Exhibit R-2, RDT&E Budget Item Justification	xhibit R-2, RDT&E Budget Item Justification										
APPROPRIATION/BUDGET ACTIVITY		R-1 IT	R-1 ITEM NOMENCLATURE								
RDT&E, Defense-Wide/07	Defens	Defense Information Infrastructure Engineering &									
Integration / PE 0302019K											
COST (in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11				
Total Program Element	3.104	5.388	34.007	5.842	8.128	9.245	9.569				
Global Information Grid Systems Engineering & Support/T62	3.104	2.571	2.719	2.780	2.844	2.953	3.066				
Modeling and Simulation/E65	0	2.817	2.902	3.062	5.284	6.292	6.503				
UHF SATCOM Integrated Waveform/KCD	0	0	28.386	0	0	0	0				

A. <u>Mission Description and Budget Item Justification</u>: This program element funds efforts involving the development and fielding of Global Information Grid (GIG) Enterprise Services, including engineering support for the resolution of critical interoperability and integration issues, and assessment of C4I initiatives that will ensure compatibility, interoperability, and technical integration.

Global Information Grid (GIG) Systems Engineering and Support, Project T62, involves the definition and implementation of various aspects of evolving the GIG. It will strengthen critical GIG foundation technologies and programs through the application of precise, short-term, technical, engineering and integration expertise.

Modeling and Simulation, Project E65, provides architecture, systems engineering, and modeling and simulation functions for DISA and its customers, ensuring integrated capabilities to fulfill warfighter mission requirements. Specifically, it performs a broad spectrum of activities for the DoD communications planning and investment strategy, to include: application assessments; contingency planning; network capacity planning and diagnostics; evaluation of horizontal (cross-cutting) operational and system architectures; and systems-level modeling and simulation. Modeling and Simulation develops across-theater information awareness for Combatant Commands through application solutions for integrated networks, to include DoD's missions in Iraq and Afghanistan and the Defense Information Systems Network (DISN), by: (1) supporting the development and consistency of DoD's GIG architectures and ensuring that critical GIG programs are consistent with them and with each other; (2) developing standardized DISA systems engineering and integration processes to improve systems integration across DISA for all DISA-developed communication systems; and (3) providing the underlying modeling and simulation and analytical support for end-to-end DISA and DoD systems engineering and assessment. These modeling and simulation operations are to provide DoD decision-makers, from the Office of the Secretary of Defense (OSD) level to the warfighter, with services and a suite of tools capable of identifying key

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
RDT&E, Defense-Wide/07	Defense Information Infrastructure Engineering &
	Integration / PE 0302019K

points of impact on DoD command and control information systems and recommending tradeoffs within the GIG configuration with regard to prioritized performance, availability, and security.

The Ultra High Frequency (UHF) Satellite Communications (SATCOM) Integrated Waveform (IW) System, Project KCD, is developed by DISA as an improvement to the present UHF SATCOM waveforms. UHF SATCOM provides the US Department of Defense (DoD) and other US Government departments and agencies with critical beyond line-of-sight communications for tactical and special forces operations. UHF SATCOM is the only commercial or military system that enables users to operate communications on-the-move and under all weather conditions and cover. The present UHF SATCOM constellation is aging and the replacement system, the Mobile User Objective System (MUOS), will not provide initial operational capability (IOC) until 2010 and full operational capability (FOC) until 2014, at the earliest. The UHF SATCOM Integrated Waveform will more than double the UHF SATCOM capacity in accesses and data throughput. The majority of fielded UHF SATCOM terminals are software programmable and can be upgraded to IW by updating the software in the field.

This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

### B. Program Change Summary:

	FY05	FY06	<u>FY07</u>
Previous President's Budget	2.437	5.466	5.545
Current Submission	3.104	5.388	34.007
Total Adjustments	0.667	078	28.462

Change Summary Explanation:

FY 2005 changes are due to below threshold reprogramming.

FY 2006 changes are due to undistributed Congressional Reductions to the Defense-Wide RDT&E appropriation.

FY 2007 increase is due principally to funding for the new project UHF SATCOM Integrated Waveform.

Exhibit R-2a, RDT&E Project Justifica	xhibit R-2a, RDT&E Project Justification						
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NAME A	ND NUMBER	
RDT&E, Defense-Wide/07	DII Engineering	& Integrat	ion / PE 0	302019K	Global Informa	tion Grid (G	IG)
					Systems Engine	ering and Su	pport/ T62
COST (in millions)	FY 05	FY 06	FY07	FY08	FY09	FY10	FY11
Project Cost	3.104	2.571	2.719	2.780	2.844	2.953	3.066

#### A. Mission Description and Budget Item Justification:

Efforts under this project will strengthen critical Global Information Grid (GIG) technologies and programs through the establishment of DISA technology strategies, and through the implementation of those strategies in DISA programs and services. This engineering and technical expertise will be applied in conducting technical reviews of all solutions, products, and services to determine compliance with overall DISA strategy, and to evaluate soundness of technical approach. This effort will support end-to-end reviews of all solutions, programs, and services to ensure all are consistent with GIG architecture and standards. This project supports definition of various aspects of evolving the GIG, including developing system architecture constructs for the GIG and its components, providing engineering guidance for component evolution including incorporation of new technology from industry. Subtasks are assigned based on need to address specific technical problems, mitigate risks, and take advantage of cross-program synergies.

### B. Accomplishments/Planned Program:

 FY 05
 FY 06
 FY 07

 Subtotal Cost
 3.104 2.571 2.719

Engineering and technical support of DISA programs that implement the GIG involves technical research and analysis of state-of-the-art and emerging technologies, security, architectures, and application frameworks. This involves the identification and recommendation of innovative engineering techniques, technologies and products effort. It includes the support of information exchanges with the Services, OSD, the Combatant Commanders, and the Joint Staff to identify opportunities, issues, and solutions to improve DISA products; and facilitation and harmonization of cross-corporate programs relative to DISA programs and the GIG.

C. Other Program Funding Summary: O&M, DW

FY05	FY06	FY07	<u>FY08</u>	FY09	FY10	FY11
0.369	0.833	0.958	0.950	0.942	0.935	0.894

D. <u>Acquisition Strategy</u>: MITRE, McLean, VA, This project provides technical, engineering, and integration expertise to the DISA Chief Technology Officer (CTO) in support of the major GIG components, which include: GIG Enterprise Services (GES), GIG Bandwidth Expansion (GIG-BE), Defense Information Systems Network (DISN), Satellite Communications

Exhibit R-2a, RDT&E Project Justifica	xhibit R-2a, RDT&E Project Justification						
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NAME A	ND NUMBER	
RDT&E, Defense-Wide/07	DII Engineering	& Integrat	ion / PE 0	302019K	Global Informa	ition Grid (G	;IG)
					Systems Engine	ering and Su	pport/ T62
COST (in millions)	FY 05	FY 06	FY07	FY08	FY09	FY10	FY11
Project Cost	3.104	2.571	2.719	2.780	2.844	2.953	3.066

(SATCOM), GIG Directory Service, Global Combat Support System (GCSS), Joint Command and Control (JC2), Teleport, Global Command and Control System (GCCS), Enterprise Services Management (ESM), Information Assurance (IA), Wireless Services, Net-Centric Enterprise Services (NCES), and other related components. Through this project MITRE will support the definition and implementation of various aspects involving the GIG. MITRE will provide support to DISA in its mission of providing end-to-end systems engineering for the DoD for GIG Enterprise Services. MITRE will ensure that system integration and implementation is coordinated with other major C2 systems via its support to other C2 System Program Executive Offices.

#### E. Performance Metrics:

The Task Order is composed of multiple short-suspense technology research/exploration components with a concrete deliverable targeted at some facet of the DISA mission.

Each research initiative is produced in collaboration with a designated task subject matter specialist.

These engineering tasks are short term in nature and designed to facilitate bringing high-potential over-the-horizon technology into engineering programs supporting the Agency mission.

Engineering support is provided for CTO technical reviews of DISA programs, at least 4 reviews supported per month.

					SSIFIED	UNCLA			
				2006	DATE: February			alysis	Exhibit R-3 Cost A
		AND NUMB				GRAM ELEMENT		T ACTIVITY	APPROPRIATION/BUDG
GIG) Systems T62	rid (GIG) ort / T62				egration/PE	Engineering & Int 2019K		e/07	RDT&E, Defense-Wide
	Cost To Complete	FY07 Award <u>Date</u>	FY07 Cost	FY06 Award Date	FY06 Cost	Total PYs Cost	Performing Activity & Location	Contract Method & Type	Cost Category
Contg 16.906	Contg	Various	2.719	Various	2.571	11.616	MITRE McLean, VA	Other Than Full & Open CPFF	Engineering /Tech Services
								Open CPFF	

Exhibit R-4 Schedule Profile															Date: February 2006													
Appropriation/Budget Activity RDT&E, Defense-Wide/07			Pi Di	Program Element Number and Name DII Engineering & Integration/PE 0302				me Project Number and Name 302019K Global Information Grid (GIG) Systems Engineering and Support/T62				\$																
Fiscal Year		2	2005	;		20	06			20	07			20	800			20	09			20	10			201	1	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Technical Direction Agent (TDA)		7																										Ζ

Page 6 of 18 R-1 Line Item No. 168 UNCLASSIFIED

Exhibit R-4a Schedule Detail		I	DATE: Februa	ry 2006	у 2006						
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEM DII Engineer PE 0302019K	MENT		PROJECT I	PROJECT NAME AND NUMBER Global Information Grid (GIG) Systems Engineering and Support / T62						
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011				
Technical Direction Agent (TDA)	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q				

Exhibit R-2a, RDT&E Project Justi	DA	ATE: Februar	cy 2006	5					
APPROPRIATION/BUDGET ACTIVITY	PROGRAM	ELEMENT				PROJ	ECT NAME ANI	NUMBER	
RDT&E, Defense-Wide/07	DII Engi	neering & 1	Integration	/PE 0302019	K	Mode	ling & Simul	lation / E65	
COST (in Millions)		FY05	FY06	FY07	FY(	8	FY09	FY10	FY11
Project Cost *		0	2.817	2.902	3.0	62	5.284	6.292	6.503

- A. Mission Description and Budget Item Justification: This Modeling and Simulation project provides architecture, systems engineering and end-to-end analytical functions for DISA and its customers, ensuring integrated capabilities to fulfill warfighter mission requirements. Specifically, Modeling and Simulation performs a broad spectrum of activities for the DoD communications planning and investment strategy, to include: application assessments; contingency planning; network capacity planning and diagnostics; evaluation of horizontal (cross-cutting) operational and system architectures; setting character-oriented message standards; and systems-level modeling and simulation. Modeling and Simulation develops across-theater information awareness for Combatant Commands through application solutions for integrated networks, to include DoD's missions in Iraq and Afghanistan and the Defense Information Systems Network (DISN), by: (1) supporting the development and consistency of DoD's Global Information Grid (GIG) architectures and ensuring that critical GIG programs are consistent with them and with each other; (2) developing standardized DISA systems engineering and integration processes to improve systems integration across DISA for all DISA developed communication systems and services; and (3) providing the underlying modeling and simulation and analytical support for end-to-end DISA and DoD systems engineering and assessment. These operations are to provide DoD decision makers, from the OSD level to the warfighter, with services and a suite of tools capable of identifying key points of impact on DoD command and control information systems and recommending tradeoffs within the GIG configuration with regard to prioritized performance, availability, and security.
- \* Beginning in FY 2006 this project has been realigned from PE 0303149K. Modeling and Simulation was formerly titled Technical Integration Services. The modeling and simulation portion of Technical Integration Services has been realigned to PE 0302019K due to its direct engineering and integration support to the GIG.
- B. Accomplishments/Planned Program:

FY 2006 - Horizontal Engineering will explore, identify, and frame key end-to-end issues associated with the ability of the GIG to support the warfighter by improving system engineering decisions of DISA programs, and provide a DoD framework for assuring performance meets mission capability requirements.

Exhibit R-2a, RDT&E Project Justi	DA	ATE: Februar	y 2006	5					
APPROPRIATION/BUDGET ACTIVITY	PROGRAM	ELEMENT				PROJ	ECT NAME ANI	NUMBER	
RDT&E, Defense-Wide/07	DII Engi	neering & 1	Integration	/PE 0302019	K	Mode	ling & Simul	lation / E65	
COST (in Millions)		FY05	FY06	FY07	FY0	18	FY09	FY10	FY11
Project Cost *		0	2.817	2.902	3.0	62	5.284	6.292	6.503

FY 2007 - Horizontal Engineering will continue the development of a monitoring framework for the GIG to identify and prioritize key end-to-end issues using qualitative and quantitative methods for comparative assessment of alternative architectures in terms of system performance, mission outcome, and potential impact to DoD communication systems together with the assessment of performance management tools to improve application performance.

	FY 05	<u>FY 06</u>	FY 07
Subtotal Cost	0	1.782	1.806

FY 2006 - Modeling and Simulation Applications will provide final net-centric transitional designs for the seamless convergence of all DISN customers/services onto GIG as a result of the GIG Bandwidth Expansion (GIG-BE) project, which provides a ubiquitous, secure, and robust network. These designs will provide the detailed roadmap for DISN customers to transition to the GIG-BE by providing "power to the edge" capabilities and capacity that far exceed the existing DISN.

FY 2007 - Modeling and Simulation Applications will provide predictive modeling capability and net-centric support for the ongoing and planned major Internet Protocol (IP) services and Net-centric Enterprise Services (NCES) applications in the converged IP Services, which will improve quality of service and the ability to evaluate Service Level Agreements (SLAs) with the warfighter.

### C. Other Program Funding Summary: (\$M)

	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	<u>FY11</u>	<u>To</u> Complete	<u>Total</u> Cost
RDT&E, DW (PE0303149K)	9.848	0	0	0	0	0	0	0.000	9.848
O&M, DW	3.586	6.612	5.502	6.000	9.238	9.477	9.857	Contg	Contg

D. <u>Acquisition Strategy</u>: Uses a number of contractors for modeling support with Booz, Allen Hamilton, Inc. and OPNET Technologies being the two main providers of these services. The level of support includes network model development; software installation and maintenance; software revisions or patches; and software upgrades. These companies are

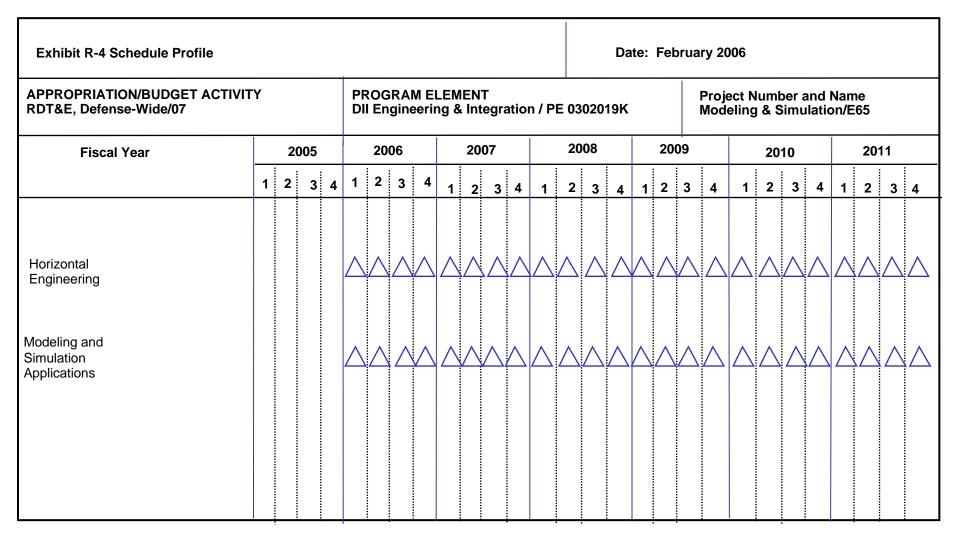
Exhibit R-2a, RDT&E Project Justi	fication		DA	<b>TE:</b> Februar	ry 2006	)			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM :	ELEMENT				PROJ	JECT NAME ANI	NUMBER	
RDT&E, Defense-Wide/07	DII Engi:	neering & I	Integration	/PE 03020191	K	Mode	eling & Simul	ation / E65	
COST (in Millions)		FY05	FY06	FY07	FY0	8	FY09	FY10	FY11
Project Cost *		0	2.817	2.902	3.00	62	5.284	6.292	6.503

uniquely qualified to provide the necessary level of technical support and services to ensure DISA uses the leading edge communication technologies.

### E. Performance Metrics:

Modeling and Simulation's systems engineering is measured by its impact on the DoD communications planning and investment strategy, with criteria based on performance of a broad spectrum of technical activities. These include application assessments; contingency planning; network capacity planning and diagnostics; system architecture evaluation; technical and operational assessments of emerging technologies; and systems-level modeling and simulation.

Exhibit R-3 Cos	t Analysis				D.F	TE: Febru	uary 2006			
APPROPRIATION/B	SUDGET ACTI	VITY PROGR	AM ELEM	ENT				PROJECT NA	AME AND	NUMBER
RDT&E, Defense-	Wide/07	DII E	ngineer	ing & Int	egration	/ PE 0302	019K	Modeling 8	& Simula	ation / E65
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Modeling and Simulation Systems Engineering and Integration	CPFF	Verizon/BBNT McLean, Va	0	0.725	02/06	0.729	02/07	Contg	Contg	1.454
Com modeling and simulation	CPFF	OPNET Tech, Inc. Bethesda, MD	0	0.416	01/06	0.460	01/07	Contg	Contg	0.876
	CPFF	Pragmatics, McLean, Va	0	0.675	01/06	0.679	01/07	Contg	Contg	1.354
	CPFF/8A	CNS, Inc Springfield, Va	0	0.400	01/06	0.400	01/07	Contg	Contg	0.800
	CPFF	Booz, Allen & Hamilton, McLean, VA	0	0.501	03/06	0.534	03/07	Contg	Contg	1.035
		Various Contracts	0	0.100	Various	0.100	Various	Contg	Contg	0.200
TOTAL			0	2.817		2.902				



Page 12 of 18 R-1 Line Item No. 168 UNCLASSIFIED

Exhibit R-4a Schedule Deta	il		DAT	E: February 2	006							
APPROPRIATION/BUDGET ACTIV	TITY PRO	GRAM ELEMENT		PROJECT	NAME AND NUMB	ER						
RDT&E, Defense-Wide/07	DII	Engineering &	Integration	/ PE 0302019K	Modeling	Modeling and Simulation / E65						
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011					
Horizontal Engineering		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q					
Modeling and Simulation		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q					
Applications												

Exhibit R-2a, RDT&E Project Justi	fication		DA	ATE: Februar	ry 2006	5			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM	ELEMENT				PRO	JECT NAME ANI	NUMBER	
RDT&E, Defense-Wide/07	DII Engi	neering & 1	Integration	/ PE 030201	9K	UHF	SATCOM Integ	grated Wavefo	orm / KCD
COST (in Millions)		FY05	FY06	FY07	FY0	18	FY09	FY10	FY11
Project Cost *		0	0	28.386	0		0	0	0

A. Mission Description and Budget Item Justification: The Ultra High Frequency (UHF) satellite communications (SATCOM) system provides the US Department of Defense (DoD) and other US Government departments and agencies critical beyond line-of-sight communications for tactical and special forces operations. UHF SATCOM is the only commercial or military system that enables users to operate communications on-the-move and under all weather conditions and cover. The present UHF SATCOM constellation is aging and the replacement system, the Mobile User Objective System (MUOS), will not provide initial operational capability (IOC) until 2010 and full operational capability (FOC) until 2014, at the earliest. The MUOS deployment is contingent on the Joint Tactical Radio System (JTRS) terminals being fielded across all services. Assuming that the MUOS and JTRS are deployed on time and all current UHF satellites continue to operate, the UHF SATCOM system is short on meeting present user needs. DISA developed the Integrated Waveform (IW) as an improvement on the present UHF SATCOM waveforms. IW implementation will more than double the UHF SATCOM capacity in accesses and data throughput. The majority of fielded UHF SATCOM terminals are software programmable and can be upgraded to IW by updating the software in the field. The Commander of US Central Command (CENTCOM) reports that for the present military operations in Iraq and Afghanistan, CENTCOM was provided additional UHF SATCOM channels from the PACOM and EUCOM apportionments. But even with these additional channels, UHF SATCOM resources were not sufficient to meet CENTCOM needs.

#### B. Accomplishments/Planned Program:

FY 2007 - By developing IW demand assignment capabilities, preplanned or ad-hoc services can be activated and deactivated by user terminals using orderwire messages. IW improves demand assigned service because the assignment is permitted across a larger pool of resources. IW is more efficient and will have more access resources available. Having more accesses, users will be able to receive a quicker response with IW than with the current Demand Assigned Multiple Access (DAMA) services. Implementing a much simpler and easier to use service-on-demand will enable warfighters to maximize the advantages of the present UHF SATCOM system. In addition, it will prepare the users for the Mobile

User Objective System (MUOS), which will be a demand assignment system. Implementing the IW capabilities in the

Exhibit R-2a, RDT&E Project Justification DATE: February 2006											
APPROPRIATION/BUDGET ACTIVITY	PROGRAM	ELEMENT				PRO	JECT NAME ANI	NUMBER			
RDT&E, Defense-Wide/07	DII Engi:	neering & 1	Integration	/ PE 030201	9K	UHF	SATCOM Integ	grated Wavefo	orm / KCD		
COST (in Millions)		FY05	FY06	FY07	FY(	8(	FY09	FY10	FY11		
Project Cost *		0	0	28.386	0		0	0	0		

fielded software-programmable terminals will provide the warfighter:

- Substantially more system capacity
- Demand assignment of preplanned services
- Support ad-hoc services
- Dynamic bandwidth allocation
- Join The NET request (Informs a user to join a NET in progress)
- Service-waiting notification (similar to call-waiting)

### C. Other Program Funding Summary: N/A

#### D. Acquisition Strategy:

Fixed price contract will be awarded for IW software development for selected UHF SATCOM terminals. Based on current military operations, the Joint Staff and STRATCOM have evaluated and recommended, which fielded terminals should be IW upgraded. The Net-Centric Functional Configuration Board endorsed the Joint Staff and STRATCOM recommended terminals for IW upgrades. DISA will lead the software development for six types of deployed UHF SATCOM terminals. The terminal list includes: the PRC-117F developed by Harris Corporation, the PSC-5C, PSC-5D and ARC-231 developed by Raytheon Corporation, and the MD-1324 and RT-1828 developed by ViaSat Corporation. In addition, the software of the channel Control Terminal (CT), developed by General Dynamics, and the Satellite Access Control (SAC) system developed by the Navy, will be upgraded to IW. The software will be certified for waveform compliance and interoperability and then will be fielded. Software installation and operating instructions will be developed to assist the UHF SATCOM users with the software upgrades and operations of the terminals.

#### E. Performance Metrics:

The system engineering for the IW waveform improvement has been completed and published in the latest revisions of information technology standards for UHF SATCOM. Integrated Waveform demonstrations using UHF SATCOM terminals have proven the performance improvement of IW, in terms of link and voice quality and capacity. The performance of the terminal software developed by the various vendors will be measured against the IW standards interoperability and performance requirements. Standards compliance and interoperability testing will be performed by the Joint Interoperability Test Command (JITC) on each and every terminal type upgraded to IW.

Exhibit R-3 Co	st Analysi	s			DAT	DATE: February 2006									
<b>APPROPRIATION/</b> RDT&E, Defense			<b>AM ELEME</b> ngineeri:	<b>NT</b> ng & Inte	egration /	PE 03020	19K			Cost         Contract           4.000         4.000           3.500         3.500           4.000         4.000           5.000         5.000           5.000         5.000           4.500         4.500           0.450         .450					
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Value of					
Deployed legacy terminals	FPAF	Harris Corp Rochester NY	0			4.000	02/07	4.000	4.000	4.000					
software development	FPAF	Raytheon Corp Ft Wayne IND	0			3.500	01/07	3.500	3.500	3.500					
	FPAF	ViaSat Corp Carlsbad Ca	0			4.000	01/07	4.000	4.000	4.000					
SCA compliant terminal software development	FPAF	TBD	0			5.000	03/07	5.000	5.000	5.000					
Channel Controller (CC) Software development	FPAF	TBD	0			5.000	02/07	5.000	5.000	5.000					
CC terminal Software development	FPAF	Gen. Dynamics Scottsdale AZ	0			4.500	02/07	4.500	4.500	4.500					
Terminal certification testing	FPAF	JITC Various Contracts	0			0.450	11/07	0.450	0.450	. 450					
Engineering & Help Desk Support	CPFF	Able Communications Sterling VA	0			1.936	01/07	1,936	1.936	1.936					
TOTAL			0			28.386				28.386					

APPROPRIATION/BUDGET ACTIV RDT&E, Defense-Wide/07	/ITY					PROGRAM ELEMENT DII Engineering & Integration / PE 0302019K Waveform/KCD								and tegr	Nan ated	ne I												
Fiscal Year		2	005			20	06			20	07			20	800			20	09			20	10			20	11	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
UHF SATCOM Integrated Waveform (IW) Software Development										$\triangle$	<u>,                                    </u>		$\triangle$	Δ	Δ													

Page 17 of 18 R-1 Line Item No. 168 UNCLASSIFIED

			UNCLASSIFI				
Exhibit R-4a Schedule Deta			DAT	E: February 20			
APPROPRIATION/BUDGET ACTIV		GRAM ELEMENT				NAME AND NUMB	
RDT&E, Defense-Wide/07	DII	Engineering &	Integration	/ PE 0302019K	UHF SATC	OM Integrated	Waveform / KCD
Schedule Profile	FY 2005	<u>FY 2006</u>	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
UHF SATCOM Integrated Waveform (IW) Software Development			1-4Q	1-3Q			