEERING AND INTEGRATION	0	20899	0	0	0	0	0	0	0	20899

A. Mission Description and Budget Item Justification: This Program Element provides funding for integration of Army Air and Missile System of Systems (SoS). The Army SoS comprises a broad range of systems acquired individually to support complementary missions. To provide this integrated capability, the PEO Missiles and Space 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. The Cruise Missile Defense (CMD) initiative was approved by the Vice Chief of Staff of the Army in 2003. This program will accelerate the fielding and development of systems to counter the threat of Land Attack Cruise Missiles. The Integrated Fire Control (IFC) effort will provide for the engineering and development of the battle management algorithms necessary to support Integrated Fire Control. IFC will provide the integrated capability necessary to counter emerging cruise missile threat, through the integration of ground based weapons with elevated sensors and the management of sensor, weapon and network resources. This program element will integrate requirements within the Army and address joint needs.

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2005)	91713	87400	116572
Current Budget (FY 2006/2007 PB)	109217	83063	128570
Total Adjustments	17504	-4337	11998
Net of Program/Database Changes			
Congressional Program Reductions	-3959		
Congressional Rescissions			
Congressional Increases	24600		
Reprogrammings			
SBIR/STTR Transfer	-3137		
Adjustments to Budget Years		-4337	11998

FY05 Increase to PEO Missiles and Space in project S34 to support E-strike, Future Army Attack and Missile Defense System (FAAMDS), ASMD Architecture Analysis Program (A3P), Geospatial Information Decision Support (GIDS), and Suingle Integrated Space Picture (SISP).
FY06 Funds realigned to higher priority requirements.
FY07 Adjustment increase in the Joint SIAP Systems Engineering, Project S32.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332□A - Air and Missile Defense Systems Engineering**	**E□□**

COST (In Thousands)		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
E88	INTEGRATED FIRE CONTROL AIR MISSILE DEFENSE (CA)	42421	0	24961	42736	48894	50930	0	0	0	207796

A. Mission Description and Budget Item Justification: Cruise Missile Defense/Integrated Fire Control - This project will provide for development of the Integrated Fire Control (IFC) capability that is essential to defeat the emerging cruise missile threat. The IFC capability is a critical enabler for the transformation of the Army's current air and missile defense systems to a component-based, System of Systems (SoS) Architecture. IFC will provide network centric air and missile defense protection of high value assets, operational flexibility through wide area battle coordination and counters stressing threats at extended ranges IFC enables fire control quality track and/or measurement data from any sensor to be used to execute an engagement with the most effective/efficient available weapon system. IFC provides the network and functionality necessary to fully exploit the capabilities provided by advanced elevated sensors. This project defines the integrated air and missile defense SoS architecture for IFC, develops requirements and interface specifications, develops specific IFC capabilities, and performs integration and testing of the IFC architecture. The IFC capabilities that this project will develop are an essential component of the development of an effective cruise missile defense capability. This project will be coordinated with similar IFC projects/programs within the other services and the Missile Defense Agency to evolve toward a Joint IFC capability.
(FY05 Funding for this project in PE 0603327, project S24).

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
Cruise Missile Defense – Integrated Fire Control	1720	0	24961	42736
Science and Technology Analysis and Integration Project	2880	0	0	0
Army Space Architectural Analysis	4880	0	0	0
Army Allen Airfield Upgrades	32941	0	0	0
Totals	42421	0	24961	42736

B. Other Program Funding Summary	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
PE 0603869A, MEADS	236823	251414	0	0	0	0	0	0	0	488237
PE 0203801A, PATRIOT Product Improvement	45587	32082	16188	10884	10607	10884	11119	12029	15520	164900
SSN C50001, Patriot/MEADS CAP	0	0	288875	326352	454511	510672	510389	490411	0	2581210
PE 0604869A, PAC-3	151318	61482	0	0	0	0	0	0	0	212800
PE 0102419A, JLENS	57803	79316	106420	256893	471997	332428	0	0	0	1304857
SSN BZ0525, JLENS Production	0	0	0	0	0	29153	549707	397776	0	976636
PE 0604802A, SLAMRAAM	36103	63111	36102	29200	0	0	0	0	0	164516
SSN C81004, SLAMRAAM Production	7397	2440	19315	21970	59273	13124	0	0	0	123519
PE 0604820A, SENTINEL	0	5851	5080	2547	2647	0	0	0	0	16125
SSN WK5053, SENTINEL Production	20646	7337	8393	15373	25074	31572	34473	32552	0	175420

This PE project is an integral part of the Air, Space and Missile Systems of Systems (SoS) including Integrated Fire Control, JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, JTAGS, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

C. Acquisition Strategy: Not applicable for this item.

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332□A - Air and Missile Defense Systems Engineering

PROJECT
E□□

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . CMD Integrated Fire Control Development	MIPR, 1095, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	0		17466	1-4Q	18900	1-4Q	0	36366	0
b . Integrated Product and Development Spt	MIPR, 1095, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	0		1404		3000		0	4404	0
Subtotal:			0	0		18870		21900		0	40770	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Cruise Missile Defense – Integrated Fire Control	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	1780	0		1100	1-4Q	1200	1-4Q	0	4080	0
b . Science and Technology Analysis and Integration Project	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	2980	0		0		0		0	2980	0

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332□A - Air and Missile Defense Systems Engineering

PROJECT
E□□

II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
c . Army Space Architectural Analysis	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	4950	0		0		0		0	4950	0
d . Army Allen Airfield Upgrades	MIPRs, 1095s, CPFF		32711	0		0		0		0	32711	0
Subtotal:			42421	0		1100		1200		0	44721	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Testing of IFC capability	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	0		4991	1-4Q	19636	1-4Q	0	24627	0
Subtotal:			0	0		4991		19636		0	24627	0

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332□A - Air and Missile Defense Systems Engineering

PROJECT
E□□

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			42421	0		24961		42736		0	110118	0

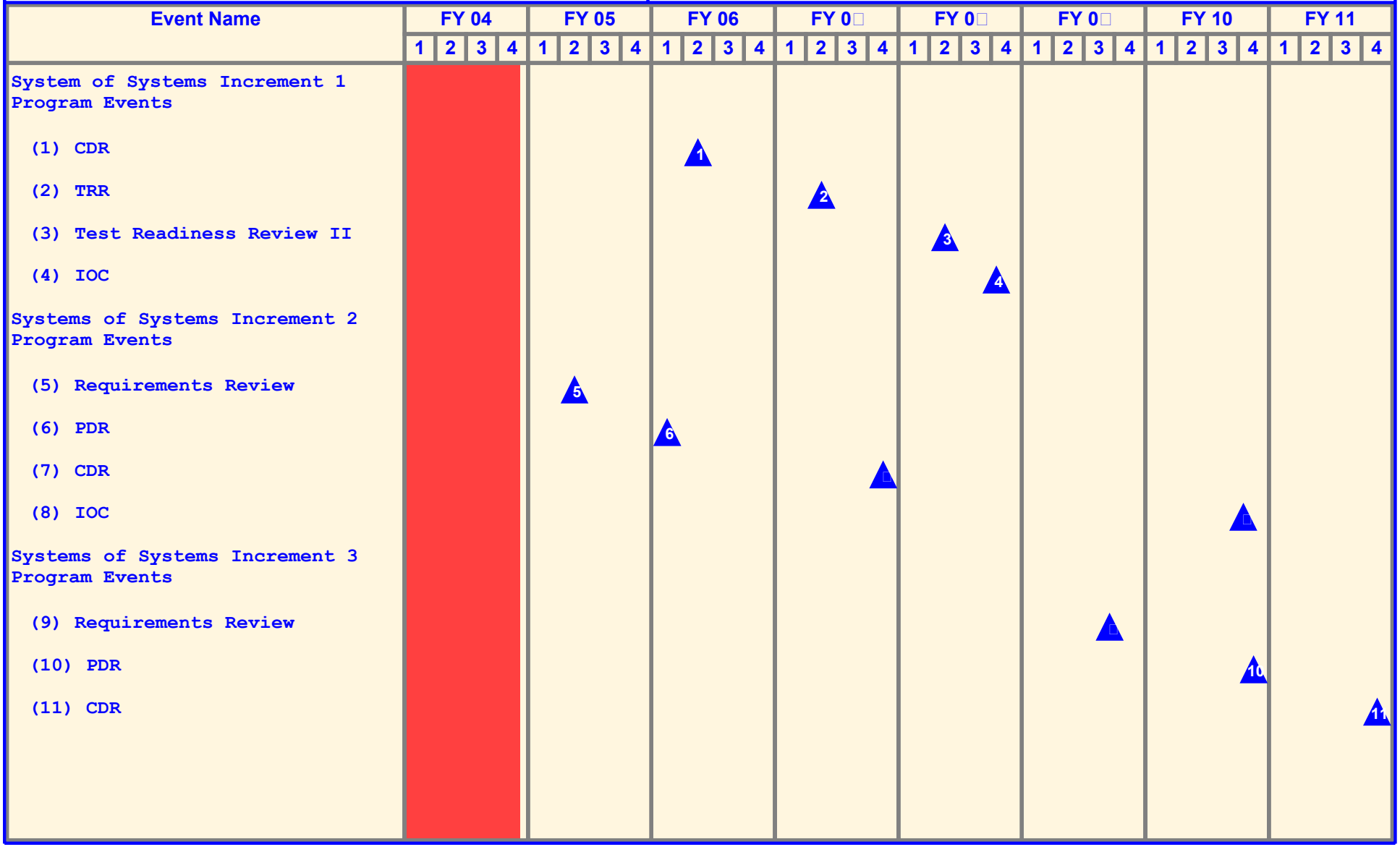
Schedule Profile (R4 Exhibit)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332□A - Air and Missile Defense Systems Engineering

PROJECT
E□□



Schedule Detail (R4a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**E**

Schedule Detail	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
System of Systems Increment 1 Program Events								
Critical Design Review			2Q					
Test Readiness Review I				2Q				
Test Readiness Review II					2Q			
SoS Increment 1 IOC					4Q			
System of Systems Increment 2 Program Events								
Requirements Review		2Q						
Preliminary Design Review			1Q					
Critical Design Review				4Q				
System of System Increment 3 Program Events								
Requirements Review					3Q			
Preliminary Design Review							1Q	
Critical Design Review								4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**S24**

COST (In Thousands)		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S24	ARMY SIAP SYSTEMS ENGINEERING	14605	29013	10139	10171	10137	196	0	0	0	73522

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 a PEO Missiles and Space 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. Army Systems Engineering effort has three main elements: 1) ensure persistent critical interoperability deficiencies are identified and fixed; 2) support the development and evaluation of the Joint SIAP System Engineering Organization's (JSSEO) SIAP Integrated Architecture Behavior Model; and 3) provide management, staffing and infrastructure for the JSSEO and Army SIAP programs.

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
Program Management / Systems Engineering	4812	2725	2500	2200
Identify and Fix Critical Interoperability Deficiencies (SIAP)	2212	1362	1549	1350
Development and Evaluation of SIAP Integrated Architecture Behavior Model (SIAP)	7581	4926	6090	6621
Integrated Fire Control for CMD	0	20000	0	0
Totals	14605	29013	10139	10171

B. Other Program Funding Summary	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
PE 643327, Project S25, SIAP Operational Integration	2643	5423	2921	3058	2968	2964	0	0	0	19977
PE 643327, Project S26, SIAP Implementation	10167	14903	26115	40938	16815	889	0	0	0	109827
PE 643327, Project S32, Joint SIAP Systems Engineering	44924	35814	15520	28207	23033	17882	0	0	0	165380
PE 643327, Project E88, Integrated Fire Control Air Missile Defense	40275	0	24961	42736	48894	50930	0	0	0	207796

This PE project is an integral part of the Army Air and Missile System of System of Systems (SoS) including Integrated Fire Control, JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, JTAGS, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

C. Acquisition Strategy: Not applicable for this item.

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S24

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Systems Engineering support for the development and evaluation of the SIAP IABM	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	7771	3000	1-4Q	4223	1-4Q	3949	1-4Q	Continue	18943	0
b . Identification and development of fixes for critical interoperability deficiencies	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	2169	1250	1-4Q	1362	1-4Q	1724	1-4Q	Continue	6505	0
c . Begin development of Integrated Fire Control Capability in support of Cruise Missile Defense	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	20000	1-4Q	0		0		Continue	20000	0
Subtotal:			9940	24250		5585		5673		Continue	45448	0

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S24

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management, Army JSSEO Staff and Modeling and Simulation	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	4665	3085	1-4Q	1525	1-4Q	1500	1-4Q	Continue	10775	0
Subtotal:			4665	3085		1525		1500		Continue	10775	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Development of Testbed and actual testing of IABM timebox drops	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	1678		3029	1-4Q	2998	1-4Q	0	7705	0
Subtotal:			0	1678		3029		2998		0	7705	0

Remarks: IABM - Integrated Architecture Behavior Model

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S24

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			14605	29013		10139		10171		Continue	63928	0

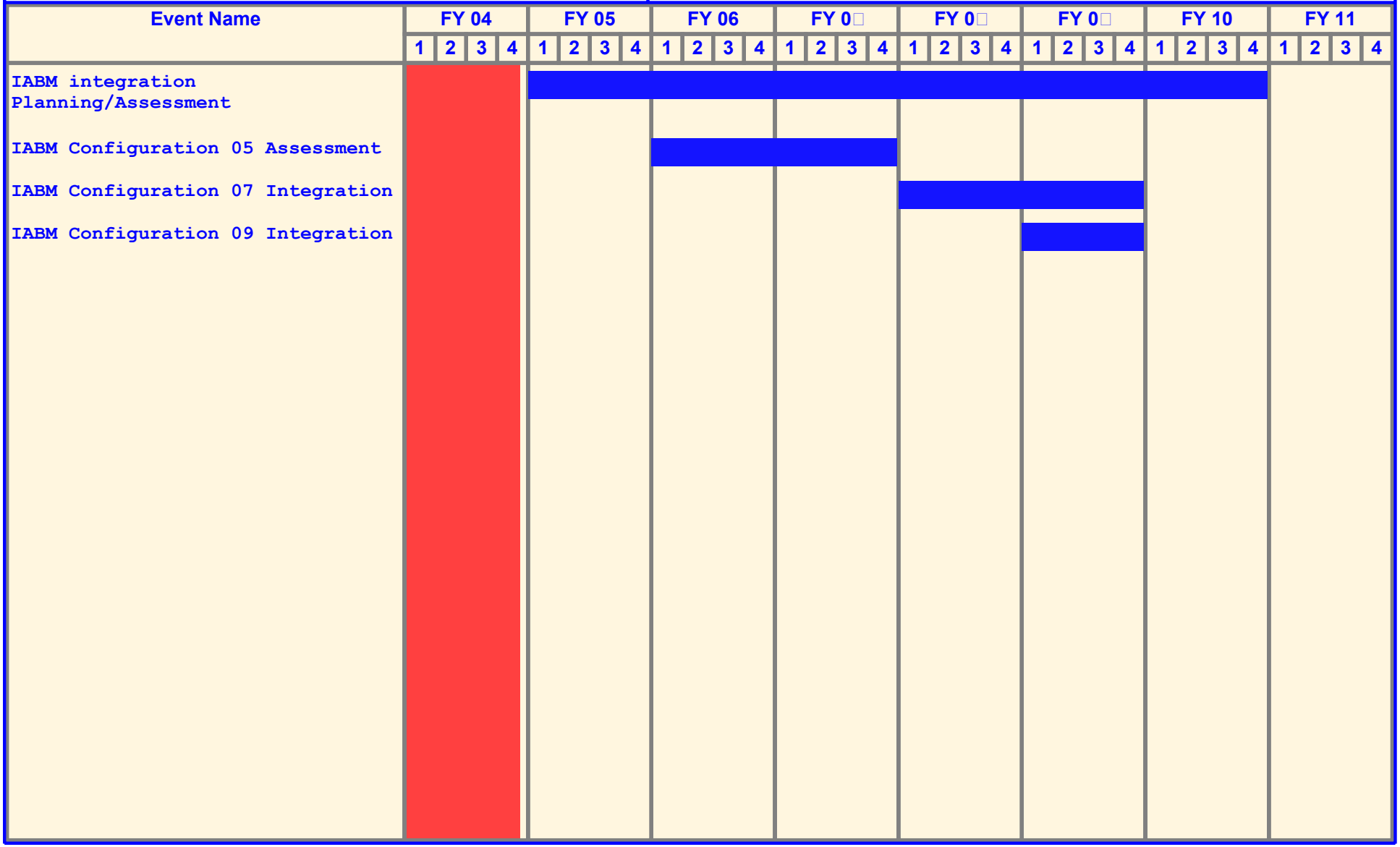
Schedule Profile (R4 Exhibit)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332□A - Air and Missile Defense Systems Engineering

PROJECT
S24



Schedule Detail (R4a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**S24**

Schedule Detail	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
IABM Integration Planning/Assessment	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		
IABM Configuration 05 Assessment			1-4Q	1-4Q				
IABM Configuration 07 Integration					1-4Q	1-4Q		
IABM Configuration 09 Integration						1-4Q	1-4Q	1-4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**S25**

COST (In Thousands)		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S25	ARMY SIAP OPERATIONAL INTEGRATION	2709	5423	2921	3058	2968	2964	0	0	0	19977

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 contains a congressional add in FY05 for Air and Missile Defense System of Systems Hardware in the Loop. The add was named Hybrid Electric Technology Demonstrator in the congressional language.

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
Continue efforts for coordinating SIAP requirements with TRADOC Directorates of Combat Developments (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 Joint SIAP Systems Engineering Organization initiatives in resolving Joint Data Network (JDN) fixes. Continue working Blue Force Laydowns for Common Reference Scenarios for analysis.	2709	2739	2921	3058
Hybrid Electric Technology Demonstrator (AMD SOS HWIL)	0	2684	0	0
Totals	2709	5423	2921	3058

B. Other Program Funding Summary	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
PE 643327, Project S24, Army SIAP Systems Engineering	14605	30285	10165	9996	9951	192	0	0	0	75194
PE 643327, Project S26, Army SIAP Implementation	10709	15557	26181	40233	16508	873	0	0	0	110061
PE 643327, Project S32, Joint SIAP Systems Engineering	47318	39668	19686	17936	22626	17556	0	0	0	164790

C. Acquisition Strategy: Not applicable for this item.

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S25

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Hybrid Electric Technology Demonstrator (AMD SOS HWIL)	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	2684		0		0		0	2684	0
Subtotal:			0	2684		0		0		0	2684	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Government support & support contracts	MIPRs, 1095s, CPFF	OGAs, Inhouse, Contact spt.	2709	2739	1-4Q	2921	1-4Q	3058	1-4Q	Continue	11427	0
Subtotal:			2709	2739		2921		3058		Continue	11427	0

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S25

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 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 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			2709	5423		2921		3058		Continue	14111	0

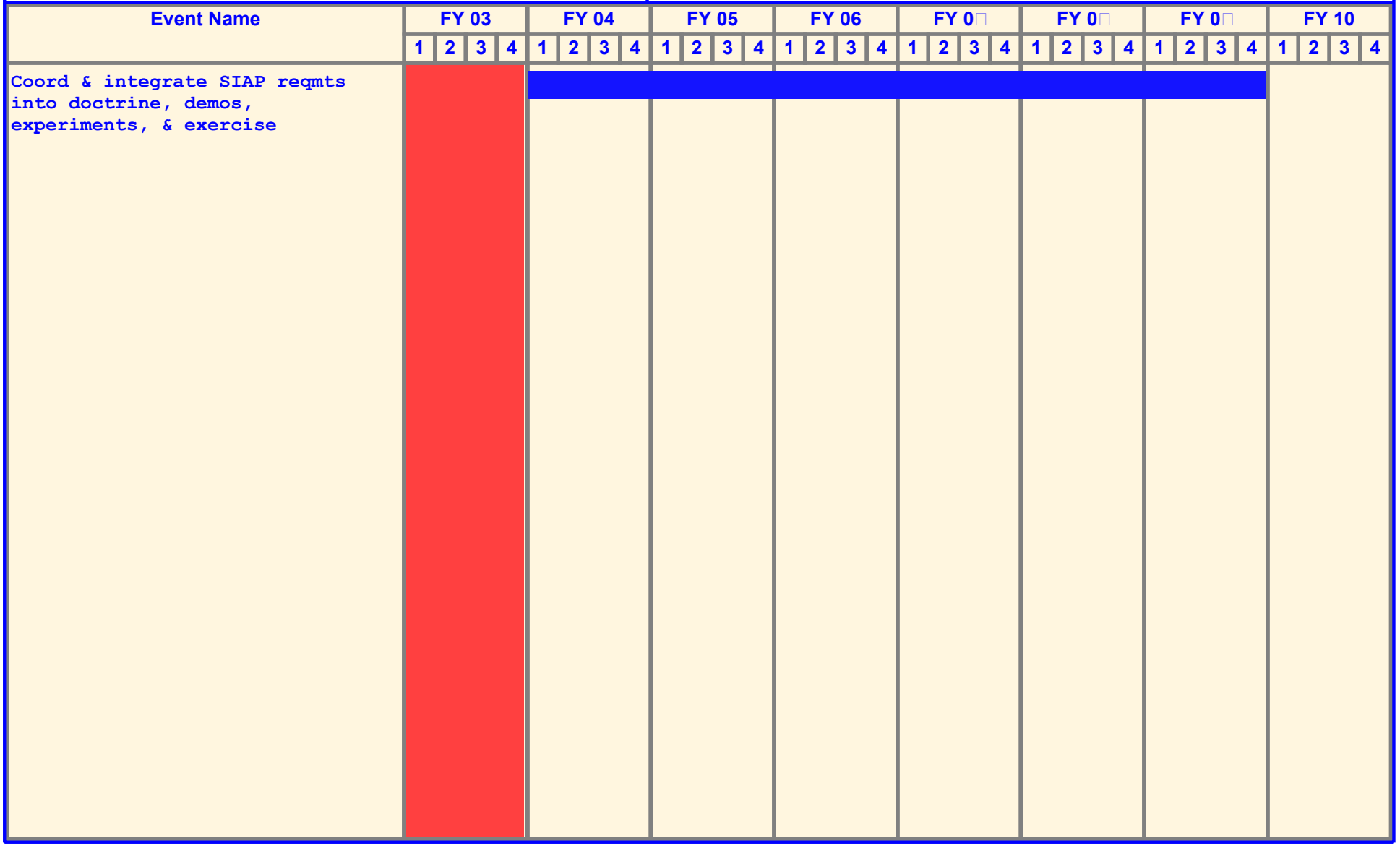
Schedule Profile (R4 Exhibit)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332□A - Air and Missile Defense Systems Engineering

PROJECT
S25



Schedule Detail (R4a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**S25**

Schedule Detail	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
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 (R2a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**S26**

COST (In Thousands)		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S26	ARMY SIAP IMPLEMENTATION	10709	14903	26115	40938	16815	889	0	0	0	109827

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 Joint SIAP System Engineering Organization (JSSEO) has adopted a business model focused on the development of an Integrated Architecture Behavior Model (IABM) as the solution for fixing interoperability deficiencies and delivering future SIAP capabilities. The IABM is being jointly developed by the JSSEO and the Services, with the first delivery scheduled for FY05. Initial deliveries will be implemented in selected Army systems to evaluate the emerging IABM. Additionally, until the high risk in the IABM approach has been adequately mitigated, the identification and implementation of near-term fixes to critical interoperability deficiencies (such as those observed during Operation Iraqi Freedom) will continue to be maintained as a risk mitigation program.

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
Perform engineering and analysis to identify and prioritize critical interoperability deficiencies, design and develop engineering fixes for high priority deficiencies, and begin implementation of those fixes.	4654	6962	2618	31915
Support the development, evaluation and implementation of the JSSEO IABM. Prepare selected Army system for implementation of IABM Configuration 05.	5755	7941	23497	9023
Totals	10409	14903	26115	40938

B. Other Program Funding Summary	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
Army SIAP Systems Engineering (S24)	13866	29013	10139	10171	10137	196	0	0	0	73522
Army Operational Integration (S25)	2643	5423	2921	3058	2968	2964	0	0	0	19977
Joint SIAP Systems Engineering (S32)	44924	35814	15520	28207	23033	17882	0	0	0	165380

This PE project is an integral part of the Army Air and Missile System of Systems (SoS) including Integrated Fire Control, JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, JTAGS, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

C. Acquisition Strategy: Not applicable to this item.

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S26

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Army Critical Interoperability Deficiencies Engineering and Implementation	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	5508	5462	1-4Q	7345		7555		0	25870	0
b . SIAP IABM Engineering and Implementation	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	5201	7941	4Q	16152		23325		0	52619	0
Subtotal:			10709	13403		23497		30880		0	78489	0

Remarks: Implementation of IABM Configuration occurs in FY07

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management Support	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	1500	1-4Q	2618	1-4Q	4023		0	8141	0
Subtotal:			0	1500		2618		4023		0	8141	0

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S26

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Testing of Implementation of IABM into systems	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	0		0		6035	1-4Q	0	6035	0
Subtotal:			0	0		0		6035		0	6035	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			10709	14903		26115		40938		0	92665	0

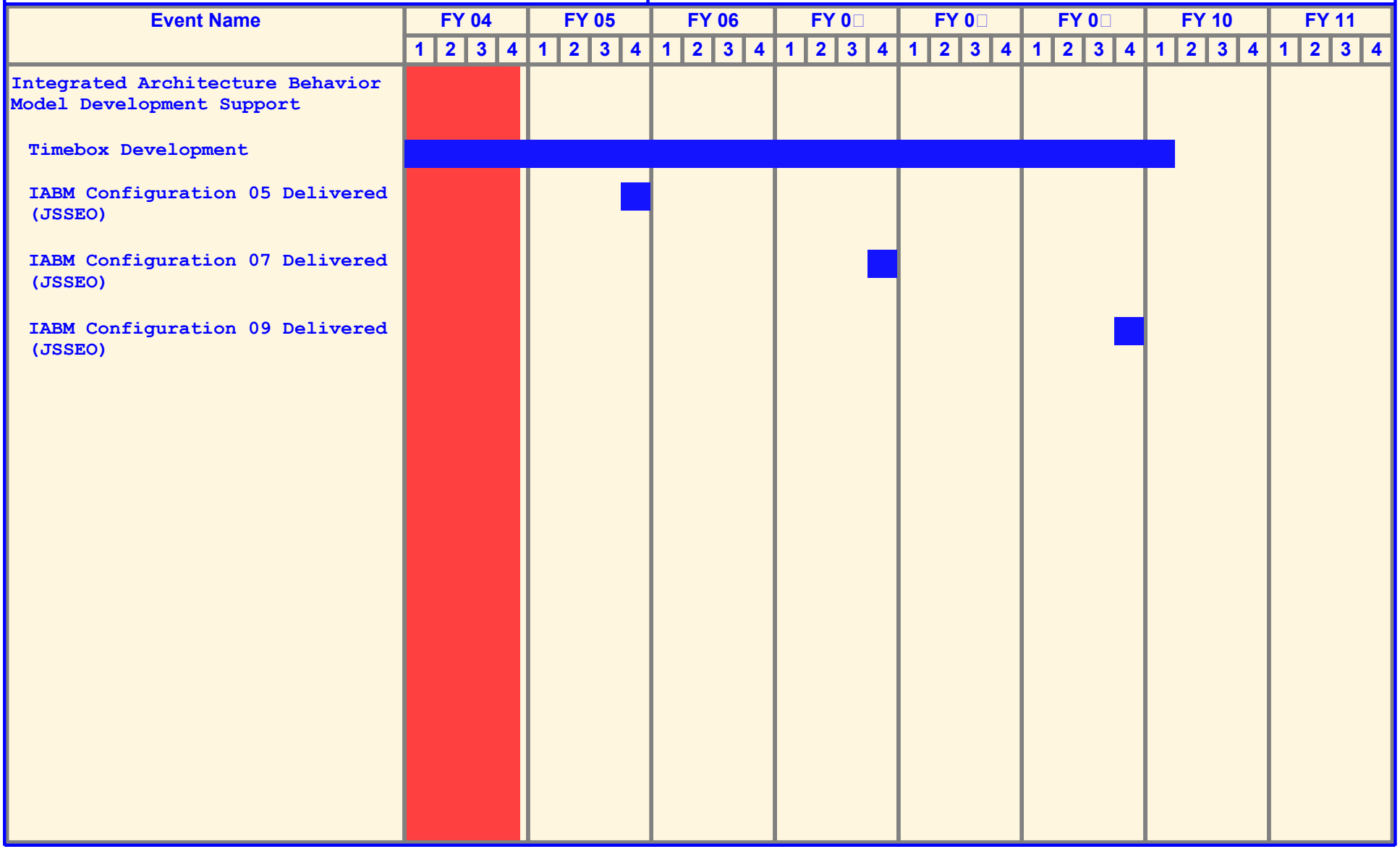
Schedule Profile (R4 Exhibit)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332□A - Air and Missile Defense Systems Engineering

PROJECT
S26



Schedule Detail (R4a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**S26**

Schedule Detail	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Integrate Architecture Behavior Model Development Support								
Timebox Development	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
IABM Configuration 05 Delivered (JSSEO)		4Q						
IABM Configuration 07 Delivered (JSSEO)				4Q	1-4Q			
IABM Configuration 09 Delivered (JSSEO)						1-4Q	1-4Q	1-4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**S2**

	COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S27	JOINT DISTRIBUTED ENGINEERING PLANT (JDEP)	3652	3165	3407	3460	0	0	0	0	0	13499

A. Mission Description and Budget Item Justification: The Joint Distributed Engineering Plant (JDEP) is a Navy concept expanding their land-based Distributed Engineering Plant (DEP) 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 and missile defense. The program consists of individual combat systems distributed throughout the US connected with ATM telecommunication network(s) and High Level Architecture (HLA) protocols. The JDEP management structure consists of service execution cells. This funding provides for the Army involvement in the overall JDEP program.

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
JDEP Test Event Participation	1004	1370	1500	1500
Communication Equipment	623	696	700	700
Operational Center Support: Support during JDEP testing and pre-event simulations.	2025	1099	1207	1260
Totals	3652	3165	3407	3460

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

This PE project is an integral part of the Army Air and Missile System of Systems (SoS) including Integrated Fire Control, JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, JTAGS, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

C. Acquisition Strategy: Not applicable for this item.

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S2

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Development of Simulation/Stimulation for JDEP	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	1537	1000	1-4Q	816	1-4Q	816	1-4Q	0	4169	0
Subtotal:			1537	1000		816		816		0	4169	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Digital/integrated system network and equipment	MIPRs, 1095s, CPFF	OGAs, Inhouse, contract spt.	685	696	1-4Q	700	1-4Q	700	1-4Q	Continue	2781	0
Subtotal:			685	696		700		700		Continue	2781	0

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S2

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . JDEP Test Event Support	MIPRs, 1095s, CPFF	OGAs, Inhouse, contract spt.	1150	1169	1-4Q	1491	1-4Q	1559	1-4Q	Continue	5369	0
Subtotal:			1150	1169		1491		1559		Continue	5369	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Army management of JDEP activity	MIPRs, 1095s, CPFF	OGAs, Inhouse, contract spt.	280	300	2-4Q	400		385		0	1365	0
Subtotal:			280	300		400		385		0	1365	0

Project Total Cost:			3652	3165		3407		3460		Continue	13684	0

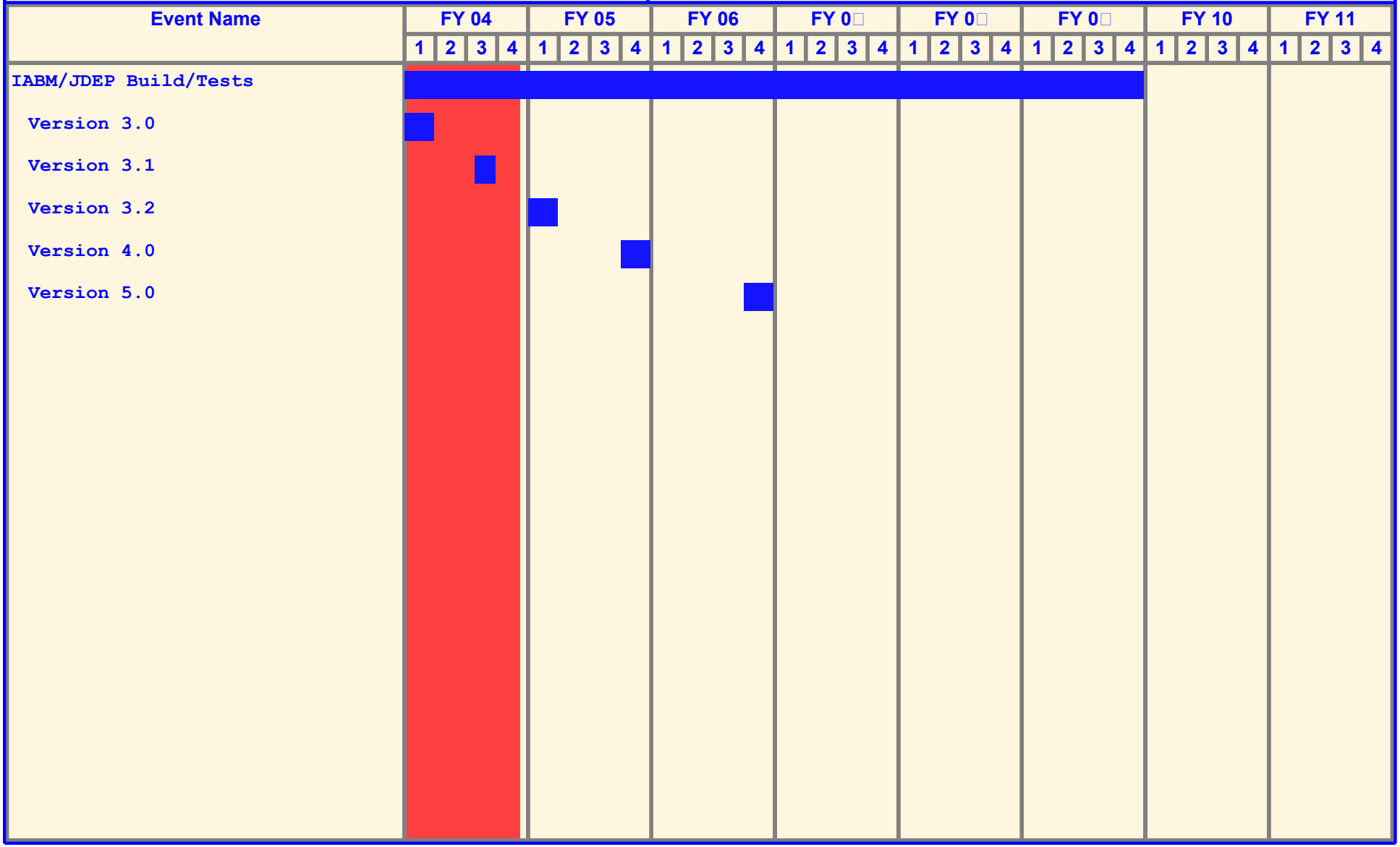
Schedule Profile (R4 Exhibit)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S2



Schedule Detail (R4a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**S2**

Schedule Detail	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
IABM/JDEP Build/Tests	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		
Version 3.0	1Q							
Version 3.1	3Q							
Version 3.2		1Q						
Version 4.0		4Q						
Version 5.0			4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**S32**

COST (In Thousands)		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S32	JOINT SIAP SYSTEM ENGINEERING	46077	35814	15520	28207	23033	17882	0	0	0	165380

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 Joint SIAP System Engineering Organization (JSSEO) is developing the tools and processes and performing the system engineering designed to net Joint US and coalition warfighting systems and tactical data link systems for the theater air and missile defense warfighting mission. The JSSEO focuses on specific problem areas through engineering blocks and translates these solutions into an integrated, executable architecture (Integrated Architecture Behavioral Model (IABM)) that describes the expected performance between Joint and coalition netted sensors for meeting the Joint Staff's Net-Ready Key Performance Parameters. These engineering blocks will identify the engineering specifications, supporting rationale (test results and analysis), and acquisition estimate expected to implement the changes. As the Services implement the desired architectures in their combat systems, they will conform and build the Joint Theater Air and Missile Defense Family of Systems SIAP capability. The JSSEO products are the block engineering and the integrated architectures that provide the framework for Service implementation.

Block 0 addressed the four joint warfighting shortfalls selected for their impact on the Joint Data Net (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/de-correlation, identification taxonomy and symbology, ID conflict resolution matrix, and strength reporting (still awaiting final approval).

Block 1 focused on building the technical foundations for geodetic/time synchronization that addressed a set of United States Joint Forces Command and JROC endorsed deficiencies that could be implemented in the near- to mid-term. The Block 1 capabilities 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 beyond line-of-sight capability. The capabilities 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 is captured in an Integrated Architecture Behavior Model (IABM) to give engineers a tool (with operations context and supporting engineering detail) to make decisions about what design functions produce the most cost effective solution 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 current and future combat systems.

Starting in FY04, Joint SIAP funding was transitioned from a Navy Program Element to an Army Program Element.

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
Block 1 - (FY04) Service implementation planning and risk reduction of Block 1 recommendations began. JSSEO monitored and assisted the Services with test infrastructure development and acquisition planning, monitored technical configuration management and conducted technical design reviews with affected weapon systems. (FY05-07) Implementation in Service systems continues, monitor and assist the Services in the implementation of Block 1 solutions. Establish technical configuration management, conduct technical design reviews with affected weapon systems and assist with risk reduction and demonstration planning for Block 1 math and analysis designed into the Integrated Architecture Behavior Model (IABM).	3574	100	300	900
Block 2 - (FY04) Refined planning and requirements, and began engineering analysis for Block 2. Translated JROC validated requirements into system-level objectives for quality of service and information assurance capabilities to support Joint sensor netting. Coordinated design and solution development with the Services and Agencies and introduced industrial integrators to Joint technical approach. (FY05-07) Secured JFCOM endorsement for Block 2 objectives that continues to focus engineering of SIAP Block 2 improvements. Monitor technical configuration management; conduct technical design reviews with affected weapon systems support Block 2 host implementation and database consistency objectives with the Integrated Architecture Behavior Model (IABM). Other products include engineering analysis focused on network latency reduction, ground system interfaces, and Missile Defense performance enhancements	10796	4255	2250	8487
Architecture - (FY04) Delivered version 2.1 of the SIAP Integrated Architecture. Expanded engineering detail to capture additional tactical functionality and updated Joint TAMD requirements. Provided integrated architecture artifacts to Joint Staff and OSD roadmaps and other decision-making tools. Continued to update the IABM with increased functional scope and began to align with other tactical data functions. (FY05-07) Deliver SIAP Integrated Architecture versions 3.0 and 4.0, and deliver IABM configurations 05 and 07. Expand engineering detail to capture additional tactical functionality and updated Joint TAMD requirements. Continue to assist Services with integration tasks, resolve technical discrepancies and update the behavior model to align scope with other warfighting domains and provide minor track management and combat identification performance enhancements. Configuration 05 of the IABM will deliver in Sep 2005; Configuration 07 will deliver in Sep 2007 to establish a 2-yr cadence for DoD integrators	17496	20301	6239	10984

Accomplishments/Planned Program (continued)	FY 2004	FY 2005	FY 2006	FY 2007
Systems Engineering Tools and Analysis - (FY04) Continued to evaluate the technical and warfighting benefits of SIAP engineering. Updated analysis tools to support modeling and simulation capabilities, hardware in the loop laboratories and data reduction of open-air live exercises. Coordinated with Joint Tactical Data Link Certification Agency for SIAP Block architecture conformance certification. Analyzed and synchronized implementation opportunities with respect to individual Services and weapon systems. Plotted predicted and fielded Joint Tactical Data Line performance capabilities and timelines. (FY05-07) Continue to evaluate the technical and warfighting benefits of the SIAP improvements. Update analysis tools to support modeling and simulation capabilities, hardware in the loop laboratories, and planning/data reduction of open-air live exercises (i.e., graduation exercises for assessing Block improvements). Coordinate with Joint Interoperability Test Command (JITC) for verification and validation of the Integrated Architecture Behavior Model (IABM). Analyze and synchronize implementation opportunities. Products include updates to technical reports on Common Reference Scenarios (CRS), SIAP Attributes, SIAP Measures of Performance (MOPs), and Block improvements.	8167	7254	1855	3500
Block 0 = (FY06) Analyze installed performance of Block 0 fixes in systems in Joint Exercises	2201	0	1457	0
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.	3843	3904	3419	4336
Totals	46077	35814	15520	28207

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

C. Acquisition Strategy: Not applicable to this project.

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332□A - Air and Missile Defense Systems Engineering

PROJECT
S32

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Block 1	MIPR	NAVSEA-JHU-APL. Laurel, MD	800	0	1-4Q	0	1-4Q	0	1-4Q	Continue	800	0
b . Block 1	MIPR	GSA-Sparta, Centerville, VA	222	0	1-4Q	0	1-4Q	0	1-4Q	Continue	222	0
c . Block 1	MIPR	Various	2552	100	1-4Q	300	1-4Q	900	1-4Q	Continue	3852	0
d . Block 2	MIPR	NAVSEA - JHU/APL Laurel, MD	2000	800	1-4Q	577	1-4Q	1098	1-4Q	Continue	4475	0
e . Block 2	MIPR	GSA-BAH, McLean VA	0	375	1-4Q	384	1-4Q	504	1-4Q	Continue	1263	0
f . Block 2	MIPR	GSA - Northrop Grumman, McLean, VA	463	50	1-4Q	0	1-4Q	71	1-4Q	Continue	584	0
g . Block 2	MIPR	GSA - SPARTA, Centreville, VA	595	754	1-4Q	884	1-4Q	972	1-4Q	Continue	3205	0
h . Block 2	Various	Various	7738	2276	1-4Q	405	1-4Q	5841	1-4Q	Continue	16260	0
i . Architecture	MIPR	NAVSEA - JHU/APL, Laurel, MD	750	6066	1-4Q	2735	1-4Q	5371	1-4Q	Continue	14922	0
j . Architecture	MIPR	GSA - BAH, McLean, VA	1692	2882	1-4Q	1129	1-4Q	2218	1-4Q	Continue	7921	0

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S32

I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
k . Architecture	MIPR	GSA, Northrup Grumman	1944	681	1-4Q	305	1-4Q	600	1-4Q	Continue	3530	0
l . Architecture	MIPR	GSA, Sparta, McLean, VA	1088	800	1-4Q	213	1-4Q	418	1-4Q	Continue	2519	0
m . Architecture	Various	Various	12022	9881	1-4Q	1857	1-4Q	2377	1-4Q	Continue	26137	0
n . Block Development Engineering	MIPR	NAVSEA - JHU/APL, Laurel, MD	625	170		63	1-4Q	129	1-4Q	Continue	987	0
o . Block Development Engineering	MIPR	GSA- BAH, McLean, VA	0	0		0	1-4Q	146	1-4Q	Continue	146	0
p . Block Development Engineering	MIPR	GSA, Northrop Grumman, McLean, VA	741	2008		770	2-3Q	1681	1-4Q	Continue	5200	0
q . Block Development Engineering	MIPR	GSA - Sparta, Centreville, VA	0	338		117	1-4Q	273	1-4Q	Continue	728	0
r . Block Development Engineering			9002	4729	1-4Q	2362		1272		0	17365	0
Subtotal:			42234	31910		12101		23871		Continue	110116	0

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S32

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 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 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management Support	Various		3843	3904		3419		4336		Continue	15502	0
Subtotal:			3843	3904		3419		4336		Continue	15502	0
Project Total Cost:			46077	35814		15520		28207		Continue	125618	0

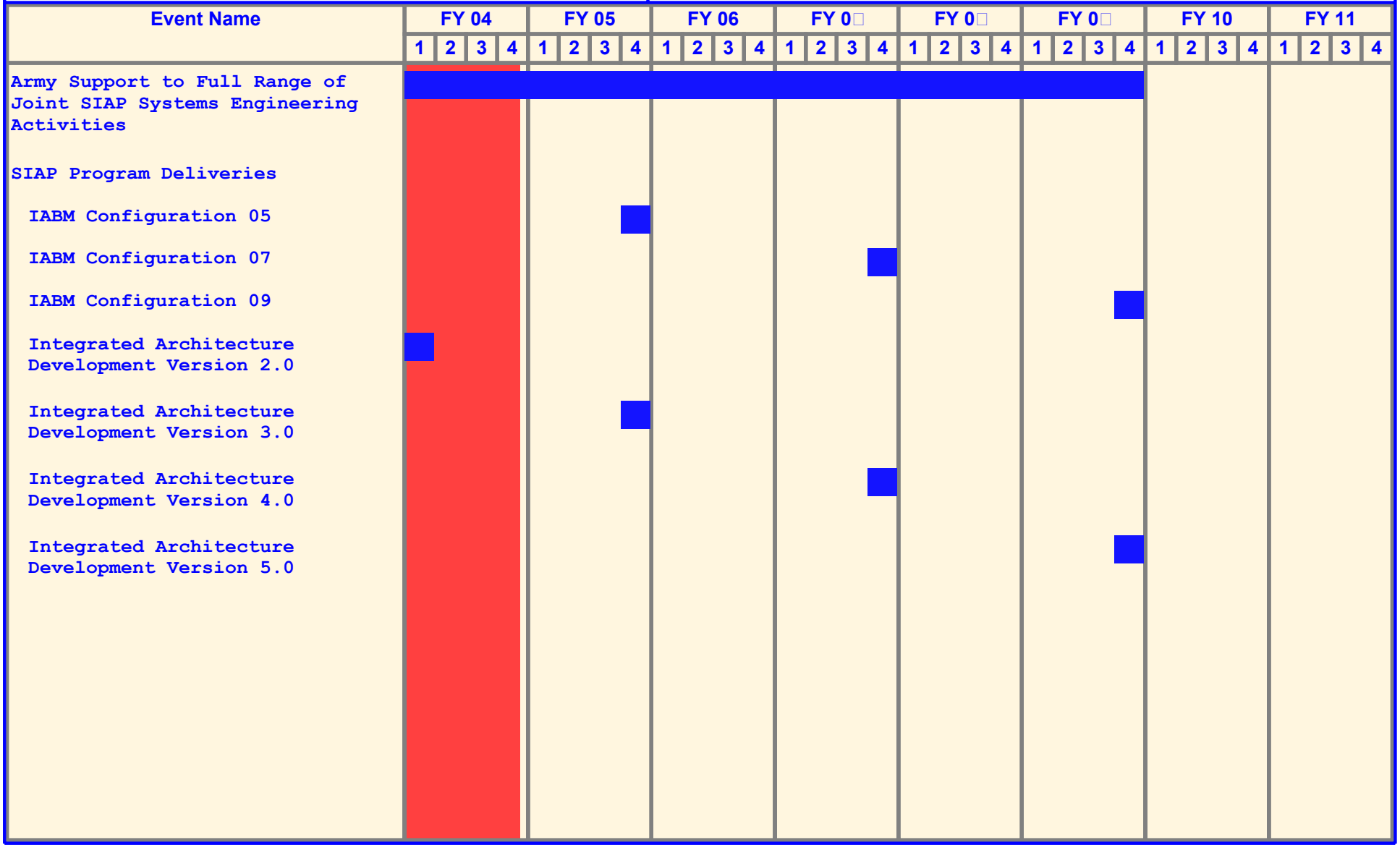
Schedule Profile (R4 Exhibit)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332□A - Air and Missile Defense Systems Engineering

PROJECT
S32



Schedule Detail (R4a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**S32**

Schedule Detail	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Army Support to Full Range of Joint SIAP Systems Engineering Activities	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		
SIAP Program Deliveries								
IABM Configuration 05		4Q						
IABM Configuration 07				4Q				
IABM Configuration 09						4Q		
Integrated Architecture Development Version 2.0	1Q							
Integrated Architecture Development Version 3.0		4Q						
Integrated Architecture Development Version 4.0				4Q				
Integrated Architecture Development Version 5.0						4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2005

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**060332A - Air and Missile Defense Systems Engineering**	**S34**

COST (In Thousands)		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S34	AMD SYSTEM OF SYSTEMS ENGINEERING AND INTEGRATION	0	20899	0	0	0	0	0	0	0	20899

A. Mission Description and Budget Item Justification: Funding in the project provides components to produce an integrated capability or AMD System of Systems (SoS). To provide this integrated capability, the PEO Missiles and Space (M&S) must ensure operational effectiveness and acquisition efficiency are achieved. The Army system of systems comprises a broad range of elements/components acquired individually to support complementary missions. PEO M&S must have the needed resources to execute this integration task. This project will provide for insertion of technology initiatives, development of alternative architectures and the modeling and simulation associated with development of a PEO M&S system of systems. FY05 Funding in this project is a result of multiple congressional adds.

Geospatial Information Decision Support for Single Integrated Air Picture - This effort provides the Army aerospace warfighter the view and effects from space to ground to support time-critical targeting of missile threats.

SituSpace Single Integrated Space Picture - Provides critical decision support and visualization of the view up into space, in support of space control, satellite control, and laser-assisted missile defense missions.

ASMD Architecture Analysis Program - The PEO M&S Architecture Analysis Program (A3P) Develops the Modeling and Simulation infrastructure for the Army's Integrated Air and Missile Defense (IAMD) System of Systems Program. A3P provides key capabilities for the SoS Simulation Lab, SoS Integration Lab and SoS User Lab. A3P analyses are critical for the definition of the SoS architecture and requirements, and the integration of AMD components/systems into the Army and Joint IAMD architectures.

Future Army Attack and Missile Defense System (FAAMDS) - This project will provide for the initiation of the preliminary design of a direct fire rocket capable of engaging and destroy a mortar in flight.

E-Strike Technology Enhancement for the Maneuver Air Defense Capability - Provides for the Army's future needs in development of a radar that can acquire, track, and provide fire control for a kinetic energy and a directed energy rocket, artillery, and mortar (RAM) defense system. This funding will provide for the performance analysis to develop the necessary requirements for the radar and shooters and the overall integration requirements.

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
Geospatial Information Decision Support for Single Integrated Air Picture	0	5019	0	0
SituSpace Single Integrated Space Picture	0	4390	0	0
ASMD Architecture Analysis Program (A3P)	0	5010	0	0
Future Army Attack and Missile Defense System (FAAMDS)	0	1672	0	0
E-Strike Technology Enhancement for the Maneuver Air Defense Capability	0	4808	0	0
Totals	0	20899	0	0

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

C. Acquisition Strategy: Not applicable for this item.

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S34

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Geospatial Information Decision Support for Single Integrated Air Picture	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	5019		0		0		0	5019	0
b . ASMD Architecture Analysis Program (A3P)	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	5010		0		0		0	5010	0
c . SituSpace Single Integrated Space Picture	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	4390		0		0		0	4390	0
d . Future Army Attack and Missile Defense System (FAAMDS)	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	1672		0		0		0	1672	0
e . E-Strike Technololgy Enhancement for the Maneuver Air Defense Capability	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	4808		0		0		0	4808	0

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
060332A - Air and Missile Defense Systems Engineering

PROJECT
S34

I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	20899		0		0		0	20899	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
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PROJECT
S34

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			0	20899		0		0		0	20899	0