Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*							
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
Total Program Element	824.226	875.848	687.723	0.000	687.723	168.526	99.310	92.148	85.575	Continuing	Continuing
3020: *MIDS/JTRS*	26.102	12.567	20.722	0.000	20.722	7.849	7.833	2.429	0.757	Continuing	Continuing
3073: *AMF JTRS*	215.934	323.409	407.334	0.000	407.334	116.406	64.100	68.395	62.190	Continuing	Continuing
3074: *GMR JTRS*	235.516	202.718	101.404	0.000	101.404	6.043	2.283	0.852	0.032	Continuing	Continuing
3075: *HMS JTRS*	127.686	132.438	40.689	0.000	40.689	1.261	1.950	0.062	0.000	0.000	587.557
3076: *JTRS Network Enterprise Domain (JNED)*	205.525	201.131	117.574	0.000	117.574	36.967	23.144	20.410	22.596	Continuing	Continuing
9999: *Congressional Adds*	13.463	3.585	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.346

Note

In FY09-FY11, Program Element (PE) 0604280N represents the total JTRS RDT&E Budget (includes Multifunctional Information Distribution System (MIDS), Airborne and Maritime/Fixed Station (AMF) JTRS, Ground Mobile Radio (GMR) JTRS, Handheld/Manpack/Small Form Fit (HMS) JTRS, and JTRS Network Enterprise Domain (JNED)).

In FY12-FY15, Program Element (PE) 0604280N represents the Navy share (1/3) of the funding associated with all JTRS Development Projects. JTRS Common Development includes funding for: MIDS, AMF JTRS, GMR JTRS, HMS JTRS and JNED. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for one-third of the total program. Thus in FY12-15 one-third of JTRS Common Development is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.

A. Mission Description and Budget Item Justification

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. The JTRS family of products will be multifunctional, multiband, multimode, network capable, and capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 MegaHertz (MHz) to 2 GigaHertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data

media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

(AMF) AMF JTRS is a key enabler to the transformation of airborne, maritime, and land based communications toward network-centric operations. AMF JTRS will operate with legacy radios and waveforms used by civilian and military airborne, surface, subsurface, and fixed station platforms. AMF JTRS is intended to provide new radio networking capability as well as replace existing radio systems, which are facing long-term sustainment issues. AMF JTRS capabilities will be incrementally developed, with each increment building on the technological achievements of its predecessor, while providing expanded capabilities.

(MIDS) MIDS- Low Volume Terminal (LVT) is a jam-resistant, secure, digital (voice and data) information distribution system enabling rapid integrated communications, navigation and identification for tactical and command and control operations. The technical objective of the MIDS JTRS program is to transform the MIDS-LVT into a four-channel, Software Communications Architecture (SCA) compliant JTRS, while maintaining current Link-16 and tactical air navigation system (TACAN) functionality. MIDS JTRS is designed to be plug-and-play interchangeable for U.S. Navy and U.S. Air Force platforms that use MIDS-LVT, while accommodating future technologies and capabilities. Improvements such as Link-16 enhanced throughput, Link-16 frequency remapping, and programmable crypto are realized in the MIDS JTRS design. The MIDS JTRS core terminal includes three 2 MHz to 2 GHz programmable channels that allow the warfighter to use multiple waveforms in development by JNED. Total core terminal program requirements include: terminal development, F/A-18 Level 0 integration, software hosting (operating environment/waveforms) and production transition.

(GMR) JTRS GMR will provide networking capability using the Wideband Networking Waveform and Soldier Radio Waveform to connect unmanned sensors to decision makers "On-The-Move" (OTM) which will significantly reduce the decision cycle. JTRS GMR will provide the warfighter with mobile Internet-like capabilities such as voice, data, networking and video communications, as well as interoperability with current force and other JTRS radios across the battle space.

(HMS) provides the JTRS capability to meet Joint Ground Mounted, Dismounted & Embedded Radio Requirements. Increment 1, Phase 1 will develop Small-Form-Fit (SFF) SFF-A (1 and 2 Channel), SFF-D and AN/PRC-154 Rifleman Radio running Soldier Radio Waveform (SRW) for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop the 2 Channel Manpack, SFF-B and SFF-J, and 2 Channel Handheld. Phase 2 radios are all Type 1 compliant for use in a classified environment running Ultra High Frequency (UHF), Satellite Communications (SATCOM), High Frequency (HF), Enhanced Position Location and Reporting System (EPLRS), Soldier Radio Waveform (SRW), Mobile User Objective System (MUOS), and Single Channel Ground to Air Radio System (SINCGARS) waveforms.

(JNED) JNED is responsible for the development and delivery of software-defined, legacy radio waveforms and networking waveforms that support Net-Centric operational warfare at sea, air and on the ground. Networking waveforms extend the Global Information Grid (GIG) to the last tactical mile and to the warfighter. The JNED team is responsible for (1) the overall management and oversight of the JTRS Waveform program, (2) development, validation, and evolution of a common JTRS Software Communications Architecture (SCA), (3) development and evolution of waveform software applications, (4) development of software cryptographic algorithms

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy	DATE: February 2010
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and equipment applications, (5) testing and certification of JTRS waveforms, network services, network management, and software products, and (6) JTRS networking and network management software components. Services are responsible for acquiring and fielding host radio hardware and integrating JTRS into Service platforms.

JUSTIFICATION FOR BUDGET ACTIVITY:
This program is funded under ENGINEERING AND MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	845.057	876.374	0.000	0.000	0.000
Current President's Budget	824.226	875.848	687.723	0.000	687.723
Total Adjustments	-20.831	-0.526	687.723	0.000	687.723
• Congressional General Reductions		-3.650			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	-0.476			
• Congressional Adds		3.600			
• Congressional Directed Transfers		0.000			
• Reprogrammings	2.775	0.000			
• SBIR/STTR Transfer	-23.606	0.000			
• Program Adjustments	0.000	0.000	687.723	0.000	687.723

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2009	FY 2010
Project: 9999: *Congressional Adds*		
Congressional Add: *JTRS Handheld Small Form Radio Sys*	0.000	3.585
Congressional Add: *Digital Modular Radio (DMR)*	1.995	0.000
Congressional Add: *Army Tactical Radios for FCS*	11.468	0.000
Congressional Add Subtotals for Project: 9999	13.463	3.585
Congressional Add Totals for all Projects	13.463	3.585

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy	DATE: February 2010
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Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3020: *MIDS/JTRS*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3020: *MIDS/JTRS*	26.102	12.567	20.722	0.000	20.722	7.849	7.833	2.429	0.757	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY09-FY11, Project No. 3020 represents the total Multifunctional Information Distribution System (MIDS) RDT&E budget for those years. Beginning in FY10, all references to MIDS funding includes funding for both MIDS-LVT and MIDS JTRS.

In FY12-FY15, Project No. 3020 represents the Navy share of the funding associated with MIDS JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program. The MIDS funding for the Army and Air Force is represented in PE 0604280A and PE 0604280F, respectively.

A. Mission Description and Budget Item Justification

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. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 MegaHertz (MHz) to 2 GigaHertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

(MIDS) MIDS- Low Volume Terminal (LVT) is a jam-resistant, secure, digital (voice and data) information distribution system enabling rapid integrated communications, navigation and identification for tactical and command and control operations. The technical objective of the MIDS JTRS program is to transform the MIDS-LVT into a four-channel, Software Communications Architecture (SCA) compliant JTRS, while maintaining current Link-16 and tactical air navigation system (TACAN) functionality. MIDS JTRS is designed to be plug-and-play interchangeable for U.S. Navy and U.S. Air Force platforms that use MIDS-LVT, while accommodating future technologies and capabilities. Improvements such as Link-16 frequency remapping and programmable crypto are also realized in the MIDS JTRS design. The MIDS JTRS core terminal includes three 2 MHz to 2 GHz programmable channels that allow the warfighter to use multiple waveforms in development by JNED. Total core terminal program requirements include: terminal development, F/A-18 Level 0 integration, software hosting (operating environment/waveforms) and production transition.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MIDS/JTRS	25.967	12.567	20.722	0.000	20.722
FY 2009 Accomplishments: Continued MIDS JTRS Phase 2B development and qualification of the Core terminal program. Obtained Core terminal certifications for Communications Security (COMSEC), Electromagnetic Compatibility (EMC) Features, Air Worthiness, SCA compliance and joint interoperability. Conducted Government testing. Provided MIDS systems engineering, COMSEC, logistics, airborne networking, configuration and data management and program management. Completed F/A-18 Level 0 platform integration, test and evaluation and supported equipment development. *FY 2010 Plans:* Receive Limited Production & Fielding decision for Core Terminal program. Provide development and implementation of a Crypto Modernization (CM) capability for MIDS, a mandate required by the NSA, that will replace or update several hardware, software and firmware components within the MIDS terminal. Provide Frequency Remapping development and enhancements, a required Department of Transportation (DOT) mandate to enable the continued use of MIDS Link-16 to remap at least 14 of its 51 data transmission and receipt time slots to frequencies which do not interfere with current and planned Federal Aviation Administration (FAA) safety of flight systems. Provide MIDS systems engineering, COMSEC, logistics, airborne networking, configuration and data management and program management. *FY 2011 Base Plans:* Continue development and implementation of a Crypto Modernization (CM) capability for MIDS. Provide MIDS systems engineering, COMSEC, logistics, airborne networking, and configuration and data management.					
Acquisition Workforce Fund	0.135	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Funded acquisition workforce fund.					
Accomplishments/Planned Programs Subtotals	26.102	12.567	20.722	0.000	20.722

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEA/0604280A: *MIDS JTRS*	0.000	0.000	0.000	0.000	0.000	5.269	4.692	0.654	0.278	Continuing	Continuing
• RDTEF/0604280F: *MIDS JTRS*	0.000	0.000	0.000	0.000	0.000	17.949	13.622	2.429	0.849	Continuing	Continuing
• O&M, 4A6M: *Service Wide comms (MIDS JTRS)*	0.000	14.581	14.510	0.000	14.510	15.057	15.015	15.141	15.609	Continuing	Continuing
• O&M, 4B7N: *Space and Electronic Warfare Systems (MIDS LVT)*	3.511	3.668	3.769	0.000	3.769	3.497	3.516	3.565	3.666	Continuing	Continuing

D. Acquisition Strategy

(MIDS JTRS) MIDS JTRS development was initiated as a major modification to the MIDS-LVT using an Engineering Change Proposal to the existing production contracts. Development efforts include the Phase 2B Core terminal. The U.S. prime contractors from the MIDS-LVT program (Data Link Solutions and ViaSat, Inc.) will cooperatively design and develop the Core terminal. Each prime contactor will build and qualify Production Verification Terminals. The U.S. will implement a continuous competition strategy between DLS and ViaSat that will be maintained throughout the MIDS JTRS production phase. This strategy was successfully used on MIDS-LVT production. The FY11 budget supports development and implementation of Crypto Modernization and Frequency Remapping capabilities as well as MIDS system engineering and technical support to the program.

E. Performance Metrics

The five ACAT ID JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Example metrics are: the number of requirements and the number of use cases required for design are estimated

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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during the requirement and design phase and analyzed for trend-actual vs. scheduled; the software lines of code (SLOC) counts are used to determine progress during the coding phase; and the execution of test cases as well as trouble reports are monitored during the integration and test phase. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify the quality and progress of each software product's development over time. Additionally, MIDS employs Earned Value Metrics to monitor contract performance on its Prime Development Contracts.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
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Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MIDS JTRS HW/SW (Phase 2B Core)1	C/CPIF	DLS Cedar Rapids, IA	120.134	0.000		0.000		0.000		0.000	0.000	120.134	120.134
MIDS JTRS HW/SW (Phase 2B Core)	C/CPIF	ViaSat Inc Carlsbad, CA	125.570	0.000		0.000		0.000		0.000	0.000	125.570	125.570
MIDS JTRS CM and MIDS-LVT CM and ET1	C/Various	DLS Cedar Rapids	0.000	5.779	Jan 2010	9.781	Nov 2010	0.000		9.781	Continuing	Continuing	Continuing
MIDS JTRS CM and MIDS-LVT CM and ET	C/Various	ViaSat Inc Carlsbad, CA	0.000	5.779	Jan 2010	9.781	Nov 2010	0.000		9.781	Continuing	Continuing	Continuing
MIDS JTRS HW/SW (Phase 2C TTNT JPCP) DLS	C/CPFF	DLS Cedar Rapids	11.667	0.000		0.000		0.000		0.000	0.000	11.667	11.667
MIDS JTRS HW/SW (Phase 2C TTNT JPCP) Via	C/CPFF	ViaSat Inc Carlsbad, CA	5.548	0.000		0.000		0.000		0.000	0.000	5.548	5.548
MIDS JTRS Production Transition dls	C/FFP	DLS Cedar Rapids	18.771	0.000		0.000		0.000		0.000	0.000	18.771	18.771
MIDS JTRS Production Transition via	C/FFP	ViaSat Inc. Carlsbad, CA	2.768	0.000		0.000		0.000		0.000	0.000	2.768	2.768
MIDS JTRS Preoperational Support dls	C/CPFF	DLS Cedar Rapids	0.767	0.000		0.000		0.000		0.000	0.000	0.767	0.767
MIDS JTRS Preoperational Support via	C/CPFF	ViaSat Inc. Carlsbad, CA	0.163	0.000		0.000		0.000		0.000	0.000	0.163	0.163
	C/FFP	DLS Cedar Rapids	1.383	0.000		0.000		0.000		0.000	0.000	1.383	1.383

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
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Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MIDS JTRS Spec. Development (Phase 2A) dls													
MIDS JTRS Spec. Development (Phase 2A) via	C/FFP	ViaSat Inc. Carlsbad, CA	0.704	0.000		0.000		0.000		0.000	0.000	0.704	0.704
MIDS JTRS Proposal Prep (Phase 2B Core) dls	C/FFP	DLS Cedar Rapids	0.600	0.000		0.000		0.000		0.000	0.000	0.600	0.600
MIDS JTRS Proposal Prep (Phase 2B Core) via	C/FFP	ViaSat Inc. Carlsbad, CA	1.922	0.000		0.000		0.000		0.000	0.000	1.922	1.922
		Subtotal	289.997	11.558		19.562		0.000		19.562			

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
F/A-18 Level 0 Development Support (Unique) cl	WR	NAWS, China Lake Ridgecrest, CA	1.526	0.000		0.000		0.000		0.000	0.000	1.526	1.526

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
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Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
F/A-18 Level 0 Integrated Logistics Suppor (Unique) pax	WR	NAWC Pax River, MD	0.412	0.000		0.000		0.000		0.000	0.000	0.412	0.412
		Subtotal	1.938	0.000		0.000		0.000		0.000	0.000	1.938	1.938

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
F/A-18 Level 0 Developmental Test & Evaluation (Unique)	WR	NAWC Pax River, MD	5.409	0.000		0.000		0.000		0.000	0.000	5.409	5.409
F/A-18 Level 0 OperationalTest & Evaluation (Unique)	WR	NAWS China Lake Ridgecrest, CA	1.028	0.000		0.000		0.000		0.000	0.000	1.028	1.028
F/A-18 Test Assets dsl	C/FFP	DSL Cedar Rapids, IA	8.850	0.000		0.000		0.000		0.000	0.000	8.850	8.850
F/A-18 Test Assets via	C/FFP	ViaSat, Inc Carlsbad, CA	7.365	0.000		0.000		0.000		0.000	0.000	7.365	7.365
* F/A-18 EDMs dsl	C/FFP	DLS Cedar Rapids, IA	2.740	0.000		0.000		0.000		0.000	0.000	2.740	2.740

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
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Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
* F/A-18 EDMs via	C/FFP	ViaSat, Inc. Carlsbad, CA	2.475	0.000		0.000		0.000		0.000	0.000	2.475	2.475
Government Testing	WR	SSC San Diego, CA	1.745	0.000		0.000		0.000		0.000	0.000	1.745	1.745
Engineering Support and Labor/SCS Changes	WR	NAWS China Lake Ridgecrest, CA	10.519	0.000		0.000		0.000		0.000	0.000	10.519	10.519
NAVAIR Labor	WR	NAWC Pax River, MD	4.231	0.000		0.000		0.000		0.000	0.000	4.231	4.231
ECP 6277 Preparation	WR	NAWC Pax River, MD	1.963	0.000		0.000		0.000		0.000	0.000	1.963	1.963
		Subtotal	46.325	0.000		0.000		0.000		0.000	0.000	46.325	46.325

Remarks

Items marked with an asterisk (*) designate Navy unique tasks.

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPFF	General Dynamics/Syntek San Diego, Ca	15.145	0.000		0.000		0.000		0.000	0.000	15.145	15.145

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3020: *MIDS/JTRS*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Workforce Acquisition Fund	C/FP	Not Specified Not Specified	0.135	0.000		0.000		0.000		0.000	0.000	0.135	0.135
Travel	C/FP	Not Specified Not Specified	1.020	0.209		0.335		0.000		0.335	0.000	1.564	1.564
Government Engineering	WR	Various Not Specified	21.745	0.800		0.825		0.000		0.825	0.000	23.370	23.370
Airborne Networking Support	WR	SSC San Diego, Ca	1.313	0.000		0.000		0.000		0.000	0.000	1.313	1.313
Program Management Support	Various/ CPFF	Booz Allen Hamilton/SSC San Diego, Ca	8.146	0.000		0.000		0.000		0.000	0.000	8.146	8.146
		Subtotal	47.504	1.009		1.160		0.000		1.160	0.000	49.673	49.673

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	385.764	12.567		20.722		0.000		20.722			

Remarks

In PYs-FY11, Project No. 3020 represents the total MIDS JTRS RDT&E budget for those years.
In FY12-FY13, Project No. 3020 represents the Navy share of the funding associated with MIDS JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program. MIDS funding for the Army and Air Force is represented in PE 0604280A and PE 0604280F, respectively.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*	**PROJECT** 3020: *MIDS/JTRS*

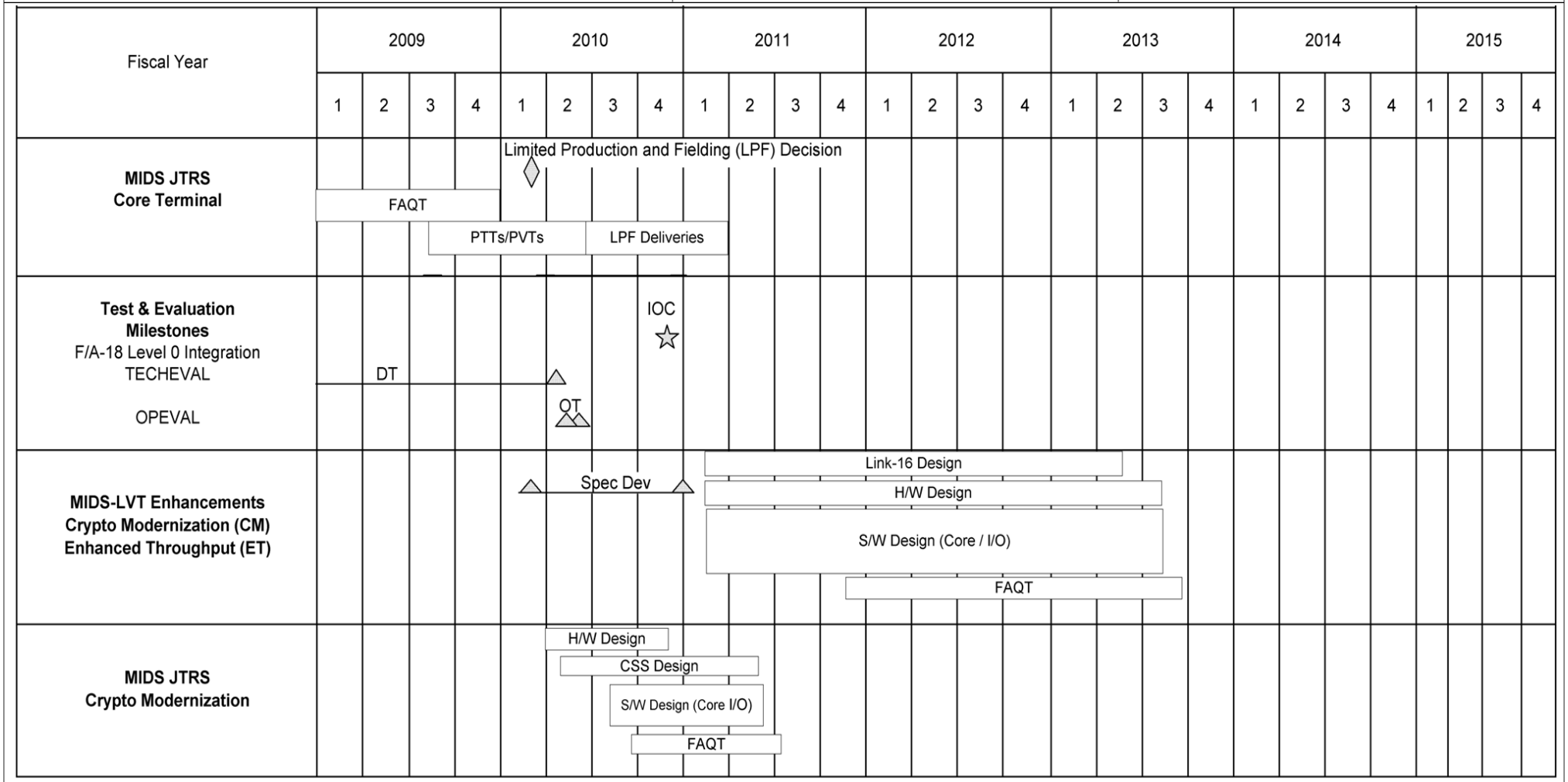

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3020: *MIDS/JTRS*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
MIDS JTRS Core Terminal: Phase 2B-Contractor Testing (FAQT)	1	2009	4	2009
MIDS JTRS Core Terminal: Phase 2B-Limited Fielding and Production Decision	1	2010	1	2010
MIDS JTRS Core Terminal: Phase 2B -Government Testing	2	2010	3	2010
MIDS JTRS Core Terminal: Phase 2B-Production Verification Terminal Delivery	4	2009	4	2009
MIDS JTRS Core Terminal: Phase 2B-Production Transition Terminal Delivery	3	2009	2	2010
MIDS JTRS Core Terminal: Phase 2B-Full Rate Production Decision	3	2010	3	2010
MIDS JTRS Core Terminal: Test and Evaluation-Technical Evaluation (TECHEVAL)	1	2009	4	2009
MIDS JTRS Core Terminal: Test and Evaluation-Operational Evaluation (OPEVAL)	1	2010	2	2010
MIDS JTRS Core Terminal: Test and Evaluation-Initial Operational Capability (IOC)	4	2010	4	2010
MIDS-LVT Enhancements: Crypto Modernization (CM) -Spec Development	2	2010	4	2010
MIDS-LVT Enhancements: CM -Link-16 Design	1	2011	2	2013
MIDS-LVT Enhancements: CM -H/W Design	1	2011	3	2013
MIDS-LVT Enhancements: CM -S/W Design	1	2011	3	2013
MIDS-LVT Enhancements: CM -FAQT	4	2011	3	2013
MIDS JTRS Crypto Modernization: H/W Design	2	2010	4	2010
MIDS JTRS Crypto Modernization: CSS Design	2	2010	2	2011
MIDS JTRS Crypto Modernization: S/W Design	3	2010	2	2011
MIDS JTRS Crypto Modernization: FAQT	3	2010	3	2011

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3073: *AMF JTRS*	215.934	323.409	407.334	0.000	407.334	116.406	64.100	68.395	62.190	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY09-FY11, Project No. 3073 represents the total AMF JTRS RDT&E budget for those years.

In FY12-FY15, Project No. 3073 represents the Navy share (1/3) of the funding associated with AMF JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for one-third of the total program. Thus, one-third of JTRS Common Development is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.

A. Mission Description and Budget Item Justification

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. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 MegaHertz (MHz) to 2 GigaHertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

(AMF) AMF JTRS is a key enabler to the transformation of airborne, maritime, and land based communications toward network-centric operations. AMF JTRS will operate with legacy radios and waveforms used by military airborne, surface, subsurface, and fixed station platforms. AMF JTRS is intended to provide new radio networking capability as well as replace existing radio systems, which are facing long-term sustainment issues. AMF JTRS capabilities will be incrementally developed, with each increment building on the technological achievements of its predecessor, while providing expanded capabilities.

B. Accomplishments/Planned Program ($ in Millions)

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
AMF JTRS	214.895	323.409	407.334	0.000	407.334
FY 2009 Accomplishments: Continued SDD design activities leading up to Critical Design Review (CDR); continued EDM hardware and non-waveform software development and integration; continued waveform porting activities; continued platform integration development for AMF test program; and NSA information assurance activities and verification of design. Continued development engineering and management support for associated JTR system components. *FY 2010 Plans:* Conduct Critical Design Review in 1st quarter FY10. Continue EDM hardware and non-waveform software development and integration; continue waveform porting activities; continue platform integration development for AMF test program; conduct initial hardware and software demonstration with the AMF JTR Set-SA and AMF JTR Set-M/F; and continue NSA information assurance activities and verification of design. Continue development engineering and management support for associated JTR system components. Conduct Contractor Development Test Readiness Review for AMF JTR Set-SA. *FY 2011 Base Plans:* Continue EDM hardware and non-waveform software development and integration; continue waveform porting activities; deliver AMF JTR Set-SA and AMF JTR Set-M/F EDMs; conduct Contractor Development Test Readiness Review for AMF JTR Set-MF; continue platform integration development for AMF test program; conduct System Verification Review/Production Readiness Review for AMF JTR Set-SA; conduct Integrated Test Airborne B (ITA B); conduct Integrated Test Maritime B (ITM B); prepare for Milestone C; and continue NSA information assurance activities and verification of design. Continue development engineering and management support for associated JTR system components.					
Acquisition Workforce Fund	1.039	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Funded acquisition workforce fund.					
Accomplishments/Planned Programs Subtotals	215.934	323.409	407.334	0.000	407.334

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEA/0604280A: *AMF JTRS*	0.000	0.000	0.000	0.000	0.000	114.398	67.967	18.488	1.320	Continuing	Continuing
• RDTEF/0604280F: *AMF JTRS*	0.000	0.000	0.631	0.000	0.631	113.593	64.404	23.172	1.304	Continuing	Continuing

D. Acquisition Strategy

The FY11 budget supports the JTRS AMF Engineering Manufacturing and Development (EMD) (formerly SDD, changed as a result of 5000.2) efforts. A joint AF/ Navy/Army team manages the development of a common core radio design that will be the basis for satisfying the AMF requirements. AMF completed Pre-System Development and Demonstration (SDD) contracts in early FY07, which were awarded to two competing vendors in late FY04. These efforts included System, Hardware, and Software Development reviews, Preliminary Design Reviews and technical risk reduction activities. The AMF program awarded the SDD contract on March 28, 2008. This effort is leveraging technical solutions derived from efforts resulting from the Pre-SDD contracts as well as from JPEO Enterprise activities. A Critical Design Review (CDR) was completed 1st Qtr FY10. EMD continues in FY11 and FY12 for the AMF JTRS system Engineering Development Models (EDMs), associated testing and integration, development engineering and management support for associated JTR system components.

E. Performance Metrics

The five ACAT 1D JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Example metrics are: the number of requirements and the number of use cases required for design are estimated during the requirement and design phase and analyzed for trend-actual vs. scheduled; the software lines of code (SLOC) counts are used to determine progress during the coding phase; and the execution of test cases as well as trouble reports are monitored during the integration and test phase. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*

the quality and progress of each software product's development over time. Additionally, AMF employs Earned Value Metrics to monitor contract performance on the Prime Development Contract.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MIDS JTRS HW/SW (Phase 2A/2B Core) dls	C/CPIF	DLS Cedar Rapids, IA	8.563	0.000		0.000		0.000		0.000	0.000	8.563	8.563
MIDS JTRS HW/SW (Phase 2A/2B Core) via	C/CPIF	ViaSat Inc Carlsbad, CA	4.078	0.000		0.000		0.000		0.000	0.000	4.078	4.078
AMF JTRS Development - JTR System (Pre-SDD) Boeing	C/CPFF	The Boeing Co Anaheim, CA	45.603	0.000		0.000		0.000		0.000	0.000	45.603	45.603
AMF JTRS Development - JTR System (Pre-SDD) LM	C/CPFF	Lockheed Martin Manassas, VA	45.335	0.000		0.000		0.000		0.000	0.000	45.335	45.335
AMF JTRS Development - JTR SET (SDD) LM	C/CPIF	Lockheed Martin Manassas, VA	267.005	242.300	Oct 2009	191.500	Oct 2010	0.000		191.500	Continuing	Continuing	Continuing
AMF JTRS - Requirements Planning and Risk Reduction	WR	Various Not Specified	8.662	38.436	Oct 2009	81.657	Oct 2010	0.000		81.657	Continuing	Continuing	Continuing
AMF JTRS - Systems Engineering	WR	Various Not Specified	78.814	15.049	Oct 2009	17.803	Oct 2010	0.000		17.803	Continuing	Continuing	Continuing
Systems Engineering - JTRS Implementation-Navy Unique	WR	Various Not Specified	15.634	0.000		0.000		0.000		0.000	0.000	15.634	15.634
H/W Development: DMR HF Power Amplifier	C/FFP	GDDS Not Specified	4.901	0.000		0.000		0.000		0.000	0.000	4.901	4.901
Systems Engineering - JTF WARNET	WR	Various Not Specified	7.481	0.000		0.000		0.000		0.000	0.000	7.481	7.481
JTRS HMS Design, Development	C/CPAF		0.000	0.000		28.666	Oct 2010	0.000		28.666	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
and Manufacture of Engineering Development Models (EDMs)		General Dynamics C4 Systems Scottsdale, AZ											
		Subtotal	486.076	295.785		319.626		0.000		319.626			

Remarks

JTF Warnet and DMR are no longer funded on this project.

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF JTRS - Acquisition, and ILS Support	WR	Various Not Specified	15.456	7.676	Oct 2009	7.571	Oct 2010	0.000		7.571	Continuing	Continuing	Continuing
Software Dev: DMR Build 6.4	C/FFP	GDDS Not Specified	12.861	0.000		0.000		0.000		0.000	0.000	12.861	12.861
		Subtotal	28.317	7.676		7.571		0.000		7.571			

Remarks

DMR is no longer funded on this project.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF JTRS - Test and Evaluation and Test Support	WR	Various Not Specified	24.913	14.280	Oct 2009	75.217	Oct 2010	0.000		75.217	Continuing	Continuing	Continuing
DMR T&E (FOTE) SD	WR	SSC San Diego, CA	1.724	0.000		0.000		0.000		0.000	0.000	1.724	1.724
DMR T&E (FOTE) CHARL	WR	SSC Charleston, SC	1.732	0.000		0.000		0.000		0.000	0.000	1.732	1.732
		Subtotal	28.369	14.280		75.217		0.000		75.217			

Remarks

DMR is no longer funded on this project.

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF Business Operations Management and Support	WR	Various Not Specified	19.831	5.668	Oct 2009	4.920	Oct 2010	0.000		4.920	Continuing	Continuing	Continuing
Acquisition Workforce Fund - 2009	C/FP	Not Specified Not Specified	1.039	0.000		0.000		0.000		0.000	0.000	1.039	1.039
		Subtotal	20.870	5.668		4.920		0.000		4.920			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks													

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	563.632	323.409		407.334		0.000		407.334			

Remarks

PY column only includes the Navy portion of the budget for AMF JTRS. Prior to FY07, Air Force AMF JTRS funding resided in Air Force PE 0604280F, Project 5068. Prior to FY07, Navy AMF JTRS funding resided in this Navy PE, Project 3073. FY07, FY08 and FY09 PYs represent the total AMF JTRS RDT&E budget for those years.

In FY10 and FY11, Project No. 3073 represents the total AMF JTRS RDT&E budget.

In FY12-15 Project No. 3073 represents one-third of the total AMF JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of AMF is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

Exhibit R-4, **RDT&E Schedule Profile:** PB 2011 Navy			**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*	**PROJECT** 3073: *AMF JTRS*	

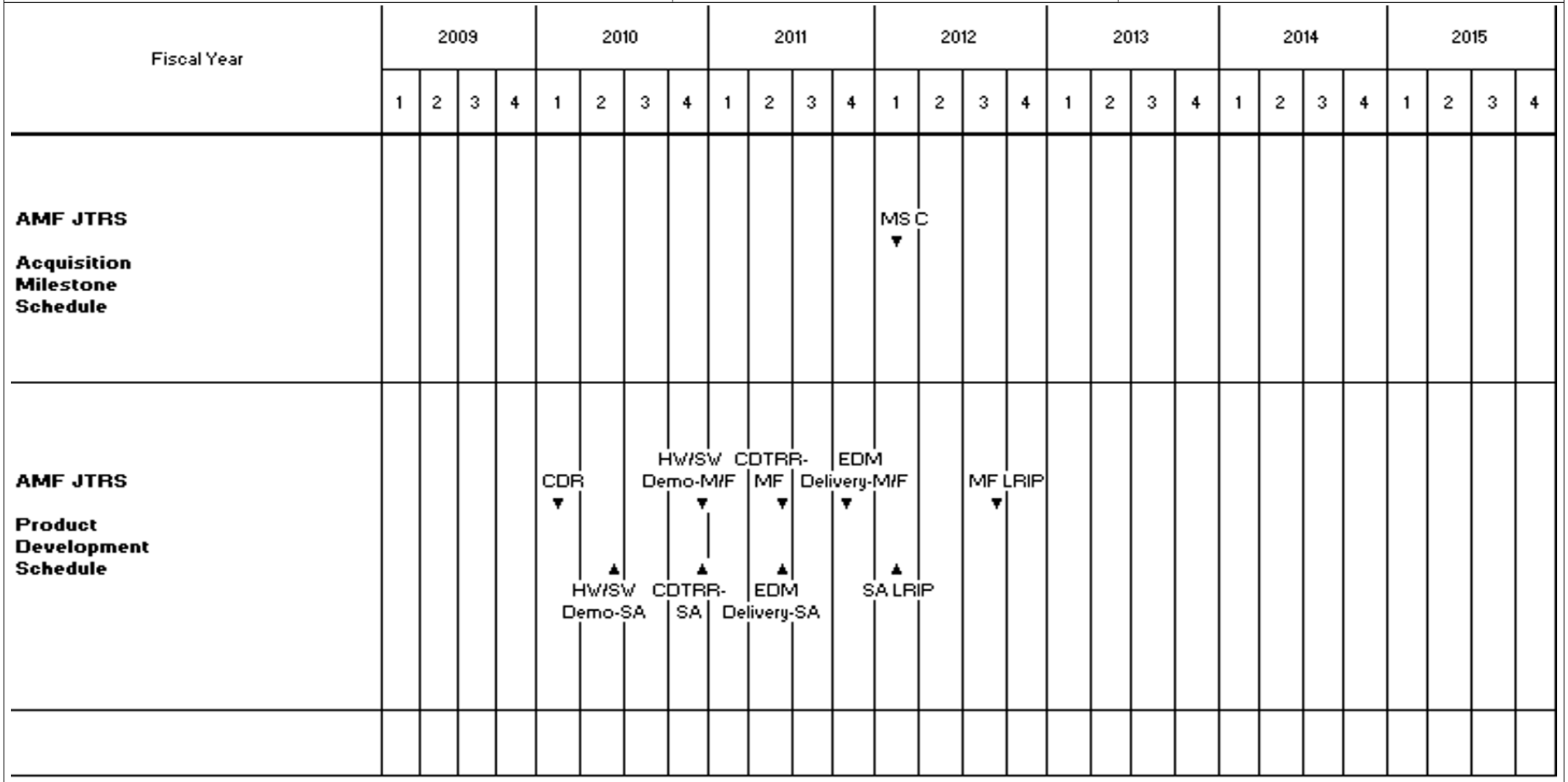

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
Critical Design Review (CDR)	1	2010	1	2010
Initial HW/SW Demonstration - SA (IHSD-SA)	2	2010	2	2010
Contractor Development Test Readiness Review - SA (CDTRR-SA)	4	2010	4	2010
Initial HW/SW Demonstration - M/F (IHSD-MF)	4	2010	4	2010
Eng Dev Model (EDM) Delivery-SA	2	2011	2	2011
Contractor Development Test Readiness Review - MF (CDTRR-MF)	2	2011	2	2011
EDM Delivery-M/F	4	2011	4	2011
Milestone C (MS C)	1	2012	1	2012
Low-Rate Initial Production I - SA (LRIP-SA)	1	2012	1	2012
Low-Rate Initial Production I - MF (LRIP-MF)	3	2012	3	2012

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3074: *GMR JTRS*	235.516	202.718	101.404	0.000	101.404	6.043	2.283	0.852	0.032	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY09-FY11, Project No. 3074 represents the total Ground Mobile Radio (GMR) JTRS RDT&E budget for those years.

In FY12-FY15, Project No. 3074 represents the Navy share (1/3) of the funding associated with GMR JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for one-third of the total program. Thus, one-third of JTRS Common Development is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.

A. Mission Description and Budget Item Justification

JTRS is the Department of Defense (DoD) family of common that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 MegaHertz (MHz) to 2 GigaHertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

(GMR) JTRS GMR will provide networking capability using the Wideband Networking Waveform and Soldier Radio Waveform to connect unmanned sensors to decision makers "On-The-Move" (OTM) which will significantly reduce the decision cycle. JTRS GMR will provide the warfighter with mobile Internet-like capabilities such as voice, data, networking and video communications, as well as interoperability with current force and other JTRS radios across the battle space using new networking Waveforms and current Waveforms.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
GMR JTRS	234.349	202.718	101.404	0.000	101.404

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Supported the design, development, manufacture and delivery of GMR EDMs, technical support, and start of the Production Qualification Test (PQT). *FY 2010 Plans:* Supports the design, development, manufacture and delivery of GMR EDMs, technical support, System Integration Test (SIT), Limited User Test (LUT), and completion of PQT. *FY 2011 Base Plans:* Complete development and support Multi-service Operational Test and Evaluation (MOT&E) preparation and National Security Agency (NSA) Certification.					
Acquisition Workforce Fund *FY 2009 Accomplishments:* Funded acquisition workforce fund.	1.167	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	235.516	202.718	101.404	0.000	101.404

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEA/0604280A: *GMR JTRS*	0.000	0.000	0.000	0.000	0.000	6.372	2.500	0.970	0.129	Continuing	Continuing
• RDTEF/0604280F: *GMR JTRS*	0.000	0.000	0.000	0.000	0.000	6.327	2.458	1.000	0.127	Continuing	Continuing
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	571.542

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEA/0604805A: *JTRS Cluster 1/ GMR*											

D. Acquisition Strategy

This project supports the JTRS GMR SDD efforts. After a Milestone (MS) B Decision in 3QFY02, the GMR development effort was awarded to develop multichannel ground and airborne configurations (airborne is now realigned under AMF). The JTRS GMR supports an evolutionary acquisition strategy and was based on an aggressive acquisition schedule. In June 2002, a Cost Plus Award Fee (CPAF) contract was competitively awarded to develop or acquire numerous SCA compliant waveforms, define common form-fit-function configurations for vehicular versions of the JTRS hardware, and successfully port 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 the JNED. A software reprogrammable radio providing the warfighter with the multiband and multimode capability, networkable radio system which provides simultaneous voice, data and video communications to increase interoperability, flexibility, and adaptability in support of varied mission requirements for vehicular platforms is being developed. The Engineering Development Models (EDM) design is complete. The FY11 budget supports the completion of Development and preparation for the Operational Test.

E. Performance Metrics

The five ACAT 1D JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Example metrics are: the number of requirements and the number of use cases required for design are estimated during the requirement and design phase and analyzed for trend-actual vs. scheduled; the software lines of code (SLOC) counts are used to determine progress during the coding phase; and the execution of test cases as well as trouble reports are monitored during the integration and test phase. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify the quality and progress of each software product's development over time. Additionally, GMR employs Earned Value Metrics to monitor contract performance on the Prime Development Contract.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS GMR GFE	MIPR	PEO C3T Ft. Monmouth, NJ	4.000	0.000		0.000		0.000		0.000	0.000	4.000	4.000
JTRS GMR SDD	C/CPAF	BOEING Anaheim, CA	622.299	148.713	Oct 2009	76.767	Oct 2010	0.000		76.767	Continuing	Continuing	Continuing
JTRS DEVELOPMENT - System Engineering Support	MIPR	PEO C3T Ft. Monmouth, NJ	6.723	7.010	Oct 2009	3.005	Oct 2010	0.000		3.005	Continuing	Continuing	Continuing
Technology Development efforts	MIPR	PEO C3T Ft. Monmouth, NJ	9.192	7.569	Oct 2009	4.205	Oct 2010	0.000		4.205	Continuing	Continuing	Continuing
		Subtotal	642.214	163.292		83.977		0.000		83.977			

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS Antenna Study	MIPR	PEO C3T Ft. Monmouth, NJ	2.025	0.000		0.000		0.000		0.000	0.000	2.025	2.025
JTRS Tech Support	MIPR	PEO C3T Ft. Monmouth, NJ	3.656	3.484	Oct 2009	2.204	Oct 2010	0.000		2.204	Continuing	Continuing	Continuing
JTRS MUOS Support	C/CPFF	Johns Hopkins University	0.623	0.000		0.000		0.000		0.000	0.000	0.623	0.623

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Laural, MD											
DIACAP Support	MIPR	PEO C3T Ft. Monmouth, MJ	0.000	0.960	Oct 2009	0.000		0.000		0.000	0.000	0.960	0.960
		Subtotal	6.304	4.444		2.204		0.000		2.204			

Remarks

PYs column only reflects prior year Navy GMR JTRS costs for FY07-08. Prior to FY07, GMR JTRS funding resided in Army PE 0604805A, Project 615. In FY09-11, Project No. 3074 represents the total GMR JTRS RDT&E budget.
In FY12-15, Project No. 3074 represents one-third of the total GMR JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of GMR is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS EPG test bed & test planning	MIPR	EPG Fort Huachuca, AZ	9.797	3.100	Oct 2009	4.009	Oct 2010	0.000		4.009	Continuing	Continuing	Continuing
JTRS M&S	MIPR	USAIC Fort Huachuca, AZ	4.741	2.643	Oct 2009	1.594	Oct 2010	0.000		1.594	Continuing	Continuing	Continuing
JTRS Test In-house Spt & Gov activities	MIPR	PEO C3T Ft. Monmouth, NJ	6.320	3.073	Oct 2009	1.987	Oct 2010	0.000		1.987	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS EOA/SIT/LUT/ MOTE Test Activity	MIPR	EPG Fort Huachuca, AZ	1.870	10.538	Oct 2009	4.616	Oct 2010	0.000		4.616	Continuing	Continuing	Continuing
		Subtotal	22.728	19.354		12.206		0.000		12.206			

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS Business Engineering Mgmt	MIPR	PEO C3T Ft. Monmouth, NJ	8.934	5.408	Oct 2009	1.849	Oct 2010	0.000		1.849	Continuing	Continuing	Continuing
PMO Support	MIPR	PEO C3T Ft. Monmouth, NJ	19.732	10.220	Oct 2009	1.168	Oct 2010	0.000		1.168	Continuing	Continuing	Continuing
JTRS MITRE support	MIPR	MITRE Ft. Monmouth, NJ	0.513	0.000		0.000		0.000		0.000	0.000	0.513	0.513
Acquisition Workforce Fund	C/FP	Not Specified Not Specified	1.167	0.000		0.000		0.000		0.000	0.000	1.167	1.167
		Subtotal	30.346	15.628		3.017		0.000		3.017			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*	

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	701.592	202.718		101.404		0.000		101.404			

Remarks

PYs column only reflects prior year Navy GMR JTRS costs for FY07-08. Prior to FY07, GMR JTRS funding resided in Army PE 0604805A, Project 615. In FY09-11, Project No. 3074 represents the total GMR JTRS RDT&E budget.

In FY12-15, Project No. 3074 represents one-third of the total GMR JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of GMR is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*	**PROJECT** 3074: *GMR JTRS*

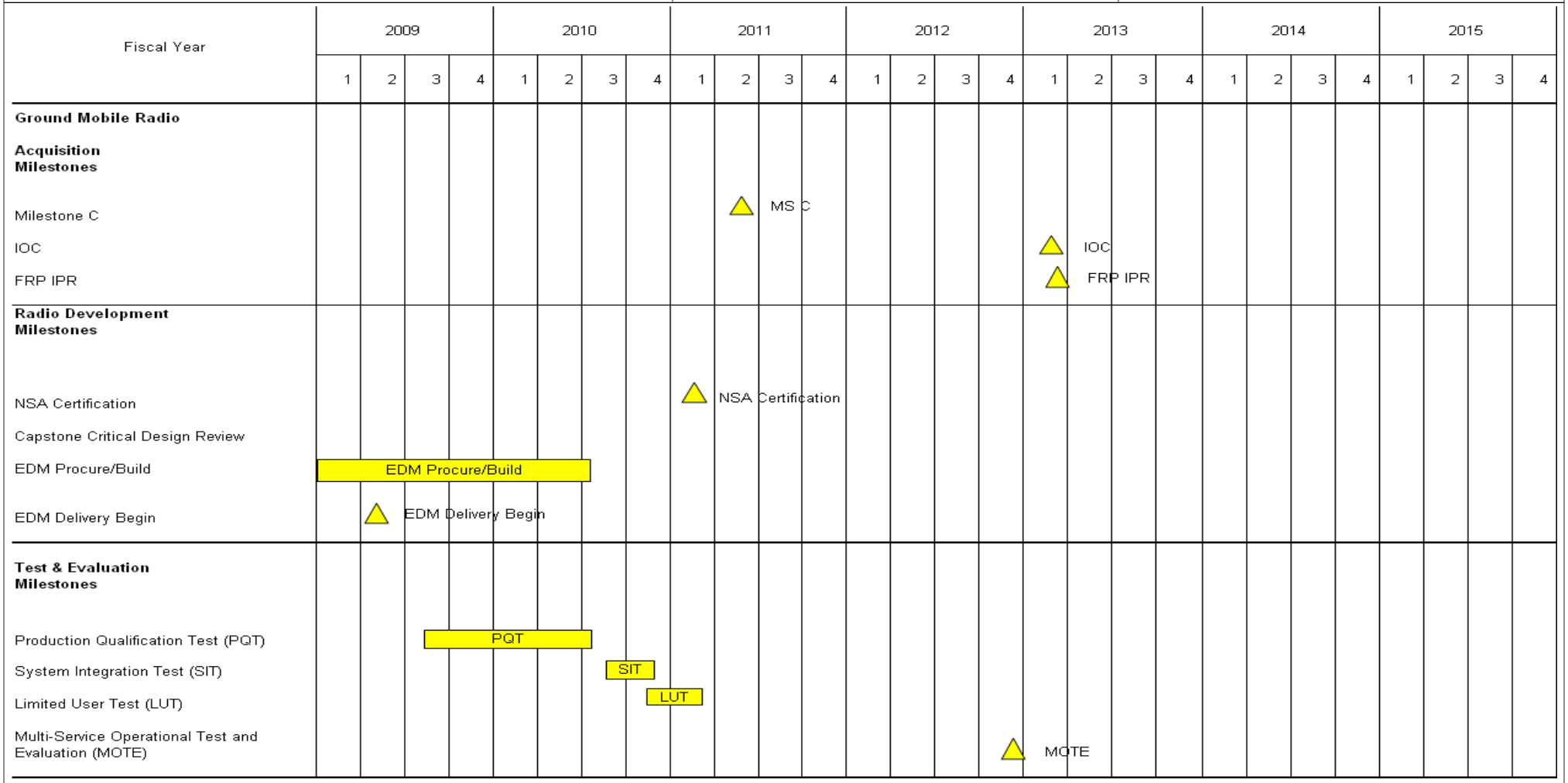

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*	**PROJECT** 3074: *GMR JTRS*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
EDM Procure/Build	1	2009	3	2010
EDM Delivery Begin	2	2009	2	2009
Production Qualification Test (PQT)	3	2009	3	2010
JTRS - Army GMR System Integration Test (SIT)	3	2010	4	2010
Limited User Test	4	2010	1	2011
NSA Certification	1	2011	1	2011
JTRS GMR Milestone C	2	2011	2	2011
JTRS - Multi-Service Operational Test and Evaluation	4	2012	4	2012
IOC	1	2013	1	2013
FRP IPR	1	2013	1	2013

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3075: *HMS JTRS*	127.686	132.438	40.689	0.000	40.689	1.261	1.950	0.062	0.000	0.000	587.557
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY09-FY11, Project No. 3075 represents the total HMS JTRS RDT&E budget for those years.

In FY12-FY14, Project No. 3075 represents the Navy share (1/3) of the funding associated with HMS JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for one-third of the total program. Thus, one-third of JTRS Common Development is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.

A. Mission Description and Budget Item Justification

JTRS is the Department of Defense (DoD) family of common that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 MegaHertz (MHz) to 2 GigaHertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

HMS provides the JTRS capability to meet Joint Ground Mounted, Dismounted & Embedded Radio Requirements. Increment 1, Phase 1 will develop Small-Form-Fit (SFF) SFF-A (1 and 2 Channel), SFF-D and AN/PRC-154 Rifleman Radio running Soldier Radio Waveform (SRW) for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop the 2 Channel Manpack, SFF-B and SFF-J, and 2 Channel Handheld. Phase 2 radios are all Type 1 compliant for use in a classified environment running Ultra High Frequency (UHF), Satellite Communications (SATCOM), High Frequency (HF), Enhanced Position Location and Reporting System (EPLRS), Soldier Radio Waveform (SRW), Mobile User Objective System (MUOS), and Single Channel Ground to Air Radio System (SINCGARS) waveforms.

B. Accomplishments/Planned Program ($ in Millions)

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
HMS JTRS	127.052	132.438	40.689	0.000	40.689
FY 2009 Accomplishments: Supported the Contractor Developmental Test (CDT) and Government Development Test (GDT) for Phase 1 radios; Phase 1 Limited User Test (LUT); preparation for Milestone C for Phase 1 AN/PRC-154 Rifleman Radio; technical support for Phase 1; Phase 2 design and development for EDMs; Phase 2 Design Readiness Review (DRR); technical support for Phase 2. *FY 2010 Plans:* Supports the Government Development Test (GDT) for Phase 1 radios, continued preparation for Milestone C for Phase 1 AN/PRC-154 Rifleman Radio; Phase 1 First Article Test (FAT) and Phase 1 Information Assurance certification; technical support for Phase 1; Phase 2 EDM manufacturing, CDT, and GDT; technical support for Phase 2. *FY 2011 Base Plans:* Supports technical support for Phase 1; Phase 1 Operational Test (OT) and Phase 1 Information Assurance certification; Phase 2 Limited User Test (LUT), Phase 2 Information Assurance certification; preparation for Milestone C for Phase 2.					
Acquisition Workforce Fund	0.634	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: Funded acquisition workforce fund.					
Accomplishments/Planned Programs Subtotals	127.686	132.438	40.689	0.000	40.689

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEA/0604280A: *HMS JTRS*	0.000	0.000	0.784	0.000	0.784	1.363	2.134	0.064	0.000	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEF/0604280F: *HMS JTRS*	0.000	0.000	0.000	0.000	0.000	1.354	2.097	0.067	0.000	Continuing	Continuing
• RDTEA/0604805A: *JTRS Cluster 5 / HMS*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	242.657

D. Acquisition Strategy

This project supports the JTRS HMS SDD efforts. The JTRS HMS Program began with the development of the HMS Radios following Milestone (MS) B approval on April 26, 2004. HMS uses an evolutionary acquisition strategy and will deliver NSA certified capabilities. Following full and open competition, a single Cost-Plus-Award Fee (CPAF) contract was awarded on July 16, 2004. The contract is structured to address Increment 1. JTRS HMS Increment 1 consists of two phases of development. Increment 1, Phase 1 will develop SFF-A (1 and 2 Channel), SFF-D and AN/PRC-154 Rifleman Radio running Soldier Radio Waveform (SRW) for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop the 2 Channel Manpack, SFF-B and SFF-J, and 2 Channel Handheld which are all Type 1 compliant for use in a classified environment running Ultra High Frequency (UHF), Satellite Communications (SATCOM), High Frequency (HF), Enhanced Position Location and Reporting System (EPLRS), Soldier Radio Waveform (SRW), Mobile User Objective System (MUOS), and Single Channel Ground to Air Radio System (SINCGARS) waveforms. The FY11 budget supports the completion of Development and preparation for the Operational Test.

E. Performance Metrics

The five ACAT 1D JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify the quality and progress of each software product's development over time. Additionally, JTRS HMS employs Earned Value Metrics to monitor contract performance on the Prime Development Contract.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS HMS Design, Development and Manufacture of Engineering Development Models (EDMs)	C/CPAF	General Dynamics C4 Systems Scottsdale, AZ	308.164	81.979	Oct 2009	25.347	Oct 2010	0.000		25.347	Continuing	Continuing	Continuing
JTRS HMS Development System Engineering Support	MIPR	PEO C3T Ft. Monmouth, NJ	24.964	6.203	Oct 2009	0.275	Oct 2010	0.000		0.275	Continuing	Continuing	Continuing
Technology Development efforts	MIPR	PEO C3T Ft. Monmouth, NJ	8.317	5.355	Oct 2009	0.000		0.000		0.000	0.000	13.672	13.672
		Subtotal	341.445	93.537		25.622		0.000		25.622			

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS Technical Support	MIPR	PEO C3T Ft. Monmouth, NJ	16.096	5.209	Oct 2009	3.082	Oct 2010	0.000		3.082	Continuing	Continuing	Continuing
		Subtotal	16.096	5.209		3.082		0.000		3.082			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS EPG test bed and planning	MIPR	EPG Ft. Huachuca, AZ	0.300	0.000		0.100	Oct 2010	0.000		0.100	Continuing	Continuing	Continuing
JTRS Modeling and Simulation	MIPR	USAIC Ft. Huachuca, AZ	0.650	0.100	Jul 2010	0.000		0.000		0.000	0.000	0.750	0.750
JTRS Test In-house Support & Government	MIPR	PEO C3T Ft. Monmouth, NJ	9.889	10.340	Oct 2009	2.230	Oct 2010	0.000		2.230	Continuing	Continuing	Continuing
Phase 1 T&E (CDT, GDT, LUT, OT)	MIPR	PEO C3T Ft. Monmouth, NJ	6.025	5.900	Dec 2009	0.000		0.000		0.000	0.000	11.925	11.925
Phase 2 T&E (CDT, GDT, LUT, OT)	MIPR	PEO C3T Ft. Monmouth, NJ	0.250	5.750	Nov 2009	5.500	Oct 2010	0.000		5.500	Continuing	Continuing	Continuing
		Subtotal	17.114	22.090		7.830		0.000		7.830			

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Office Support	MIPR	PEO C3T Ft. Monmouth, NJ	25.415	8.941	Oct 2009	3.341	Oct 2010	0.000		3.341	Continuing	Continuing	Continuing
JTRS Business/ Engineering Management	MIPR	PEO C3T Ft. Monmouth, NJ	10.452	2.661	Oct 2009	0.814	Oct 2010	0.000		0.814	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Acquistion Workforce Fund	C/FP	Not Specified Not Specified	0.634	0.000		0.000		0.000		0.000	0.000	0.634	0.634
		Subtotal	36.501	11.602		4.155		0.000		4.155			

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	411.156	132.438		40.689		0.000		40.689			

Remarks

PYs column only reflects prior year Navy HMS costs for FY07-09. Prior to FY07, HMS JTRS funding resided in Army PE 0604805A, Project 61A.
In FY10-11, Project No. 3075 represents the total HMS JTRS RDT&E budget.
In FY12-14 Project No. 3075 represents one-third of the total HMS JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of HMS is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*

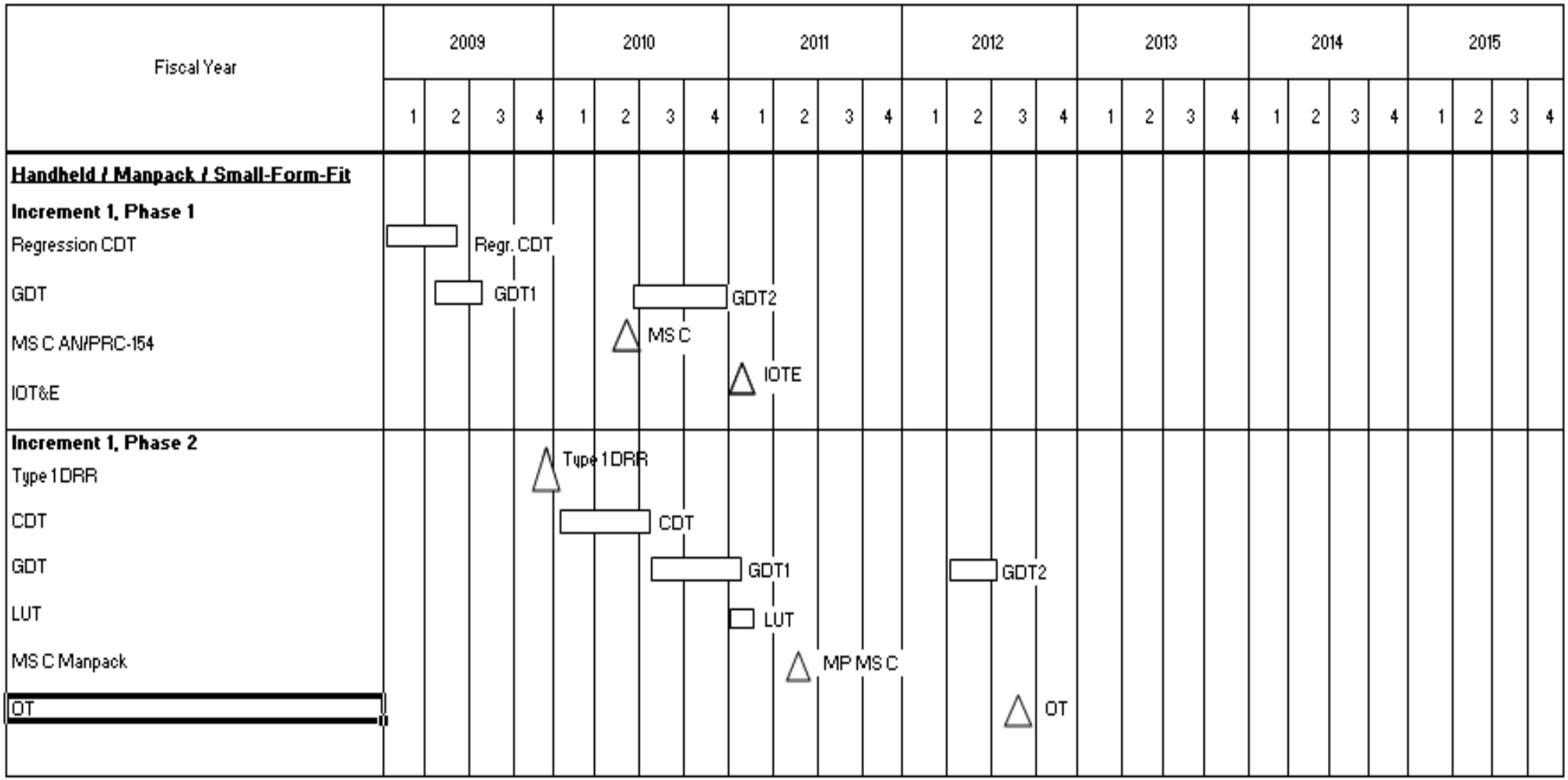

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
Increment 1, Phase 1 Regression CDT	1	2009	2	2009
Increment 1, Phase 1 GDT	2	2009	3	2009
Increment 1, Phase 2 Type 1 DRR	4	2009	4	2009
Increment 1, Phase 2 CDT	1	2010	3	2010
Increment 1, Phase 1 MS C	2	2010	2	2010
Increment 1, Phase 1 GDT2	2	2010	4	2010
Increment 1, Phase 2 GDT	3	2010	1	2011
Increment 1, Phase 1 IOT&E	1	2011	1	2011
Increment 1, Phase 2 LUT	1	2011	1	2011
Increment 1, Phase 2 MS C	2	2011	2	2011
Increment 1, Phase 2 GDT2	2	2012	3	2012
Increment 1, Phase 2 OT	3	2012	3	2012

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3076: *JTRS Network Enterprise Domain (JNED)*	205.525	201.131	117.574	0.000	117.574	36.967	23.144	20.410	22.596	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY09-FY11, Project No. 3076 represents the total JNED RDT&E budget.

In FY12-FY15, Project No. 3076 represents the Navy share (1/3) of the funding associated with the JNED program. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for one-third of the total program. Thus, one-third of JTRS Common Development is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.

A. Mission Description and Budget Item Justification

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. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 MegaHertz (MHz) to 2 GigaHertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

(JNED) JNED is responsible for the development and delivery of software-defined, legacy radio waveforms and networking waveforms that support Net-Centric operational warfare at sea, air and on the ground. Networking waveforms extend the Global Information Grid (GIG) to the last tactical mile and to the warfighter. The JNED team is responsible for (1) the overall management and oversight of the JTRS Waveform program, (2) development, validation, and evolution of a common JTRS Software Communications Architecture (SCA), (3) development and evolution of waveform software applications, (4) development of software cryptographic algorithms and equipment applications, (5) testing and certification of JTRS waveforms, network services, network management, and software products, and (6) JTRS networking and network management software components. Services are responsible for acquiring and fielding host radio hardware and integrating JTRS into Service platforms.

Networking Waveforms:

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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- Wideband Networking Waveform (WNW) is a high data rate networking waveform application that provides the lower tactical Internet backbone and connects tactical forces across the battle sphere. WNW will feature two signals-in-space (SiS), which are the Orthogonal Frequency Division Multiplexing (OFDM) and Anti-Jam (AJ). WNW will provide high throughput, dynamically adaptable connectivity for the exchange of Internet Protocol (IP) based voice, data, and video traffic. WNW will support network nodes on mobile, airborne, and maritime platforms. WNW includes networking services, security, High Assurance IP Equipment (HAIPE) capabilities, red-black switching, and internal routing of other WNW signals. Platforms include: GMR and AMF.

- Soldier Radio Waveform (SRW) will operate on JTR sets to provide a networked battlefield communications capability for disadvantaged users engaged in land combat operations and will support voice, data, and video communications on and over the immediate battlefield. These forces include vehicles, rotary wing, dismounted soldiers, munitions, sensors, and unmanned air vehicles (UAV). Functional software applications will use SRW enabled JTR sets over IP capable networks and sub-networks. SRW will be interoperable with higher throughput, IP-based network waveforms, such as WNW. As applicable, these IP-based networking waveforms will enable information exchanges through the GIG to the soldier and provide entirely new capabilities for battlefield communications and information sharing. Platforms include: GMR, AMF and HMS.

- Mobile User Objective System (MUOS) will enable MUOS satellites to provide worldwide communication satellite coverage for DoD requirements. MUOS will provide functionality comparable to commercial mobile phone systems. MUOS offers secure streaming video, netted communications, and voice/data in real time to provide essential connectivity. JNED program will modify this waveform, making it compatible and certifiable to meet DoD security requirements plus enable porting to JTR sets. Platforms include: HMS and AMF.

- Joint Airborne Networking - Tactical Edge (JAN-TE) will operate on JTR airborne sets to provide a networked tactical communications capability for tactical aircraft. JAN-TE will provide increased throughput, highly responsive connectivity, and ad hoc mobile networking for fighters engaged in air operations. This networking waveform is uniquely designed and engineered for highly maneuverable, fast moving aircraft for rapidly establishing networks to share high value data communications. USD(AT&L) directed that the development of the JAN-TE waveform be discontinued after Critical Design Review in October 2008.

Network Enterprise Services (NES): Includes development and acquisition of JTRS Network Enterprise Services (JNES) to include JTRS WNW Network Manager (JWNM), JTRS Enterprise Network Manager (JENM), Soldier Radio Waveform Network Manager (SRWNM), and Enterprise Network Services (ENS).

Legacy Radio Waveforms: Includes the development and acquisition of legacy software and other related activities to support the legacy waveform development.

B. Accomplishments/Planned Program ($ in Millions)

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
JTRS Network Enterprise Domain (JNED)	204.495	201.131	117.574	0.000	117.574

Continued development and acquisition of Increment 1 networking waveforms that support Net-Centric operational warfare at sea, air and on the ground to extend the GIG to the last tactical mile and the warfighter. Continued JNED program support and other related activities.

FY 2009 Accomplishments:

Networking Waveforms:

- WNW (35.363) Completed development and delivered WNW v3.5 in 1Q FY09 and v3.6 in 3Q FY09. Continued development of WNW for v4.0.

- SRW (19.325) Completed development and performed FQT for v1.0c Soldier Systems (SS) in 2Q FY09. Completed development and performed FQT for v1.01c in 3QFY09 and continued integration of v1.0c into HMS.

- MUOS ($31.664) Continued development effort of MUOS v3.1 in FY09.

- JAN-TE ($0.386) USD(AT&L) directed that the development of the JAN-TE waveform be discontinued after Critical Design Review in October 2008.

Network Enterprise Services ($55.247): Continued development and acquisition of JTRS Network Enterprise Services (JNES) to include JTRS WNW Network Manager (JWNM), JTRS Enterprise Network Manager (JENM), Soldier Radio Waveform Network Manager (SRWNM), and Enterprise Network Services (ENS). Continued to provide JNED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering and problem resolution and support of Software Communications Architecture (SCA) activities. Completed development of JWNM v3.5 in 1Q FY09. Continued development of JWNM v4.0 and SRWNM 1.0R. Began development for ENS Phase 1 Software Internet Controller (SoftINC) and Tactical Data Controller (TDC).

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Legacy Radio Waveforms ($62.510) Continued the development and acquisition of legacy software and other related activities to support the legacy waveform development of High Frequency (HF). Completed the development and performed FQT for Link 16 in 3Q FY09. Continued development of UHF SATCOM v4.1. Continued to provide JNED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering and problem resolution and support of Software Communications Architecture (SCA) activities. Provided technical guidance to the Platform Program Management offices (PMO). Continued to support waveform integration, test and evaluation to include hardware and software waveform certification process (SCA compliance testing) to meet program requirements. Continued JNED program management office support. Provided post FQT support to platforms during Legacy Waveform porting activities.					
FY 2010 Plans: Networking Waveforms: - WNW (14.197) Complete development and perform FQT for WNW v4.0 in 1QFY10. Provide post FQT support to platforms during WNW porting activities.					
- SRW ($5.745) Complete integration of v1.0c into HMS and conduct Delta-FQT in Q1 FY10. Provide post FQT support to platforms during SRW v1.0c porting activities.					
- MUOS ($34.036) Continue development of MUOS v3.1.					
Network Enterprise Services ($82.438): Continued development and acquisition of JTRS Network Enterprise Services (JNES) to include JTRS WNW Network Manager (JWNM), JTRS Enterprise Network Manager (JENM), Soldier Radio Waveform Network Manager (SRWNM), and Enterprise Network Services (ENS). Continue to provide JNED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering, problem resolution and support of Software Communications Architecture (SCA) activities. Complete					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
development and perform FQT for JWNM v4.0 in 2Q FY10. Complete development and perform FQT for JENM Phase 1 in 4Q FY10. Complete development and perform FQT for SRWNM 1.0R in 2Q FY10, and SRWNM 1.0+ in 3Q FY10. Continue development for ENS Phase 1 (SoftINC and TDC). Legacy Radio Waveforms ($64.715) Continue to support waveform integration, test and evaluation to include hardware and software waveform certification process (SCA compliance testing) to meet program requirements. Complete development and perform FQT for HF v4.0 in 1Q FY10. Complete development and perform FQT for UHF SATCOM v4.1 in 1Q FY10. Continue JNED program management office support. Continue to provide post FQT support to platforms during Legacy Waveform porting activities. Begin enhancements to legacy waveforms. *FY 2011 Base Plans:* - MUOS ($20.730) Complete development and perform FQT of MUOS v3.1 in 2Q FY11. Network Enterprise Services ($50.470): Continued development and acquisition of JTRS Network Enterprise Services (JNES) to include JTRS WNW Network Manager (JWNM), JTRS Enterprise Network Manager (JENM), Soldier Radio Waveform Network Manager (SRWNM), and Enterprise Network Services (ENS). Continue to provide JNED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering and problem resolution and support of Software Communications Architecture (SCA) activities. Complete development and perform FQT for JENM Phase 2 in 4Q FY11. Complete development and perform FQT for ENS Phase 1 SoftINC in 1Q FY11 and ENS Phase 1 TDC in 3Q FY11. Legacy Radio Waveforms ($46.374) Continue to support waveform integration, test and evaluation to include hardware and Software Waveform Certification Process (SCA compliance testing) to meet program requirements. Continue JNED program management office support. Continue enhancements to legacy waveforms.					
Aquisition Workforce Fund	1.030	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Funded acquisition workforce fund.					
Accomplishments/Planned Programs Subtotals	205.525	201.131	117.574	0.000	117.574

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDTEA/0604280A: *JNED*	0.000	0.000	0.000	0.000	0.000	41.535	28.777	19.637	19.441	Continuing	Continuing
• RDTEF/0604280F: *JNED*	0.000	0.000	0.000	0.000	0.000	41.141	25.084	18.284	18.970	Continuing	Continuing
• O&M, 4A6M: *Service Wide Communications (JNED)*	1.823	6.654	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

(JNED) JNED, formerly Joint Waveforms Program Office, is responsible for common core activities including developing and evolving the software-defined legacy and networking waveforms that operate on multiple hardware sets and in all operational environments that support network-centric operational warfare, as well as common networking services solutions. Waveform developments will be procured through full and open contract competitions, except when special circumstances support sole source acquisition. The JNED program is developing waveforms and Cryptographic Equipment applications (CEAs) for use within the JTRS community. The module developer will develop CEAs. The FY11 Budget supports continued development of waveforms, supporting software, and testing support, as well as the National Security Agency (NSA) evaluation of software crypto libraries.

E. Performance Metrics

The five ACAT 1D JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Example metrics are: the number of requirements and the number of use cases required for design are estimated during the requirement and design phase and analyzed for trend-actual vs. scheduled; the software lines of code (SLOC) counts are used to determine progress during the coding phase; and the execution of test cases as well as trouble reports are monitored during the integration and test phase. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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the quality and progress of each software product's development over time. Additionally, JNED employs Earned Value Metrics to monitor contract performance on its Prime Development Contracts.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Architecture Development and Validation, Evolve and Provide CM Mgmt of SCA	WR	Johns Hopkins Laurel, MD	1.650	0.250	Oct 2009	0.439	Dec 2010	0.000		0.439	Continuing	Continuing	Continuing
Wideband Networking Waveform (WNW)	C/CPAF	BOEING Huntington Beach, CA	95.524	8.197	Oct 2009	0.000		0.000		0.000	0.000	103.721	103.721
Soldier Radio Waveform (SRW)	C/CPIF	ITT Clifton, NJ	84.110	5.745	Dec 2009	0.000		0.000		0.000	0.000	89.855	89.555
Mobile User Objective System (MUOS)	C/Various	Lockheed Martin Sunnyvale, CA	35.956	34.036	Dec 2009	20.730	Dec 2010	0.000		20.730	0.000	90.722	90.722
Joint Airborne Networking -Tactical Edge (JAN-TE)	C/CPFF	Rockwell Collins Cedar Rapids, IA	36.260	0.000		0.000		0.000		0.000	0.000	36.260	36.260
Legacy Software-Defined Radio Waveforms	C/CPAF	BOEING Huntington Beach, CA	43.221	5.743	Oct 2009	12.190	Dec 2010	0.000		12.190	Continuing	Continuing	Continuing
Network Enterprise Services Development	C/Various	BOEING / ITT Huntington Beach, CA / Clifton, NJ / TBD	198.499	75.315	Oct 2009	50.031	Dec 2010	0.000		50.031	Continuing	Continuing	Continuing
Post FQT / Software Sustainment	C/Various	Raytheon / ITT MA / Clifton, NJ / TBD	1.877	14.740	Nov 2009	1.747	Dec 2010	0.000		1.747	Continuing	Continuing	Continuing
	MIPR	NSA Ft. Meade, MD	9.064	2.940	Nov 2009	2.157	Dec 2010	0.000		2.157	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Certification (Interim SCA Compliance Testing)													
		Subtotal	506.161	146.966		87.294		0.000		87.294			

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC - MITRE Technical Support	MIPR	MITRE Ft. Monmouth, NJ	7.941	1.595	Oct 2009	0.744	Dec 2010	0.000		0.744	Continuing	Continuing	Continuing
		Subtotal	7.941	1.595		0.744		0.000		0.744			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various/ Various	SRA / SSC PAC / SSC LANT San Diego, CA / San Diego, CA / Charleston, SC	153.426	52.570	Oct 2009	29.536	Dec 2010	0.000		29.536	Continuing	Continuing	Continuing
Acquisition Workforce Fund	C/FP	Not Specified Not Specified	1.030	0.000		0.000		0.000		0.000	0.000	1.030	1.030
		Subtotal	154.456	52.570		29.536		0.000		29.536			

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	668.558	201.131		117.574		0.000		117.574			

Remarks

Remarks: PYs column only reflects prior year Navy JNED costs for FY07-08. Prior to FY07, funding for JNED resided in Army PE 0604280A, Project 162. In FY09-11, Project No. 3076 represents the total JNED RDT&E budget. In FY12-FY15, Project No. 3076 represents one-third of the total JNED RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of JNED is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

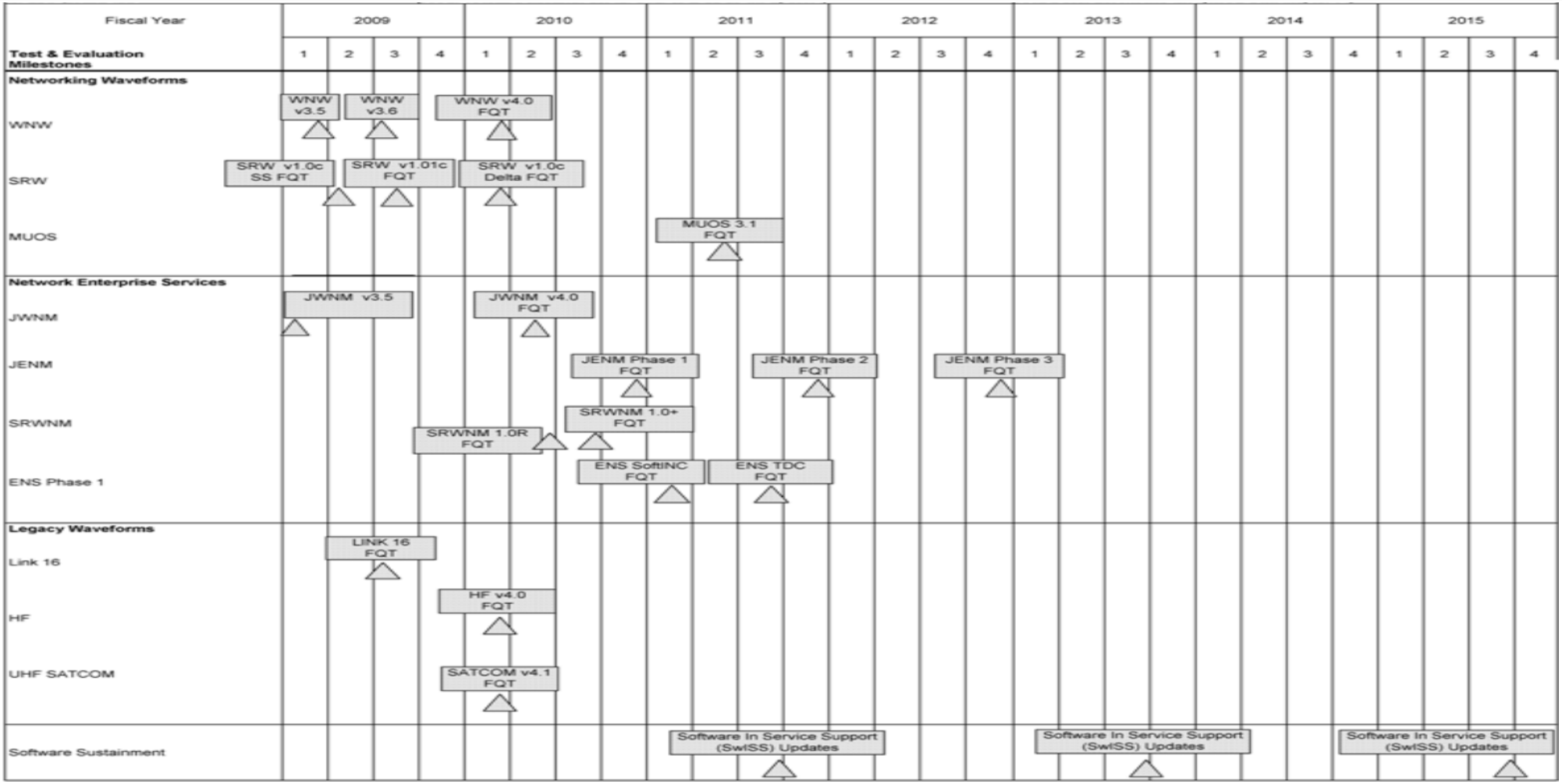

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
WNW v 3.5	1	2009	1	2009
WNW v 3.6	3	2009	3	2009
WNW v 4.0	1	2010	1	2010
SRW v1.0c (SS)	2	2009	2	2009
SRW v1.01c	3	2009	3	2009
SRW v1.0c Delta for HMS	1	2010	1	2010
MUOS 3.1	2	2011	2	2011
JWNM v 3.5	1	2009	1	2009
JWNM v 4.0	2	2010	2	2010
JENM Phase I	4	2010	4	2010
JENM Phase II	4	2011	4	2011
JENM Phase III	4	2012	4	2012
SRWNM 1.0R	2	2010	2	2010
SRWNM 1.0+	3	2010	3	2010
ENS Phase 1 SoftINC	1	2011	1	2011
ENS Phase 1 TDC	3	2011	3	2011
Link 16	3	2009	3	2009
HF v4.0	1	2010	1	2010

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

	Start		End	
Event	Quarter	Year	Quarter	Year
UHF SATCOM v4.1	1	2010	1	2010
Software In Service Support (SwISS) Update I	3	2011	3	2011
Software In Service Support (SwISS) Update II	3	2013	3	2013
Software In Service Support (SwISS) Update III	3	2015	3	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
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COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9999: *Congressional Adds*	13.463	3.585	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.346
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

(HMS) HMS provides the JTRS capability to meet Joint Ground Mounted, Dismounted & Embedded Radio Requirements. Increment 1, Phase 1 will develop SFF-A (1 and 2 Channel), SFF-D, and SFF-C(v)1 (AN/PRC-154) running Soldier Radio Waveform (SRW) for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop the 2 Channel Manpack, SFF-B, SFF-J, and 2 Channel Handheld. Phase 2 radios are all Type 1 compliant for use in a classified environment running Ultra High Frequency (UHF), Satellite Communications (SATCOM), High Frequency (HF), Enhanced Position Location and Reporting System (EPLRS), Soldier Radio Waveform (SRW), Mobile User Objective System (MUOS), and Single Channel Ground to Air Radio System (SINCGARS) waveforms.

(DMR) The Digital Modular Radio (DMR) provides improvements for fleet radio requirements in the HF, VHF, and UHF frequency band. The DMR replaces and will be interoperable and backwards compatible with legacy systems. The DMR is a digital, modular, software programmable, multi-channel, multi-function and multi-band (2MHz-2 GHz) radio system.

(Army Tactical Radios for FCS) JTRS GMR will provide networking capability using the Wideband Networking Waveform and Soldier Radio Waveform to connect unmanned sensors to decision makers "On-The-Move" (OTM) which will significantly reduce the decision cycle. JTRS GMR will provide the warfighter with mobile Internet-like capabilities such as voice, data, networking and video communications, as well as interoperability with current force and other JTRS radios across the battle space using new networking Waveforms and current Waveforms.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
Congressional Add: JTRS Handheld Small Form Radio Sys	0.000	3.585
FY 2010 Plans: Conduct study to determine the technical feasability of adding the wide-band networking waveform to HMS products.		

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 9999: *Congressional Adds*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
Congressional Add: Digital Modular Radio (DMR) *FY 2009 Accomplishments:* Developed Workstation Authentication and Software Signature version 6.4.4 for a DMR security enhancement required by the National Security Agency (NSA).	1.995	0.000
Congressional Add: Army Tactical Radios for FCS *FY 2009 Accomplishments:* Supported the design, development, manufacture and delivery of GMR Engineering Design Models (EDM).	11.468	0.000
Congressional Adds Subtotals	13.463	3.585

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Not required for congressional adds.

E. Performance Metrics

Not required for congressional adds.