ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**

COST (In Thousands)		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		217686	318947	10783	10126	9876	10155	10444	0	871383
097	Interop & Standards Compliance Experiment & Test	61	0	0	0	0	0	0	0	3950
485	Info Standards Interop Eng/Joint Interop Cert	2469	5161	5237	4876	4801	4884	5175	0	42243
589	ARMY SYS ENGINEERING & WARFIGHTING TECH SUP	5754	5364	5546	5250	5075	5271	5269	0	48785
591	Wpn Sys Tech Arch (WSTA)	559	0	0	0	0	0	0	0	3434
615	JTRS-GROUND DOMAIN INTEGRATION	97232	172337	0	0	0	0	0	0	525275
61A	JTRS CLUSTER 5 DEVELOPMENT	96042	128791	0	0	0	0	0	0	224833
F99	NUCLEAR ARMS CTRL TECH - SENSORE NETWORK MONIT	15569	7294	0	0	0	0	0	0	22863

A. Mission Description and Budget Item Justification: This Program Element (PE) supports efforts to develop interoperability of Army programs and products, horizontally and vertically for the digitized battlefield. Project D485 supports Information Standards Interoperability Engineering and Joint Interoperability Certification. It provides the critical elements of the Army/Joint Technical Architecture, the mandated standards and communication protocols for Army/Joint ground and air operations, and crucial certification test tools to evaluate systems' interoperability for the Warfighter in support of the Vice Chief of Staff of the Army (VCSA) and Army Acquisition Executive (AAE). It also provides Joint certification testing and certification recommendations to the Joint Chiefs of Staff (JCS) for Army systems. This Army-wide effort directly supports the management, oversight, development, maintenance, and interoperability at the Army enterprise level C4I/IT (Command, Control, Communications, Computers, and Intelligence/Information Technology) architecture efforts required to implement Unit Set Fielding (USF), Software Blocking (SWB) Policy and Army Knowledge Management. Project D589 Army Systems Engineering (ASE) & Warfighter Technical Support provides essential technology expertise on all Systems Engineering and Technical Architecture (SE/TA) matters critical to gain Information Dominance and foster interoperability among all Army systems. The Weapons Systems Technical Architecture (WSTA), Project D591, supports the Army's development and employment of a Real-Time and Embedded Weapon Systems Common Operation Environment (COE). The WSTA Working Group also defines the Defense Information Standards Repository (DISR) specific Weapons Domain profiles and standards (mandatory and emerging) that provide the Department of Defense "building code" which is the foundation for designing, building, fielding, and supporting interoperable systems in an expedient and cost-effective manner. Project D615 supports the JTRS Cluster 1 program, which is being renamed to Ground Mobile Radios (GMR). This project provides for the development of Ground Vehicular platforms. Project D61A supports JTRS Cluster 5 program, which is being renamed to Handheld, Manpack, and Small Form Fit (HMS) radios. This project provides for the development of three radio form factors: Handheld; Manpack (including vehicular mounted); and a family of Small Form Fit (SFF) embedded applications. Project D629, Tactical Communications System - Demonstration Validation, provides for insertion of selected proven communications technology from program elements 0602782A, Project AH92 applied research and 0603008A, advanced technology development, into the next phase of development. The Protocol Investigation for the Next Generation (PING) program evaluates and assesses emerging network protocols, concentrating on the assessment and evaluation of the next generation of Internet Protocol (IPv6) and its protocol dependencies affecting the Army Enterprise Architecture. The Applied Communications and Information Networking (ACIN) project provides for the evaluation and capitalization of emerging commercial communications and networking technologies by leveraging advances, influencing development efforts, influencing standards and delivering technical solutions in support of emerging architectures (JTA-A).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)	218402	393062	320725
Current BES/President's Budget (FY 2007)	217686	318947	10783
Total Adjustments	-716	-74115	-309942
Congressional Program Reductions		-69241	
Congressional Rescissions		-4615	
Congressional Increases			
Reprogrammings	-716		
SBIR/STTR Transfer			
Adjustments to Budget Years		-259	-309942

FY06 Congressional Reductions
FY07 Realignment to higher Army Priorities

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**485**

COST (In Thousands)		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
485	Info Standards Interop Eng/Joint Interop Cert	2469	5161	5237	4876	4801	4884	5175	0	42243

A. Mission Description and Budget Item Justification: Focus for this project is to support the engineering or evaluation of commercially-available information technology (IT) tools to develop architecture products Information Technology based Command, Control, Computers, and Communications (C4/IT) systems such as Applications Program Interfaces for Weapons Systems. A significant effort will be on building Army (consistent with DoD) C4/IT technical standards-compliant Army data repositories that are web-accessible but secure. These repositories will be consistent with DoD standards and policies and virtually appear to be a single repository for Army C4/IT architecture products. FY2004-2006 are "transitioning" periods for the Army to incorporate DoD policies, procedures, and constraints.

What follows below is the retention of the original objectives of this project (modified effective FY2006):
To support the Army Vice Chief of Staff (VCSA) and the Army Chief Information Officer/G6,
as cited in the AEA Master Plan, this initiative fulfills the Clinger-Cohen Act's mandate of developing sound integrated Information Technology (IT) architectures and the Army's Software Blocking Policy. The increased combat power of the Future Force will be dependent on the information superiority of network & knowledge centric warfare and the ability of systems to be fully "interoperable as a member of the joint, multinational, interagency team as well as emerging Future Force (FF) C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) Systems." It identifies and reduces interoperability issues earlier in the life cycle by intra-Army/FF/Joint/combined experiments and assessments, and through the establishment & sustainment of common standards. This Army wide effort directly supports the management, oversight, development, maintenance, and interoperability of the Army enterprise level C4I/IT architecture efforts required to implement Unit Set Fielding, Software Blocking and Army Enterprise Architecture (AEA). Specifically, this project resources the Army's messaging standards conformance authority in assessing compliance with the Defense Information Systems Repository (DISR), in meeting the warfighter information exchange requirements and in facilitating their interoperability. It also resources, in accordance with the DISR, the development and maintenance of the following information standards: Variable Message Format (VMF) & Combat Net Radio (CNR) protocol, which support Army/Joint ground operations; Tactical Digital Information Links (TADILs), which support Air Defense operations; and US Message Text Format (USMTF), which support Intel and Commanders operations. It provides the Army's lead for configuration management functions of these standards and test tools at both Army and Joint levels. This project resources the Army participation in joint/allied messaging certification testing & configuration management processes. This project also resources the development and fielding of a suite of four (4) crucial tools which are used throughout the entire Army. These tools which are currently under development will provide the ideal means to: a) validate JTA-A critical messaging and protocol standards; b) improve systems interoperability; c) verify/certify correct system implementations and interpretation to JTA-A; d) sustain/support digitization and transition of fielded systems; e) support Software Blocking and interoperability testing; f) provide Legacy AEA interoperability with Future Combat System (FCS) command and control systems. These crucial tools are critical to the JTA-A Compliance, Certification Testing mission & Interoperability programs. The task also supports the Army's transformation campaign while mitigating interoperability issues resulting in reducing cost & program slippages. This project also provides the Configuration Management & Control for the Software Blocking (SWB)/USF (Unit Set Fielding).

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Develop and update architecture standards and protocols necessary to ensure C4ISR systems interoperabilty.	1285	1425	1552
Conduct, chair & manage at multiple Army CCBs (Configuration Control Boards) and represent the Army at multiple Army/Joint CCBs	500	0	0

to support existing and evolving warfighter interoperability.			
Prepare for and Conduct 10 Joint certification testings to include 30 operational systems, and develop over 500 interoperability problem reports for analysis by Joint services	0	0	0
Engineer, develop & publish Army Warfighter Information Standards (i.e. XML-USMTF/VMF,Wireless XML, database exchange, etc...) incorporating DoD standards requirements.	0	1200	1200
Identify, analyze, and provide solutions to gaps in technical architecture standards requirements.	200	1200	1140
Develop, publish and execute the SWB CM (Software Blocking Configuration Management) function to include all the configuration items developed by the Requirements WG (Working Group), Architecture WG, Block Execution Management WG and the IPT/SUB-IPTs for all SW Blocks, ISCCB SOP development, & SWB architecture CM web site development.	0	0	0
Develop and engineer Army Net-Centric Enterprise Service standards and protocols supporting OSD Global Information Grid messaging requirements and serve as Army focal point for messaging working group.	0	1136	1200
Knowledge Center Development - Build & update as necessary access to website repositories for key policies, directives, and architecture products.	476	200	145
Funds not received	8	0	0
Total	2469	5161	5237

C. Acquisition Strategy The efforts funded in this project are non-system specific, interoperability experimentation, evaluation and certification across multiple systems. The contractual efforts/services are obtained from existing competitive omnibus support service contracts.

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
485

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
Labor	In House	USACECOM , Fort Monmouth, NJ	11459	1070	1-4Q	5236		5495		Continue	0	0
Travel	In House	USACECOM, Fort Monmouth, NJ	346	111	1-4Q	0		0		Continue	457	0
Subtotal:			11805	1181		5236		5495		Continue	457	0

II. Support Costs	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
Development Support	C/CPFF	Arinc, Fort Monmouth, NJ	5699	0		0		0		0	5699	0
Development Support	C/CPAF	Telos, Fort Monmouth, NJ	4581	0		0		0		0	4581	0
Development Support	C/CPFF	CSC, Fort Monmouth, NJ	1963	0		0		0		0	1963	0
Development Support	C/CPFF	C3I, Fort Monmouth, NJ	1374	0		0		0		0	1374	0
Development Support	SS/CPFF	Mitre, Fort Monmouth, NJ	280	0		0		0		0	280	0
Development Support/ Army Enterprise Applications Architecture	C/T&M	Binary, Ft. Belvoir, VA	46	0		0		0		0	46	0
Development Support- Knowledge Center	C/T&M	ITEL, Ft Monmouth, NJ	1198	0		0		0		0	1198	0
Development Support	C/T&M	ITEL, Ft Monmouth, NJ	2018	622	2Q	0		0		Continue	2640	0
Development Support	C/T&M	Northrop Grumman (SEC SSES), Ft Monmouth, NJ	1973	606	2Q	0		0		Continue	2579	0
Technical Support	C/CPFF	TFE, Fort Monmouth, NJ	65	30	2-3Q	0		0		Continue	95	0

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
485

Technical Support	C/CPFF	Marconi, Fort Monmouth, NJ	183	0		0		0		0	183	0
Equipment	In House	USACECOM, NJ	455	30	4Q	0		0		Continue	485	0
Equipment (Development Support)	C/FFP	GTE, Tauton, MA	106	0		0		0		0	106	0
Telecommunications	MIPR	USASC, Fort Huachuca, AZ	1145	0		0		0		Continue	1145	0
Subtotal:			21086	1288		0		0		Continue	22374	0

Remarks: *Contracts/awards cited are 5 year (1 base + 4 option years). Future award dates imply future competitive award, contractor TBD.

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									

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									

Project Total Cost:			**32891**	**2469**		**5236**		**5495**		**0**	**22831**	**0**

Schedule Detail (R4a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**485**

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Knowledge Center Development	1-4Q	1-4Q	1-4Q				
Army Enterprise Architecture Policy Development		1-4Q	1-4Q				
Develop Comfiguration Management Processes	1-4Q	1-4Q	1-4Q				
Engineer Warfighter C4/IT Standards		1-4Q	1-4Q				
Evaluate, experiment, and provide systems integration for testing of ACTD, ATD, & STO's							
Experiment/Evaluate Joint Interoperability in conjunction with CIPO initiatives	1-4Q	1-4Q	1-4Q				
Conduct Joint/Coalition Experiments	1-4Q	1-4Q	1-4Q				
Evaluate, certify systems for and support SDD							
Evaluate, certify systems for and support FDC							
DOTE/JDEP Initial Concept/Evaluation/Experiments							
Develop and maintain Combat Net Radio (CNR) Standard	1-4Q						
Develop and maintain Variable Message Format (VMF) application header standards	1-4Q						
Develop and maintain Variable Message Format (VMF) Standards & standard databases	1-4Q						
Configuration Management and control of TADIL(A,B,J) and USMTF standards	1-4Q						
Represent Army on Army/DOD forums	1-4Q						
Test and promulgate Defense Collaborative Tools Set within the Army	1-4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**589**

COST (In Thousands)		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
589	ARMY SYS ENGINEERING & WARFIGHTING TECH SUP	5754	5364	5546	5250	5075	5271	5269	0	48785

A. Mission Description and Budget Item Justification: This project has been re-aligned to better support the mission of Army Chief of Staff (CSA) santioned Army Architecture Integration Cell (AAIC) for developing and, implementing and maintianing the Army Enterprise Architecture for Information Technology based Command, Control, Computers & Communications (C4/IT) systems. AAIC mission is to develop standards-based architecture products that are inter-operable within the Army as well as the with Joint, Interagency, and Multinational systems.

Through FY2005, this project funded the Army Systems Engineering Office (ASEO) with the primary mission of developing technical architecture standards without compromising DoD-mandated standards but ensuring Amry C4/IT systems under development are interoperable with legacy systems still utilized by the Army warfighter, which extend from tactical levels up through operational and strategic components of the Army Battle Command Architecture (ABCA), as well as, the institutional portions of the Enterprise to include the Army's Business Enterprise Architecture (BEA). The ASEO supports the Army CIO/G6 Architecture Integration Cell (AIC) in establishing an integrated AEA framework that complements, and is a natural extension of, the GIG-Enterprise Services (GIG-ES). In addition, the ASEO is an essential contributor in the development of the JBMC2 integrated architecture, the Battle Command Architecture, and emerging Cross-Service Integrated Architecture efforts. Each of these architecture definition and integration efforts is elemental to achieving the Army's goal of a NetCentric Future Force.

Previously, the Joint Technical Architecture (JTA) and JTA-Army (JTA-A) have provided the foundation for designing, building, fielding and supporting Joint interoperable Army systems in an expedient and cost-effective manner. With the revision to the standardization process as implemented by the Defense Information Systems Agency (DISA), technical architecture standards are encompassed in the new Defense Information Systems Repository (DISR) program. The Army must participate in DISR to ensure Army requirements are adequately captured and reflected in any new baseline developed by DISA. The ASEO identifies emerging standards in support of the integration of new technologies into existing Army systems and Advanced Technology Demonstrations/Advanced Concept Technology Demonstrations (ATD/ACTDs), enabling the Army transformation to the Future Force. The ASEO's work efforts in the development and maintenance of Army IT standards within the context of DISR guidelines are critical path elements to achieve transformation, increase joint interoperability and to provide the future Army with the ability to fight and win on tomorrow's battlefields. However, the Technical Architecture (TA) alone only provides the foundation for interoperability. Integrated Army Enterprise Architectures (e.g., ABCA, BEA, etc.) fuse Operational, Systems and Technical views of the Army Enterprise into cohesive and manageable information sets that allow the Army to make consequent decisions regarding the Army's inventory of present and future systems and their associated funding. In this area the ASEO specializes in defining and exploiting (through analysis) the relationships between architectural views to provide quantitative answers to complex questions regarding the Army's future capabilities and the roadmap the Army will pursue in realizing them.

The allocated resources fund two support efforts for CIO/G6. First, subsequent to the development of the AKEA (Army Knowledge Enterprise Architecture) Guidance Document, V1.1, the effort has shifted to development of the Army Technical Reference Model (TRM) for information broker/mediation services, and mapping the Army's architecture requirements to DOD Net-Centric Operations and Warfare Reference Model, including NCES (Net-Centric Enterprise Services). Second, support of the design, development, deployment and maintenance of the AAIC (Army Architecture Integration Cell) Web-based Knowledge Center continues with increased development requirements and

functionality, including the consolidation of architectural repositories, design of the DARS-A (Defense Architecture Repository-Army) database, and acting as the Army's agent for DARS/DARS-A.

Actual availability for FY2005 was $5759K due to Army withholds.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Analyze and provide Systems Engineering solutions to fill in gaps identified in C4ISR systems under development as welll as fielded systems.	1480	1772	1716
Identify unique Army requirements to influence Army/DoD Architecture Technical standards under new Defense Inforamtion Systems Repository developed under Defense Information Systems Agency (DISA) oversight. Prior years: Technically influence the development/implementation of Joint Technical Architecture (JTA). FY03 accomplishements: JTA Versions 5.x, 6.0 restructured and aligned with Net-Centric Philosophy and redefined scope and standards applicability. Planned activities: JTA-A version 7.0, 7.5 to include major revision of Information Security Section, to include results of Tactical Imagery Transport Study	209	222	185
Investigate information technical standards for inclusion in DSR, Defense Standards Repository. Global Information Grid (GIG) Technologies (XML, JPEG 2000, MPEG 4, IPV6)	0	185	185
Research and incorporate applicable emerging open standards-based commercial technologies to influence future force systems. Ensure that open commercial standards adopted by Future Force enabling systems are reflected in the DISR baseline. Maintain subject matter expertise on DISR, Defense Standards Repository Information Technology (IT) standards' mandates to ensure current and future force systems remain interoperable. Ensure a logical and cost-effective evolution of TA baselines while maximizing Joint interoperability.	740	740	740
DISR Compliance Requirements -Ensure Program Managers have an executable and effective strategy for implementing the Army/DoD Technical Architecture standards.	390	370	555
Validate/Integrate Army Enterprise Technical Views to enable the Army Technical and Systems Architect (CIO/G6) to monitor, assess and control the inherent risks associated with leveraging continuously changing technologies across all Army Enterprise Functionals/PEO/Communities.	740	835	925
Provide systems analysis for implementing IPv6 protocol across Army to ensure communications/data-sharing/data-exchange between systems. Prior Years: As a result of the decision agreed to at the 19 Dec 02 AKEA, GOSC, direction of MU17 funding was realigned to support the Protocols Investigation for the Next Generation (PING) program. The PING supported current technology agreements with various technology developers such as HP, Cisco, Microsoft and Telecordia. In addition, PING represented the ARMY CIO/G6 office at various ASD (NII)/DoD CIO meetings discussing DoD IPv6 policy and Transisition Planning, participated with JITC at DISA's Def Interop Comm Exercise 2003 (DICE 2003) demonstrating IPv6 interoperability, active member of DoD IPv6 Test Bed evaluating and testing IPv6 benefits and trade-offs, first Army lab participating with North American IPv6 Task Forces MoonV6 initiative, drafted ARmy's Phase I IPv6 Transition plan and initial transition strategy to migrate Army systems and networks to native IPv6 by FY08 in compliance with DoD policy,prepared evaluation criteria for selecting early IPv6 adopter candidates in support of the Army GIO/G6 office, hosted first Army IPv6 data call to collect systems impact information and baseline on Army IPv6 transition plan, provided IPv6 technical guidance and knowledge to the Army acquisition community.	370	370	370
Define and exploit (through analysis) the relationships between architectural views to provide quantitative answers to complex questions	370	370	370

regarding the Army's future capabilities and the roadmap the Army will pursue in realizing them.			
Provide systems engineering solutions including techincal architectures for Army systems supporting Joint Blue Force Situational Awareness (JBFSA)initiative	1455	500	500
Total	5754	5364	5546

C. Acquisition Strategy Not applicable for this item

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
589

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
Government Systems Engineering Support	In House	ASEO, DCTS, PING/03 only, Fort Monmouth, NJ	11755	1978	1-4Q	1978		1978		Continue	17689	0
Contract Support	C & T&M-R	C3ISGI, Tinton Falls, NJ	3080	0		0		0		0	3080	0
Contract Support	C & FP	TRW, Domingues Hills, CA	1281	0		0		0		0	1281	0
Overhead		ASEO/WTS CECOM, Fort Monmouth, NJ	1422	0		0		0		0	1422	0
Contract Systems Engineering Support	C & FP	Battelle, Alexandria, VA	354	0		0		0		0	354	0
System Development and Integration	MIPR	PEO C3S, PM TOCS, Fort Monmouth, NJ	25	0		0		0		0	25	0
Travel	In House	SEC, USACECOM, Ft. Monmouth, NJ	0	20	1-4Q	25		25		0	70	0
Development Support	C/T&M	Northrop Grummon (SEC SSES), Ft. Monmouth, NJ	0	50	2Q	50		50		0	150	0
Contract Systems Engineering Support	C & FP	SRI, Menlo Park, CA	199	0		0		0		0	199	0
Labor (Internal Government)	In House	SEC, USACECOM, Ft. Monmouth, NJ	0	867	1-4Q	867		867		0	2601	0
Equipment	In House	USACECOM, NJ	0	5	4Q	5		5		0	15	0
Development Support	C & TM	ITEL, Mays Landing, NJ	0	50	2Q	50		50		0	150	0
Contract Support	C & FP	Lockheed Martin, Eatontown, NJ	545	0		0		0		0	545	0
Development Support - Army Enterprise Applications Architecture	C/T&M	Binary, Ft. Belvoir, VA	0	0	3-4Q	0		0		0	0	0
Contract Support	C & T&M	SAIC, Falls Church,	1811	0		0		0		0	1811	0

		VA										
Contract Systems Engineering Support	C & FP	SRC, Atlanta, GA	612	0		0		0		0	612	0
Contract Systems Engineering Support	SS & FP	MITRE, Tinton Falls, NJ	7457	507	1-2Q	167	1Q	299		0	8430	0
Systems Engineering and Integration	MIPR	WTS - ISIO CECOM, Fort Monmouth, NJ	2341	0		0		0		Continue	2341	0
Contract Support	C & T&M	Datron, Simi Valley, CA	305	0		0		0		0	305	0
Contract Systems Engineering Support	C & FP	Gemini, Billerica, MA	137	0	2Q	0		0		0	137	0
Development Support- Knowledge Center	C & TM	ITEL, Mays Landing, NJ	849	0	2Q	0		0		0	849	0
Contract Support	IPA Agreement	Rutgers University, New Brunswick, NJ	528	0		0		0		0	528	0
Contract Systems Engineering Support	C & FP	Suntek Systems, Eatontown, NJ	460	0		0		0		0	460	0
Contract Systems Engineering Support	C & FP	HTPi, Shrewsbury, NJ	145	0		0		0		0	145	0
Contract Support	C & TM	Telos, Eatontown, NJ	24	0		0		0		0	24	0
Engineering Support	MIPR	ISEC, Fort Huachuca, AZ	1357	0	1-2Q	0		0		Continue	1357	0
Contract Support	C & TM	PTG/CACI, Eatontown, NJ	26	0		0		0		0	26	0
Contract Systems Engineering Support	C & FP	Litton, Reading, MA	245	0		0	1Q	245		0	490	0
Contract Support	C & FP	CSC, Eatontown, NJ	1746	0		0	1-2Q	0		0	1746	0
Contract Support	C & FP	Janus Research Group, Appling GA	72	0		0		0		0	72	0
Contract Support	C & T&M	BAE, Tinton Falls, NJ	139	0		0		0		0	139	0
Contract Systems Engineering Support	C & FPI	CSC, Eatontown, NJ	9883	2220	1-4Q	2220		2220		0	16543	0
Contract Systems Engineering Support	C & FP	GTE/BBN, Cambridge, MA	960	0		0		0		0	960	0

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**589**

Travel	In House	ASEO/WTS CECOM, Fort Monmouth, NJ	1376	80	1-4Q	80		80		Continue	1616	0
Subtotal:			49134	5777		5442		5819		Continue	66172	0

II. Support Costs	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									

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									

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									

Project Total Cost:			**49134**	**5777**		**5442**		**5819**		**0**	**66172**	**0**

Schedule Detail (R4a Exhibit)

February 2006

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
589

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
TA - JTA-A 7.5							
TA - JTA-A 7.0							
TA - JTA 5.0							
TA - JTA 6.0							
SWB Shortfall Analysis							
AS-IS, AS-IS Plus Comms Analysis							
SA - 2DFSA (3BDE/1CAV)							
BCT 3 - (172nd Inf Bde) S=STRYKER							
Corps Warfighter							
75 Ranger Reg							
AECP/Homeland Security Support							
Joint /HLS Architecture Development							
04 Joint/HLS Architecture Support							
Juice 03							
Joint Blue Force System Analysis (JBFSA) Technical Views	1-4Q	1-4Q	1-4Q				
TA-JTA-A 8.0	2-4Q						
TA-JTA 7.0	1-3Q						
TRADOC BCBL DCTS Assessment							
DCTS Version 2 Phase 2 Testbed							
Develop C4/IT Architecture Standards		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**615**

COST (In Thousands)	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
615 JTRS-GROUND DOMAIN INTEGRATION	97232	172337	0	0	0	0	0	0	525275

A. Mission Description and Budget Item Justification: Project D615 supports the Joint Tactical Radio System (JTRS) Cluster 1 development efforts. JTRS products have been restructured under the Joint Program Executive Officer (JPEO) JTRS. JTRS Cluster 1 is now a product line under JTRS Ground Systems and will be renamed to Ground Mobile Radio (GMR). The JTRS GMR RDTE program will enable the Services to acquire and field a family of affordable, scaleable, high capacity, interoperable radio sets based on a common JTRS Software Communications Architecture (SCA). The JTRS is a key enabler of transformation and will provide critical communications capabilities across the spectrum of operations in a Joint environment. The JTRS GMR will provide networking capability using the Wideband Networking Waveform and Soldier Radio Waveform to connect the unmanned sensors to the decision makers "On-The-Move" (OTM) which will significantly reduce the decision cycle. The JTRS GMR is the key enabler for connectivity OTM to the Global Information Grid, an essential multiplier to network centric warfare. The GMR JTRS is a Joint program encompassing the incorporation of the JTRS Joint Waveforms Program Office (JWPO) developed waveforms (porting) and Ground Vehicular applications.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
JTRS Product Development (JTRS GMR Vehicular Hardware Design and Development of Prototypes and technical engineering support)	82028	155772	0
JTRS Test and Evaluation (JTRS EPG Testbed and Test Planning/Test Support/Electronic and Information Warfare Test and Evaluation/Labor)	4597	4174	0
JTRS Management Services (JTRS Program Management Office Support)	8777	10507	0
JTRS Support Costs (Systems Engineering and Technical Support)	1830	1884	0
Total	97232	172337	0

B. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
Future Combat System (FCS), RDTE 60465A/F56/F61**	1622	2261	2415	2321	1862	1840	1891	CONT	CONT
RDTE, Army, 0604280A/162 (GMR)	0	0	219981	78739	67413	39191	15962	CONT	CONT
RDTE, Navy, 0604280N/3073 (GMR)	0	0	0	78308	67273	39139	15896	CONT	CONT
RDTE, Air Force, 0604280F/5068 (GMR)	0	0	0	78409	67708	39719	16223	CONT	CONT

Comment: Note: *Funding for the completion of development for GMR is contained in RDTE, Army, 0604280A/162 (GMR); RDTE, Navy, 0604280N/3073 (GMR); and RDTE, Air Force, 0604280F/5068 (GMR). **FCS funding reflects relevant JTRS GMR funding only and does not reflect entire FCS program funds. FCS JTRS GMR relevant funding is contained within Project F56 in FY 2004 and Project F61 in FY 2005.

C. Acquisition Strategy Project D615 supports the Joint Tactical Radio System (JTRS) Ground Mobile Radio (GMR), formerly Cluster 1, System Development and Demonstration efforts. After a successful Milestone B Decision in 3QFY02, the GMR development effort was awarded to develop multi-channel ground and airborne configurations (the airborne configuration is re-aligned under the new JTRS replan). The JTRS GMR supports an evolutionary acquisition strategy and was based on an aggressive acquisition schedule. In June 2002, a cost plus award fee contract was competitively awarded to a Prime Contractor (The Boeing Company) who is responsible for developing and/or acquiring numerous Software Communications Architecture compliant waveforms, defining common form-fit-function configurations for vehicular versions of the JTRS hardware, and successfully porting the waveforms to JTRS hardware produced by two different developers. Although Waveform development is part of the contract, the Waveform development is funded and managed under a separate project. In February 2005, all JTRS Clusters were realigned under the Joint Program Executive Office (JPEO) JTRS. The JTRS Defense Acquisition Executive (DAE) and Senior JTRS Leadership conducted a GMR replan meeting in November 2005. A replan option was selected which restructures the entire JTRS enterprise. This replan supports the formal rebaselining in early FY07 to the Capability Description Document (CDD) which is currently in staffing. The new strategy will be approved in an Acquisition Decision Memorandum (ADM), which is in the signature process. Under GMR, a software reprogrammable radio providing the warfighter with a multi-band and multi-mode capability, networkable radio system which provides simultaneous voice, data and video communications to increase interoperability, flexibility and adaptability in support of varied mission requirements is being developed as a product under the PM JTRS Ground Systems. In FY05, the program underwent some preliminary testing of hardware capabilities along with the restructuring of the program and on-going software development of the operating system. The FY06/07 budget supports continued development and support for the GMR sets to include the operating environment. The FY06 and out budget supports continued development and support for the GMR sets, design of ground vehicular A-kits (installation kits) for platforms required for testing for System Integration Test (SIT)/Limited User Test (LUT) and Multi-Service Operational Test and Evaluation (MOT&E) testing for GMR.

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
615

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
NTDRS CPIF/T&M/FFP/Ancillary Equip,NMT, and MISC Efforts*	C/T&M/CPIF/ FFP/MISC	ITT, Fort. Wayne, IN/MISC	10145	0		0		0		0	10145	10145
JTRS Army Step 2C Hardware Development & Prototypes, Anc Equip/Log & Engrg	C/OTA/T&M/ Various	BAE Systems, Wayne, NJ/Various	7492	0		0		0		0	7492	7492
JTRS GMR GFE	Various	Various	75	0		0		0		0	75	0
JTRS GMR (EPLRS Data Rights)	SS/FFP	Raytheon, Fullerton, CA	5000	0		0		0		0	5000	0
JTRS GMR SDD Development	C/CPAF	BOEING, Anaheim, CA	253602	81707	1-2Q	153325	1-2Q	0		Continue	0	0
Tactical Internet Integration	T&M	ITT, Ft. Wayne,IN	1792	0		0		0		0	1792	0
JTRS Development - System Engr Spt	various	MISC	3798	321	1-2Q	2447	1-2Q	0		Continue	0	0
ABCS System Engineering and Integration Efforts	Various	MISC	1227	0		0		0		0	1227	0
HMS Design and Development**	C/CPAF	TBD	21974	0		0		0		Continue	Continue	0
Technology Development Strategy Efforts	Various	Various	3214	0		0		0		Continue	0	0
Subtotal:			308319	82028		155772		0		Continue	Continue	17637

Remarks: The funding to complete the development efforts is contained in other funding lines as specified in the Other Program Funding.
*NTDRS efforts prior to FY 2000 were funded in PE 0603713A, Proj D370
**Cluster 5 efforts in FY05 and out are funded in PE 0604805A, Proj D61A

II. Support Costs	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
*NTDRS Test/Training/Logistics/Technical /Exercise Support	Various	Various	7562	0		0		0		0	7562	0
JTRS Antenna Studies	PWD	ARINC, Annapolis, MD	504	0		0		0		0	504	0
JTRS Technical Support	Various	Miscellaneous	10098	1830	1-2Q	1884	1-2Q	0		Continue	0	0

ABCS SE&I Effort			1633	0		0		0		0	1633	0
Subtotal:			19797	1830		1884		0		Continue	9699	0

Remarks: The funding to complete the development efforts is contained in other funding lines as specified in the Other Program Funding.
*NTDRS efforts prior to FY 2000 were funded in PE 0603713A, Proj D370

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
*NTDRS Field Testing	MIPR	EPG, Fort Huachuca, AZ	95	0		0		0		0	95	0
JTRS Step 2C EPG Qual Testing/Customer Testing	MIPR	EPG, Fort Huachuca, AZ	2450	0		0		0		0	2450	0
JTRS EPG Testbed and Test Planning	MIPR	EPG, Fort Huachuca, AZ	3476	1239	1-4Q	1500	1Q	0		Continue	0	0
JTRS Modeling & Simulation	MIPR	USAIC	1588	320	2Q	600	1-2Q	0		Continue	0	0
JTRS Test Inhouse Spt & Govt Activities	Various	Various	2873	1425	1-2Q	1324	1Q	0		Continue	0	0
JTRS EOA/SIT/LUT/MOTE Test Activity		EPG, Fort Huachuca, AZ/Various	4190	1613	1-3Q	750	1-3Q	0		Continue	0	0
Subtotal:			14672	4597		4174		0		Continue	2545	0

Remarks: The funding to complete the development efforts is contained in other funding lines as specified in the Other Program Funding.
*NTDRS efforts prior to FY 2000 were funded in PE 0603713A, Proj D370

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
*NTDRS Program Support	MIPR	Fort Monmouth, NJ	655	0		0		0		0	655	0
JTRS Business/Engineering Management	Various	Various	14991	3145	1-4Q	3365	1-4Q	0		Continue	0	0
Project Management Office Support	Various	Various	12922	4934	1-4Q	6519	1-4Q	0		Continue	0	0
JTRS MITRE Support	PWD	MITRE Corp., Mclean, VA	3062	698	1Q	623	1Q	0		Continue	0	0

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**615**

Data Base Correction Action			3240	0		0		0		0	0	0
Subtotal:			34870	8777		10507		0		Continue	655	0

Remarks: The funding to complete the development efforts is contained in other funding lines as specified in the Other Program Funding for all FY07 costs.
*NTDRS efforts prior to FY 2000 were funded in PE 0603713A, Proj D370

Project Total Cost:			**377658**	**97232**		**172337**		**0**		**Continue**	**38630**	**17637**

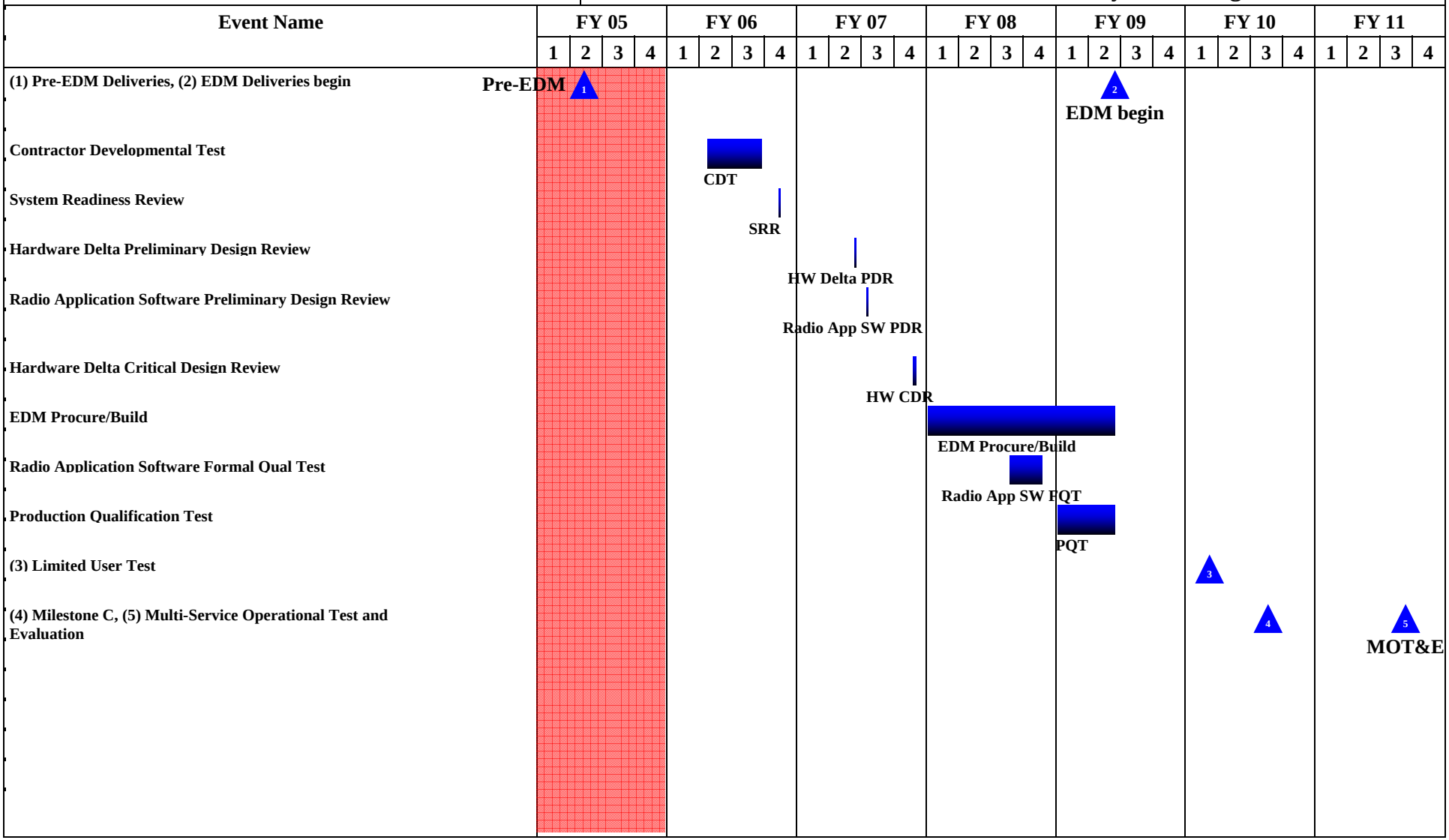
Schedule Profile (R4 Exhibit)

February 2006

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
615



Schedule Detail (R4a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**615**

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Pre-EDM Deliveries	2Q						
Contract DevTest /Design VerificationTest Fault fix		2-3Q					
System Readiness Review		4Q					
HW Delta Preliminary Design Review			2Q				
Radio Applications SW Preliminary Design Review (PDR)			3Q				
Hardware CDR			4Q				
EDM procure/build				1-4Q	1-2Q		
Radio Application SW Functional Qualification Test				3-4Q			
EDM Delivery begin					2Q		
Product Qualification Test					1-2Q		
JTRS-Army GMR System Integration Test/Limited User Test (LUT)						1Q	
JTRS GMR Milestone C						3Q	
JTRS-Army GMR MOT&E							3Q
Product Improvements				1-4Q	1-4Q	1-4Q	2-4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**61A**

COST (In Thousands)		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
61A	JTRS CLUSTER 5 DEVELOPMENT	96042	128791	0	0	0	0	0	0	224833

A. Mission Description and Budget Item Justification: Project 61A supports the Joint Tactical Radio System (JTRS) Cluster 5 Research, Development, Test and Evaluation (RDT&E) development effort. JTRS products have been restructured under the Joint Program Executive Officer (JPEO) JTRS. JTRS Cluster 5 is now a product line under JTRS Ground Systems and will be renamed to Handheld, Manpack, and Small Form Fit (HMS) Radios. JTRS is the Department of Defense (DOD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. JTRS will provide transformational communication capabilities for the Warfighter. HMS provides the Warfighter with a software re-programmable, networkable, multi-band, multi-mode system capable of simultaneous voice, data and video communication. Increment 1 of the HMS program consists of the following form factors: 2 Channel Handheld, 2 Channel Manpack (including vehicular mounted), and a family of Small Form Fit (SFF) embedded applications (SFF-A, B, C, D, H, I and J).

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
JTRS HMS Product Development of HMS radios.	84257	111247	0
JTRS HMS Test and Evaluation	5621	2023	0
JTRS HMS Management Services (JTRS Program Management Office Support)	3314	13051	0
JTRS HMS Support Costs (Technical Support)	2850	2470	0
Total	96042	128791	0

B. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
RDTE, FCS, 654645/F61	13000	4000	0	0	0	0	0	0	17000
RDTE, Army, 0604280A/162 (HMS)	0	0	110948	35409	35759	23877	7380	0	213373
RDTE, Navy, 0604280N/3073 (HMS)	0	0	0	35215	35685	23845	7349	0	102094
RDTE, Air Force, 0604280F/5068 (HMS)	0	0	0	35261	35916	24198	7500	0	102875

Comment: Funding for the completion of development for HMS is contained in RDTE, Army, 0604280A/162(HMS); RDTE, Navy, 0604280N/3073(HMS); and RDTE, Air Force, 0604280F/5068(HMS).

C. Acquisition Strategy A successful Milestone (MS) B was achieved on April 26, 2004 to begin the development of the Handheld, Manpack, and Small Form Fit (HMS) Radios. Following full and open competition, a single Cost Plus Award Fee (CPAF) contract was awarded on July 16, 2004. The JTRS programs have since undergone a

restructuring. The JTRS Defense Acquisition Executive (DAE) and Senior JTRS Leadership conducted a HMSR replan meeting in November 2005. A replan option was selected which restructures the entire JTRS enterprise. The new strategy will be approved in the Acquisition Decision Memorandum (ADM), which is currently in the signature process. This evolutionary acquisition strategy is based on incremental development, reduced requirements, and better reuse/teaming with other product lines and National Security Agency (NSA). The revised contract will be structured to address Increment 1, consisting of Phases 1 and 2.

Increment 1, Phase 1 will develop 1 and 2 Channel Type 2 Small Form Fits (SFFs) A, C, H and J running SRW waveform v1.0/2.1 for use in a sensitive but unclassified environment. The initial development of SFF J is an interim product to be delivered to support Future Combat Systems (FCS) Spin Out 1. Phase 1 MS C will be conducted in early FY09. After MS C, there will be a Low Rate Initial Production (LRIP) Award, with a competitive Full Rate Production (FRP) contract award to follow.

Increment 1, Phase 2 will develop the 2 Channel Handheld, 2 Channel Manpack, and SFFs B, D, I and J that are all Type 1 compliant for use in a classified environment. Waveforms to be ported include UHF SATCOM, HF, EPLRS, SINCGARS, and SRW. Phase 2 MS C will be conducted in early FY10. After MS C, there will be an LRIP award, with a competitive FRP contract award to follow.

The FY07 budget supports development of breadboards, prototypes, and Engineering Development Models (EDMs). The outyear budget supports Contractor Development Test (CDT) and Government Development Test (GDT), as well as Manpack and Handheld Limited User Test (LUT) and Multi-Service Operational Test and Evaluation (MOT&E).

Increment 2 is currently in the planning stages and is projected to complete development of the remaining form factors with additional operational waveform capabilities.

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
61A

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
JTRS HMS Design, Development and Manufacture of Engineering Development Models (EDMs)	C/CPAF	General Dynamics Decision Systems, Scottsdale, AZ	0	81559	1Q	105698	1Q	0		0	0	0
JTRS HMS Development System Engineering Support	Various	Various	0	2698	1-2Q	5549	1-2Q	0		0	0	0
Subtotal:			0	84257		111247		0		0	0	0

Remarks: Funding for FY2004 is captured in PE 0604805A in the Project 615 (Cluster 1).
The funding to complete the development efforts is contained in other funding lines as specified in the Other Program Funding Summary.

II. Support Costs	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
JTRS Technical Support	Various	Various	0	2850	1-3Q	2470	1-3Q	0		0	0	0
Subtotal:			0	2850		2470		0		0	0	0

Remarks: Funding for FY2004 is captured in PE 0604805A in the Project 615 (Cluster 1).
The funding to complete the development efforts is contained in other funding lines as specified in the Other Program Funding Summary.

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
JTRS EPG test bed and planning	MIPR	EPG, Ft. Huachuca, AZ	0	115	1-2Q	650	1Q	0		0	0	0
JTRS Modeling & Simulation	MIPR	USAIC, Ft. Huachuca, AZ	0	299	1Q	235	1Q	0		0	0	0
JTRS Test Inhouse Support & Goverment Activities	Various	Various	0	1350	1-3Q	1138	1-3Q	0		0	0	0
Field Test/LUT and OT	Various	Various	0	3857	1-3Q	0	1-3Q	0		0	0	0
Subtotal:			0	5621		2023		0		0	0	0

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
61A

Remarks: Funding for FY2004 is captured in PE 0604805A in the Project 615 (Cluster 1).
The funding to complete the development efforts is contained in other funding lines as specified in the Other Program Funding Summary.

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
Project Management Office Support	Various	Various	0	1911	1-4Q	10234	1-4Q	0		Continue	0	0
JTRS Business/Engineering Management	Various	Various	0	1403	1-4Q	2817	1-4Q	0		Continue	0	0
Subtotal:			0	3314		13051		0		Continue	0	0

Remarks: Funding for FY2004 is captured in PE 0604805A in the Project 615 (Cluster 1).
The funding to complete the development efforts is contained in other funding lines as specified in the Other Program Funding Summary.

Project Total Cost:	**0**	**96042**		**128791**		**0**		**Continue**	**0**	**0**

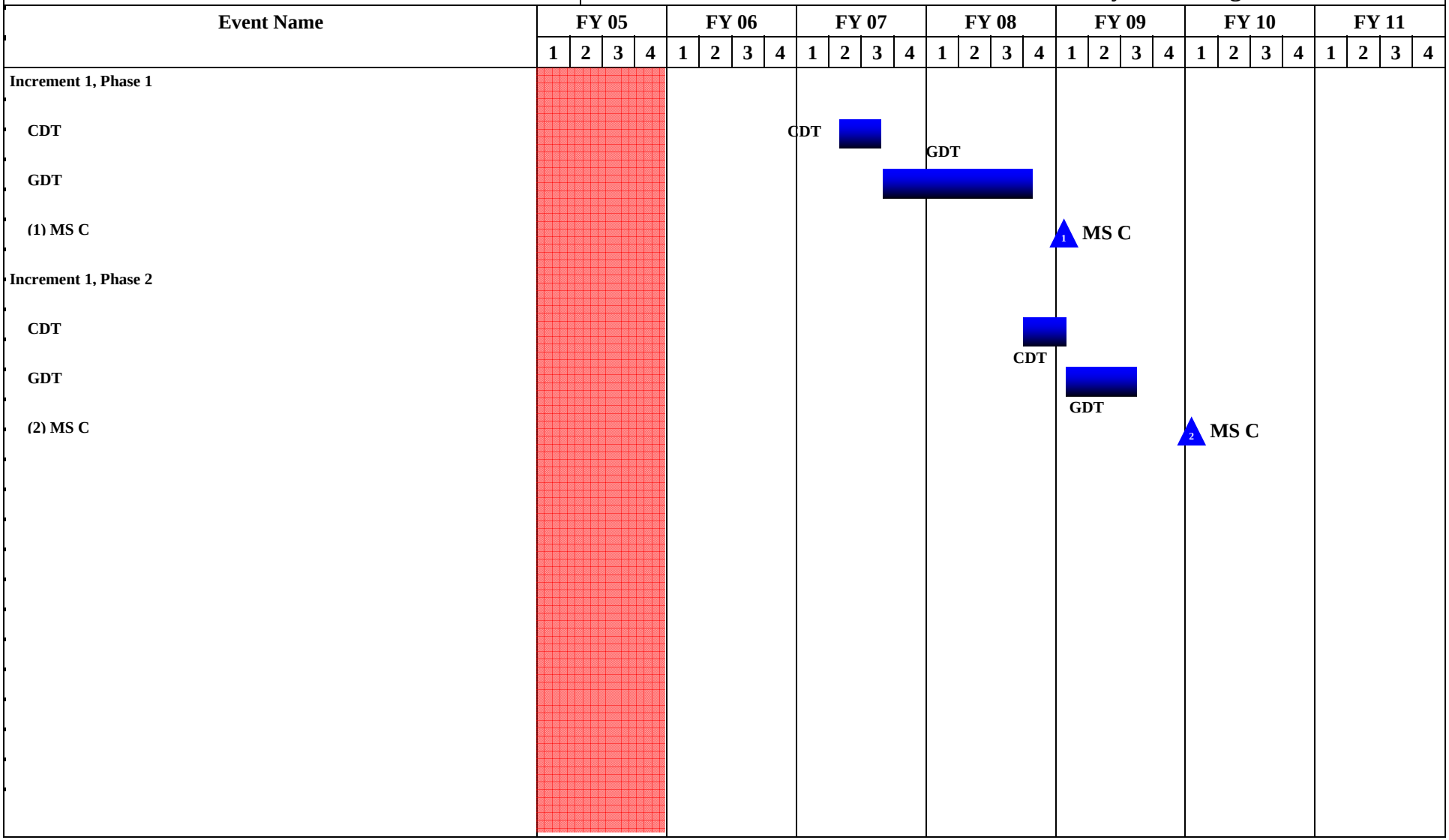
Schedule Profile (R4 Exhibit)

February 2006

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
61A



Schedule Detail (R4a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**61A**

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
CDT - Inc 1, Ph 1			2-3Q				
GDT - Inc 1, Ph 1			4Q	1-4Q			
MS C - Inc 1, Ph 1					1Q		
CDT - Inc 1, Ph 2				4Q	1-2Q		
GDT - Inc 1, Ph 2					2-4Q		
MS C - Inc 1, Ph 2						1Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**F99**

	COST (In Thousands)	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
F99	NUCLEAR ARMS CTRL TECH - SENSORE NETWORK MONIT	15569	7294	0	0	0	0	0	0	22863

A. Mission Description and Budget Item Justification: This project provides Research, Development, Testing & Evaluation (RDT&E) to meet technology requirements in support of implementation, compliance, monitoring and inspection for existing and emerging nuclear arms control activities and dual use technology for missile defense integration activities. The project addresses requirements validated by the Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD AT&L). This project conforms to the administration's research and development priorities as related to nuclear weapons of mass destruction arms control and disarmament. Technical assessments are made to provide the basis for sound project development, evaluate existing programs and provide the data required to make compliance judgments and support U.S. policy, decision-makers and negotiating teams. Technology developments and system improvement projects are conducted to ensure that capabilities for monitoring systems are available when required.

Primary emphasis is on improved sensor capabilities and improved detection and assessment capabilities against a wide range of threat origins.

The program includes development of equipment and procedures for data exchanges, inspections and monitoring capability and analysis. The technologies and procedures developed in the arms control technology program provide an invaluable source of information on equipment and procedures that is extensively used by U.S. and international agencies.

This project element also supports the JCS warfighting capability area of counterproliferation.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Conduct analyses as required to support the OSD manager	400	350	0
Development of prototype sensor	1500	1400	0
Development of radionuclide particle and noble gas detectors	850	825	0
Information system enhancements	850	825	0
Continue the R&D support system	600	500	0
Research on location calibration for seismic events	1712	1600	0
Development of techniques to identify signals from sensor systems	2000	1794	0
Development of Standoff Sensor for Radionuclide Identification	7657	0	0
Total	15569	7294	0

C. Acquisition Strategy Not applicable for this item

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
F99

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
Product Development			0	3093	1-2Q	2100	1-2Q	0		0	0	0
Subtotal:			0	3093		2100		0		0	0	0

II. Support Costs	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
Monitoring Sensor Systems, Program Data Analysis, Verification Systems Concept Demo		SAIC, General Dynamics, VA	0	4653	1-4Q	2694	1-4Q	0		0	0	0
Support Contracts & Government Support	Various	FL, NM, VA, AL	0	2323	1-4Q	1000	1-4Q	0		0	3323	0
SMDC		Huntsville, AL	0	1500	1-4Q	500	1-4Q	0		0	2000	0
Subtotal:			0	8476		4194		0		0	5323	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
Test and Eval	Huntsville, AL		0	2000	2-3Q	500	2-3Q	0		0	2500	0
Subtotal:			0	2000		500		0		0	2500	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
SMDC		Huntsville, AL	0	2000	1-4Q	500	1-4Q	0		0	2500	0

ARMY RDT&E COST ANALYSIS (R3)										February 2006
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604805A - Command, Control, Communications Systems - Eng Dev**									PROJECT **F99**
Subtotal:	0	2000		500		0		0	2500	0
Project Total Cost:	**0**	**15569**		**7294**		**0**		**0**	**10323**	**0**

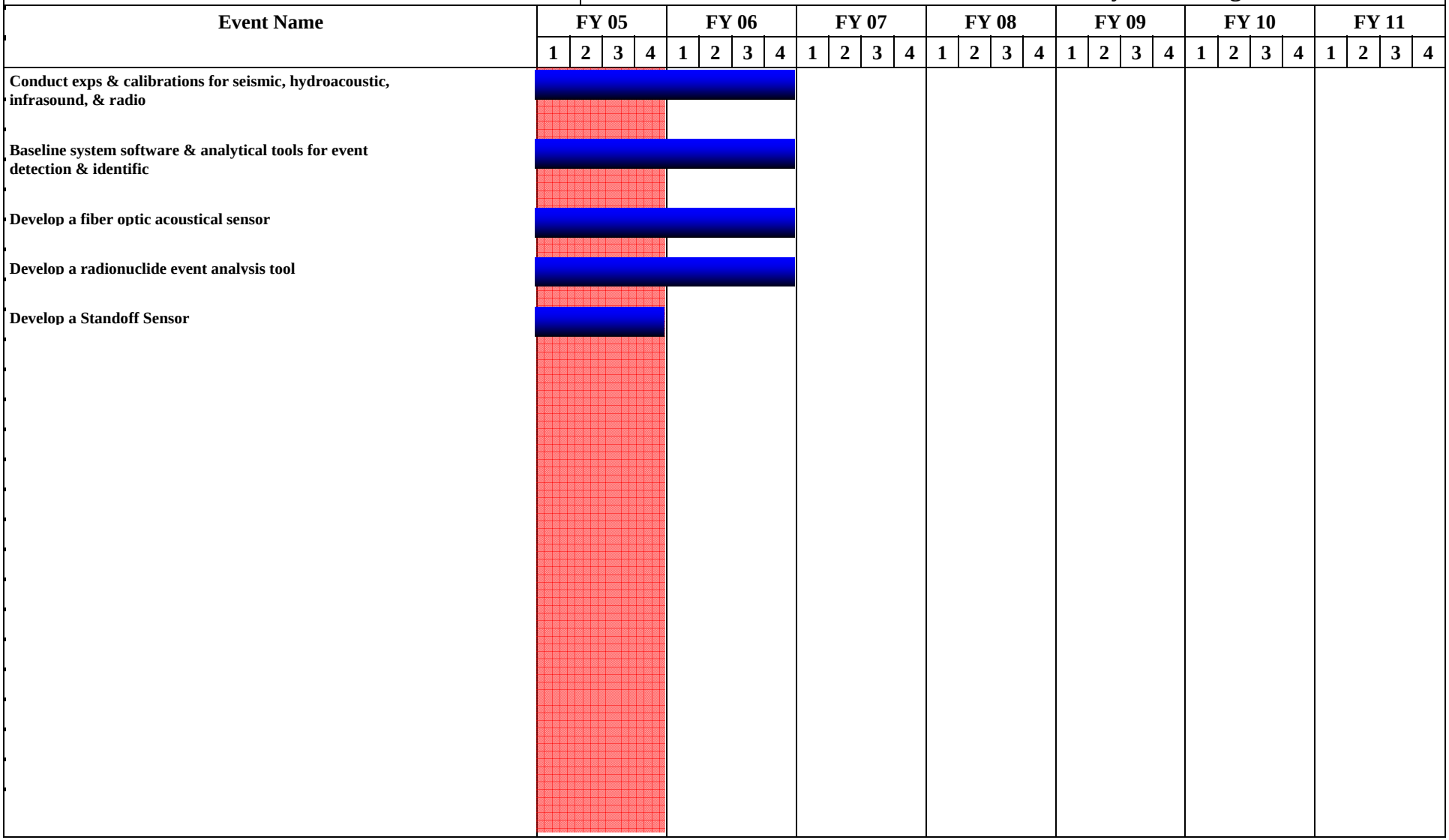
Schedule Profile (R4 Exhibit)

February 2006

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
F99



Schedule Detail (R4a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**F99**

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Conduct experiments and calibrations for seismic, hydroacoustic, infrasound, and radionuclide sensor	1-4Q	1-4Q					
Baseline system software and analytical tools for event detection and identification	1-4Q	1-4Q					
Develop a fiber optic acoustical sensor	1-4Q	1-4Q					
Development a radionuclide event analysis tool	1-4Q	1-4Q					
Develop a Standoff Sensor	1-4Q						