Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy										DATE: February 2011	
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 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**Cost To Complete**	**Total Cost**
Total Program Element	858.831	687.723	688.146	-	688.146	127.782	48.600	23.018	16.544	Continuing	Continuing
3020: *MIDS/JTRS*	14.821	20.722	41.688	-	41.688	11.105	3.003	0.732	0.625	Continuing	Continuing
3073: *AMF JTRS*	306.018	407.334	349.920	-	349.920	65.385	21.324	3.381	0.163	Continuing	Continuing
3074: *GMR JTRS*	200.332	101.404	18.732	-	18.732	2.278	0.847	0.028	0.026	Continuing	Continuing
3075: *HMS JTRS*	135.936	40.689	179.117	-	179.117	12.452	2.788	0.326	-	0.000	371.308
3076: *JTRS Network Enterprise Domain (JNED)*	198.139	117.574	94.189	-	94.189	32.235	20.638	18.551	15.730	Continuing	Continuing
3078: *Digital Modular Radio*	-	-	4.500	-	4.500	4.327	-	-	-	0.000	8.827
9999: *Congressional Adds*	3.585	-	-	-	-	-	-	-	-	0.000	3.585

Note

In FY10-FY12, 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 FY13-FY16, Program Element (PE) 0604280N represents the Navy share 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 a portion of the total program. Thus in FY13-16 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and 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

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy	DATE: February 2011
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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 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 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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy	DATE: February 2011
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B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	875.848	687.723	168.526	-	168.526
Current President's Budget	858.831	687.723	688.146	-	688.146
Total Adjustments	-17.017	-	519.620	-	519.620
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	8.326	-			
• SBIR/STTR Transfer	-24.387	-			
• Program Adjustments	-	-	520.168	-	520.168
• Section 219 Reprogramming	-0.750	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.548	-	-0.548
• Congressional General Reductions Adjustments	-0.206	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)

	FY 2010	FY 2011
Project: 9999: *Congressional Adds*		
Congressional Add: *JTRS Handheld Small Form Radio Sys*	3.585	-
Congressional Add Subtotals for Project: 9999	3.585	-
Congressional Add Totals for all Projects	3.585	-

Change Summary Explanation

The FY12 $519.620M Program Adjustment is due to the following: JTRS Administrative transfer from Army and Air Force ($485.346M), NED administrative transfer to O&M,N (-13.870M), plus-up for MIDS Enhanced Link 16 ($10.800M), plus-up for Over-The-Air-Rekeying/Over-The-Air-Zeroizing (OTAR/OTAZ) ($6.200M), plus-up for Very High Frequency/Ultra High Frequency Line-of-Sight (V/U LOS) ($4.300M), plus-up for HMS (17.783M), plus-up to NED for TTNT ($3.000M), plus-up for AMF Integration and Testing ($2.109M), and plus-up for DMR ($4.500M).

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
3020: *MIDS/JTRS*	14.821	20.722	41.688	-	41.688	11.105	3.003	0.732	0.625	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY10-FY12, 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 FY13-FY16, Project No. 3020 represents the Navy share of the funding associated with MIDS. 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.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: MIDS/JTRS	14.821	20.722	41.688
Articles:	0	0	0
FY 2010 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Received Limited Production & Fielding decision for Core Terminal program (MIDS JTRS). Began spec development of a Crypto Modernization (CM) capability for MIDS-LVT, a mandate required by the NSA, that will replace or update several hardware, software and firmware components within the MIDS terminal. Started Frequency Remapping development and ECP 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. Continued MIDS systems engineering, COMSEC, Information Assurance (IA) and program management support. ***FY 2011 Plans:*** Award Limited Fielding and Production II. Complete testing requirements to achieve Full Production and Fielding decision for Core Terminal program (MIDS JTRS). Develop, test and begin implementation of a Crypto Modernization (CM) capability for MIDS JTRS, a mandate required by the NSA. Complete spec development of MIDS-LVT CM capabilities and ECP enhancements. Begin MIDS-LVT CM design efforts to include technical and interface information, definition of the performance and interface requirements and engineering analysis to finalize interface with the Signal Message Processor (SMP) design. Continue MIDS systems engineering, COMSEC, Information Assurance (IA) and program management support. ***FY 2012 Plans:*** Complete testing and implementation of MIDS JTRS Crypto Modernization (CM) capabilities. Begin Enhanced Throughput Link-16 design and development for MIDS-LVT. Continue MIDS-LVT design, development and testing of Crypto Modernization, Frequency Remapping and ECP enhancement capabilities to extend the operational lifetime of currently fielded MIDS-LVT Terminals. Continue MIDS systems engineering, COMSEC, Information Assurance (IA) and program management support.			
Accomplishments/Planned Programs Subtotals	14.821	20.722	41.688

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• RDTEA/0604280A: *MIDS JTRS*	0.000	0.000	0.000	0.000	0.000	7.992	1.244	0.273	0.000	Continuing	Continuing
• RDTEF/0604280F: *MIDS JTRS*	0.000	0.000	0.000	0.000	0.000	16.748	3.009	0.845	0.000	Continuing	Continuing
• APN/0145: *FA-18E/F*	1.715	6.678	7.957	0.000	7.957	0.000	0.000	0.000	0.000	0.000	16.350
• APN/0525: *F-18 Series*	29.525	3.917	0.000	0.000	0.000	0.000	0.000	19.937	26.458	Continuing	Continuing
• O&M, 4A6M: *Service Wide Comms (MIDS JTRS)*	13.219	14.761	14.872	0.000	14.872	16.121	16.329	16.431	16.195	Continuing	Continuing
	3.644	3.769	3.175	0.000	3.175	3.059	3.072	3.145	3.078	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• O&M, 4B7N: *Space and Electronic Warfare Systems (MIDS LVT)*											

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 included the Phase 2B Core terminal. The U.S. prime contractors from the MIDS-LVT program (Data Link Solutions and ViaSat, Inc.) cooperatively designed and developed the Core terminal. Each prime contractor built and qualified Production Verification Terminals. The U.S. implemented 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 FY12 budget supports development and implementation of Crypto Modernization, Frequency Remapping, and Enhanced Throughput capabilities for the MIDS-LVT terminal 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 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 2012 Navy		DATE: February 2011
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total 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	120.134	120.134
MIDS JTRS HW/SW (Phase 2B Core)	C/CPIF	ViaSat Inc:Carlsbad, CA	125.570	-		-		-		-	0.000	125.570	125.570
MIDS JTRS HW/SW (Phase 2C TTNT JPCP) DLS	C/CPFF	DLS:Cedar Rapids, IA	11.667	-		-		-		-	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	5.548	5.548
MIDS JTRS Production Transition dls	C/FFP	DLS:Cedar Rapids, IA	18.771	-		-		-		-	0.000	18.771	18.771
MIDS JTRS Production Transition via	C/FFP	ViaSat Inc.:Carlsbad, CA	2.768	-		-		-		-	0.000	2.768	2.768
MIDS JTRS Preoperational Support dls	C/CPFF	DLS:Cedar Rapids, IA	0.767	-		-		-		-	0.000	0.767	0.767
MIDS JTRS Preoperational Support via	C/CPFF	ViaSat Inc.:Carlsbad, CA	0.163	-		-		-		-	0.000	0.163	0.163
MIDS JTRS Spec. Development (Phase 2A) dls	C/FFP	DLS:Cedar Rapids, IA	1.383	-		-		-		-	0.000	1.383	1.383
MIDS JTRS Spec. Development (Phase 2A) via	C/FFP	ViaSat Inc.:Carlsbad, CA	0.704	-		-		-		-	0.000	0.704	0.704
MIDS JTRS Proposal Prep (Phase 2B Core) dls	C/FFP	DLS:Cedar Rapids, IA	0.600	-		-		-		-	0.000	0.600	0.600
MIDS JTRS Proposal Prep (Phase 2B Core) via	C/FFP	ViaSat Inc.:Carlsbad, CA	1.922	-		-		-		-	0.000	1.922	1.922
MIDS JTRS Crypto Mod	C/CPFF	ViaSat Inc:Carlsbad, CA	1.577	4.998	May 2011	-		-		-	0.000	6.575	6.575
MIDS JTRS Crypto Mod	C/CPFF	DLS:Cedar Rapids, IA	1.577	4.998	May 2011	-		-		-	0.000	6.575	6.575
MIDS-LVT CM/ECP Spec Dev	C/FFP	BAE:Fort Wayne, NJ	0.581	-		-		-		-	0.000	0.581	0.581
MIDS-LVT CM/ECP Spec Dev	C/FFP	DLS:Cedar Rapids, IA	1.796	-		-		-		-	0.000	1.796	1.796
MIDS-LVT CM/ECP Spec Dev	C/FFP	ViaSat:Carlsbad, CA	1.980	-		-		-		-	0.000	1.980	1.980
MIDS-LVT CM/ET Development	C/CPFF	DLS:Cedar Rapids, IA	-	4.723	May 2011	-		-		-	0.000	4.723	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MIDS-LVT CM/ET Development	C/CPFF	ViaSat:Carlsbad, CA	-	4.722	May 2011	-		-		-	0.000	4.722	Continuing
MIDS-LVT CM/FR/ET Design	C/CPFF	DLS:Cedar Rapids, IA	-	-		20.074	Dec 2011	-		20.074	Continuing	Continuing	Continuing
MIDS-LVT CM/FR/ET Design	C/CPFF	ViaSat:Carlsbad, CA	-	-		20.074	Dec 2011	-		20.074	Continuing	Continuing	Continuing
		Subtotal	297.508	19.441		40.148		-		40.148			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total 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	1.526	1.526
F/A-18 Level 0 Integrated Logistics Suppor (Unique) pax	WR	NAWC:Pax River, MD	0.412	-		-		-		-	0.000	0.412	0.412
		Subtotal	1.938	-		-		-		-	0.000	1.938	1.938

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total 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	5.409	5.409
F/A-18 Level 0 OperationalTest & Evaluation (Unique)	WR	NAWS China Lake:Ridgecrest, CA	1.028	-		-		-		-	0.000	1.028	1.028
F/A-18 Test Assets dls	C/FFP	DLS:Cedar Rapids, IA	8.850	-		-		-		-	0.000	8.850	8.850
F/A-18 Test Assets via	C/FFP	ViaSat, Inc:Carlsbad, CA	7.365	-		-		-		-	0.000	7.365	7.365
* F/A-18 EDMs dls	C/FFP	DLS:Cedar Rapids, IA	2.740	-		-		-		-	0.000	2.740	2.740
* F/A-18 EDMs via	C/FFP	ViaSat, Inc.:Carlsbad, CA	2.475	-		-		-		-	0.000	2.475	2.475

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support and Labor/SCS Changes	WR	NAWS China Lake:Ridgecrest, CA	10.519	-		-		-		-	0.000	10.519	10.519
Government Testing	WR	SSC:San Diego, CA	1.745	-		-		-		-	0.000	1.745	1.745
NAVAIR Labor	WR	NAWC:Pax River, MD	4.231	-		-		-		-	0.000	4.231	4.231
ECP 6277 Preparation	WR	NAWC:Pax River, MD	1.963	-		-		-		-	0.000	1.963	1.963
		Subtotal	46.325	-		-		-		-	0.000	46.325	46.325

Remarks

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

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total 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	15.145	15.145
Workforce Acquisition Fund	C/FP	Not Specified:Not Specified	0.135	-		-		-		-	0.000	0.135	0.135
Travel	WR	Not Specified:Not Specified	1.020	-		-		-		-	0.000	1.020	1.020
Government Engineering	WR	SSC:San Diego, Ca	22.705	0.983	Dec 2010	1.040	Dec 2011	-		1.040	0.000	24.728	23.745
Airborne Networking Support	WR	SSC:San Diego, Ca	1.313	-		-		-		-	0.000	1.313	1.313
Program Management Support	C/CPFF	Booz Allen Hamilton/ SSC:San Diego, Ca	8.323	0.188	Dec 2010	-		-		-	0.000	8.511	8.511
Information Assurance Support	MIPR	NSA:Fort George Meade, MD	-	0.110	Jan 2011	0.500	Jan 2012	-		0.500	0.000	0.610	0.610
		Subtotal	48.641	1.281		1.540		-		1.540	0.000	51.462	50.479

	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	394.412	20.722		41.688		-		41.688			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy			DATE: February 2011
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*	

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

In PYs-FY12, Project No. 3020 represents the total MIDS RDT&E budget for those years.
In FY13-FY16, Project No. 3020 represents the Navy share of the funding associated with MIDS. 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 2012 Navy		DATE: February 2011
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 2012 Navy		DATE: February 2011
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	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3020				
MIDS JTRS Core Terminal: Phase 2B-Limited Fielding and Production Decision	1	2010	1	2010
MIDS JTRS Core Terminal: Phase 2B-Production Transition Terminal Delivery	1	2010	2	2010
MIDS JTRS Core Terminal: Phase 2B-Limited Fielding and Production Delivery	2	2010	1	2011
MIDS JTRS Core Terminal: Phase 2B-Limited Fielding and Production II	2	2011	2	2011
MIDS JTRS Core Terminal: Phase 2B-Limited Fielding and Production II Delivery	3	2011	2	2012
MIDS JTRS Core Terminal: Phase 2B-Full Production and Fielding Decision	4	2011	4	2011
MIDS JTRS Core Terminal: Test and Evaluation-Technical Evaluation (TECHEVAL)	1	2010	2	2010
MIDS JTRS Core Terminal: Test and Evaluation-Operational Evaluation (OPEVAL)	4	2010	4	2010
MIDS JTRS Core Terminal: Test and Evaluation-Initial Operational Capability (IOC)	2	2011	2	2011
MIDS JTRS Core Terminal: Verification of Correction of Deficiencies (VCD)	3	2011	3	2011
MIDS-LVT Enhancements: Crypto Modernization (CM) -Spec Development	4	2010	4	2011
MIDS-LVT Enhancements: CM -ECP Enhancements	4	2010	4	2011
MIDS-LVT Enhancements: Enhanced Through[ut Link-16 Design/Development	1	2012	1	2014
MIDS-LVT Enhancements: CM -H/W Design	4	2011	3	2014
MIDS-LVT Enhancements: CM -S/W Design	4	2011	3	2014
MIDS-LVT Enhancements: CM -FAQT	2	2013	2	2015
MIDS JTRS Crypto Modernization: H/W Design	3	2011	1	2012
MIDS JTRS Crypto Modernization: FAQT	3	2011	2	2012
MIDS JTRS Crypto Modernization: CSS Design	3	2011	2	2012
MIDS JTRS Crypto Modernization: S/W Design	3	2011	2	2012

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
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 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
3073: *AMF JTRS*	306.018	407.334	349.920	-	349.920	65.385	21.324	3.381	0.163	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY10-FY12, Project No. 3073 represents the total AMF JTRS RDT&E budget for those years.

In FY13-FY16, Program Element (PE) 0604280N represents the Navy share of the funding associated with AMF JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program. Thus in FY13-16 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and 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 Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: AMF JTRS	304.692	407.334	349.920
Articles:	0	0	0
FY 2010 Accomplishments: Conducted Critical Design Review in 1st quarter FY10. Continued EDM hardware and non-waveform software development and integration; continued waveform porting activities; continued platform integration development for AMF test program; conducted initial hardware and software demonstration with the AMF JTR Set-SA (Link-16); and continued NSA information assurance			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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 Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
activities and verification of design. Continued development engineering and management support for associated JTR system components. ***FY 2011 Plans:*** Continue EDM hardware and non-waveform software development and integration; continue waveform porting activities; conduct initial hardware and software demonstration with the AMF JTR Set-SA (WNW) and AMF JTR Set-M/F; deliver AMF JTR Set-SA EDMs; continue platform integration development for AMF test program; begin Integrated Test Airborne B (ITA B); begin 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. ***FY 2012 Plans:*** Deliver AMF JTR Set-MF EDMs; conduct Milestone C; conduct LRIP-1; complete Integrated Test Maritime B (ITM B); conduct System Verification Review/Production Readiness Review for AMF JTR Set-SA; complete Integrated Test Airborne B (ITA B); continue platform integration development for AMF test program; continue NSA information assurance activities and verification of design; continue as necessary hardware and software support for integration, testing and low rate initial production; continue engineering and management support for associated JTR system components.			
Title: Digital Modular Radio ***Articles:*** ***FY 2010 Accomplishments:*** Procured test asset for integration and laboratory testing to develop prototype DMR system that expands the current HF function into a broadband HF functionality.	1.326 0	-	-
Accomplishments/Planned Programs Subtotals	306.018	407.334	349.920

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• RDTEA/0604280A: *AMF JTRS*	0.000	0.000	0.000	0.000	0.000	68.187	19.596	2.113	0.000	Continuing	Continuing
• RDTEF/0604280F: *AMF JTRS*	0.000	0.000	0.000	0.000	0.000	64.381	24.251	2.132	0.000	Continuing	Continuing
	0.000	0.000	24.703	0.000	24.703	12.190	26.718	39.022	52.192	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• OPN/3010: *SHIP TACTICAL COMMUNICATIONS*											

D. Acquisition Strategy

The FY12 budget supports the JTRS AMF Engineering Manufacturing and Development (EMD) (formerly SDD, changed as a result of updates to the DoD Instruction 5000.02) 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 JTRS 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. AMF JTRS capabilities will be incrementally developed, with each increment building on the technological achievements of its predecessor, while providing expanded capabilities.

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 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, AMF employs Earned Value Metrics to monitor contract performance on the Prime Development Contract.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total 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	8.563	8.563
MIDS JTRS HW/SW (Phase 2A/2B Core) via	C/CPIF	ViaSat Inc:Carlsbad, CA	4.078	-		-		-		-	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	45.603	45.603
AMF JTRS Development - JTR System (Pre-SDD) LM	C/CPFF	Lockheed Martin:Manassas, VA	45.335	-		-		-		-	0.000	45.335	45.335
AMF JTRS Development - JTR SET (SDD) LM	C/CPIF	Lockheed Martin:Manassas, VA	526.500	256.700	Oct 2010	202.000	Oct 2011	-		202.000	Continuing	Continuing	Continuing
AMF JTRS - Systems Engineering	WR	Various:Various	107.103	20.580	Oct 2010	20.346	Oct 2011	-		20.346	Continuing	Continuing	Continuing
Systems Engineering - JTRS Implementation-Navy Unique	WR	Various:Various	15.634	-		-		-		-	0.000	15.634	15.634
H/W Development: DMR HF Power Amplifier	C/FFP	GDDS:Various	6.227	-		-		-		-	0.000	6.227	4.901
Systems Engineering - JTF WARNET	WR	Various:Various	7.481	-		-		-		-	0.000	7.481	7.481
JTRS HMS Design, Development and Manufacture of Engineering Development Models (EDMs)	C/CPAF	General Dynamics C4 Systems:Scottsdale, AZ	-	28.666	Mar 2011	-		-		-	Continuing	Continuing	Continuing
		Subtotal	766.524	305.946		222.346		-		222.346			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF JTRS - Acquisition, and ILS Support	WR	Various:Various	24.829	8.752	Oct 2010	10.377	Oct 2011	-		10.377	Continuing	Continuing	Continuing
Software Dev: DMR Build 6.4	C/FFP	GDDS:Various	12.861	-		-		-		-	0.000	12.861	12.861

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
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*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	37.690	8.752		10.377		-		10.377			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF JTRS - Test and Evaluation and Test Support	WR	Various:Various	41.567	86.950	Oct 2010	107.427	Oct 2011	-		107.427	Continuing	Continuing	Continuing
DMR T&E (FOTE) SD	WR	SSC:San Diego, CA	3.999	-		-		-		-	0.000	3.999	1.724
DMR T&E (FOTE) CHARL	WR	SSC:Charleston, SC	1.732	-		-		-		-	0.000	1.732	1.732
AMF JTRS Navy Specific Integration	C/CPIF	Various:Various	-	-		2.107	Oct 2011	-		2.107	Continuing	Continuing	Continuing
		Subtotal	47.298	86.950		109.534		-		109.534			

Remarks

Navy Specific Integration - Funds for Navy to complete the integration and OPEVAL of AMF-M/F terminals on CVN, SSN and Shore location.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF Business Operations Management and Support	WR	Various:Various	28.474	5.686	Oct 2010	7.663	Oct 2011	-		7.663	Continuing	Continuing	Continuing
Acquisition Workforce Fund - 2009	C/FP	Various:Various	1.039	-		-		-		-	0.000	1.039	1.039
		Subtotal	29.513	5.686		7.663		-		7.663			

	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	881.025	407.334		349.920		-		349.920			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy			DATE: February 2011
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*	

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract

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-FY10 PYs represent the total AMF JTRS RDT&E budget for those years.

In FY11-FY12, Project No. 3073 represents the total AMF JTRS RDT&E budget.

In FY13-16 Project No. 3073 represents a portion of the total AMF JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for a portion of the total program. Thus, a portion of AMF is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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 2012 Navy		DATE: February 2011
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	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3073				
Critical Design Review (CDR)	1	2010	1	2010
Initial HW/SW Demonstration - SA (IHSD-SA Link-16)	4	2010	4	2010
Initial HW/SW Demonstration - SA (IHSD-SA WNW)	2	2011	2	2011
Initial HW/SW Demonstration - M/F (IHSD-MF)	4	2011	4	2011
Eng Dev Model (EDM) Delivery- SA	2	2011	2	2011
Eng Dev Model (EDM) Delivery- M/F	3	2012	3	2012
Milestone C (MS C)	3	2012	3	2012
Low-Rate Initial Production I	3	2012	3	2012
Complete Integrated Test Airborne - C1 (ITA-C1 EDM)	1	2013	1	2013
Complete Integrated Test Maritime - C1 (ITM-C1 EDM)	4	2013	4	2013
Complete Integrated Test Airborne - C2 (ITA-C2 LRIP)	1	2014	1	2014
Complete Integrated Test Maritime - C2 (ITM-C2 LRIP)	1	2014	1	2014
Complete Initial Operational Test & Evaluation-SA (IOT&E-SA)	2	2014	2	2014
Complete Initial Operational Test & Evaluation-MF (IOT&E-MF)	2	2014	2	2014

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
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 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
3074: *GMR JTRS*	200.332	101.404	18.732	-	18.732	2.278	0.847	0.028	0.026	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY10-FY12, Project No. 3074 represents the total Ground Mobile Radio (GMR) JTRS RDT&E budget for those years.

In FY13-FY16, Program Element (PE) 0604280N represents the Navy share of the funding associated with GMR JTRS. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for a portion of the total program. Thus in FY13-16 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and 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.

(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 Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: GMR JTRS	200.332	101.404	18.732
Articles:	0	0	0
FY 2010 Accomplishments: Supported the design, development, manufacture and delivery of GMR EDMs, technical support, System Integration Test (SIT), and completion of Production Qualification Test (PQT).			
FY 2011 Plans: Continue to support the design, development, manufacture and delivery of GMR EDMs, technical support, and			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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 Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Limited User Test (LUT). ***FY 2012 Plans:*** Complete development, achieve Milestone C, support preparation and conduct of Multi-service Operational Test and Evaluation (MOT&E), National Security Agency (NSA) Certification, and upgrade of Enhanced Position Location and Reporting System (EPLRS) crypto modification.			
Accomplishments/Planned Programs Subtotals	200.332	101.404	18.732

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• RDTEA/0604280A: *GMR JTRS*	0.000	0.000	0.000	0.000	0.000	19.700	27.814	8.493	0.674	Continuing	Continuing
• RDTEF/0604280F: *GMR JTRS*	0.000	0.000	0.000	0.000	0.000	2.458	1.000	0.127	0.000	Continuing	Continuing
• RDTEA/0604805A: *JTRS Cluster 1/ GMR*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	571.542
• PMC/4633: *Radio Systems*	4.985	24.377	9.426	0.000	9.426	8.498	5.635	0.000	0.000	0.000	52.921

D. Acquisition Strategy

This project supports the JTRS GMR Engineering & Manufacturing Development (EMD) 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 providing 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 Model (EDM) designs are complete.

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 2012 Navy		DATE: February 2011
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*

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 2012 Navy			DATE: February 2011
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS GMR GFE	MIPR	PEO C3T:Ft. Monmouth, NJ	4.000	-		-		-		-	0.000	4.000	4.000
JTRS GMR GFE	C/CPAF	GENERAL DYNAMICS:Scottsdale, AZ	0.202	0.500	Nov 2010	-		-		-	0.000	0.702	0.702
JTRS GMR SDD	C/CPAF	BOEING:Anaheim, CA	771.012	75.129	Oct 2010	8.261	Oct 2011	-		8.261	Continuing	Continuing	Continuing
JTRS DEVELOPMENT - System Engineering Support	MIPR	PEO C3T:Ft. Monmouth, NJ	13.733	3.005	Jan 2011	-		-		-	0.000	16.738	16.738
Technology Development efforts	MIPR	PEO C3T:Ft. Monmouth, NJ	16.761	4.205	Jan 2011	-		-		-	0.000	20.966	20.966
		Subtotal	805.708	82.839		8.261		-		8.261			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS Antenna Study	MIPR	PEO C3T:Ft. Monmouth, NJ	2.025	-		-		-		-	0.000	2.025	2.025
JTRS Tech Support	MIPR	PEO C3T:Ft. Monmouth, NJ	7.140	2.204	Jan 2011	-		-		-	0.000	9.344	9.344
JTRS MUOS Support	C/CPFF	Johns Hopkins University:Laural, MD	0.623	-		-		-		-	0.000	0.623	0.623
DIACAP Support	MIPR	PEO C3T:Ft. Monmouth, MJ	0.960	-		0.500	Oct 2011	-		0.500	0.000	1.460	1.460
		Subtotal	10.748	2.204		0.500		-		0.500	0.000	13.452	13.452

Remarks

PYs column only reflects prior year Navy GMR JTRS costs for FY07-10. Prior to FY07, GMR JTRS funding resided in Army PE 0604805A, Project 615. In FY11 and FY12, Project No. 3074 represents the total GMR JTRS RDT&E budget. In FY13-16, Project No. 3074 represents a portion of the total GMR JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgetsfor a portion of the total program. Thus, a portion of GMR is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS EPG test bed & test planning	MIPR	EPG:Fort Huachuca, AZ	12.897	5.400	Jan 2011	2.100	Oct 2011	-		2.100	Continuing	Continuing	Continuing
JTRS M&S	MIPR	USAIC:Fort Huachuca, AZ	7.384	-	Jan 2011	-		-		-	Continuing	Continuing	Continuing
JTRS Test In-house Spt & Gov activities	MIPR	PEO C3T:Ft. Monmouth, NJ	9.393	1.987	Jan 2011	2.850	Oct 2011	-		2.850	Continuing	Continuing	Continuing
JTRS EOA/SIT/LUT/MOTE Test Activity	MIPR	EPG:Fort Huachuca, AZ	12.408	4.616	Jan 2011	3.221	Oct 2011	-		3.221	Continuing	Continuing	Continuing
		Subtotal	42.082	12.003		8.171		-		8.171			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS Business Engineering Mgmt	MIPR	PEO C3T:Ft. Monmouth, NJ	14.342	1.849	Jan 2011	0.600	Oct 2011	-		0.600	Continuing	Continuing	Continuing
PMO Support	MIPR	PEO C3T:Ft. Monmouth, NJ	27.080	2.509	Jan 2011	1.200	Oct 2011	-		1.200	Continuing	Continuing	Continuing
JTRS MITRE support	MIPR	MITRE:Ft. Monmouth, NJ	0.513	-		-		-		-	0.000	0.513	0.513
Acquisition Workforce Fund	C/FP	Not Specified:Not Specified	1.167	-		-		-		-	0.000	1.167	1.167
		Subtotal	43.102	4.358		1.800		-		1.800			

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	901.640	101.404		18.732		-		18.732			

Remarks

PYs column only reflects prior year Navy GMR JTRS costs for FY07-10. Prior to FY07, GMR JTRS funding resided in Army PE 0604805A, Project 615. In FY11 and FY12, Project No. 3074 represents the total GMR JTRS RDT&E budget. In FY13-16, Project No. 3074 represents a portion of the total GMR JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for a portion of the total program. Thus, a portion of GMR is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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 2012 Navy		DATE: February 2011
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	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3074				
EDM Deliveries	1	2010	4	2010
Production Qualification Test (PQT)	1	2010	1	2011
JTRS - Army GMR System Integration Test (SIT)	3	2010	4	2010
Limited User Test	3	2011	3	2011
JTRS GMR Milestone C	4	2011	4	2011
Preparation for Multi-Service Operational Test and Evaluation	2	2012	4	2012
JTRS - Multi-service Operational Test and Evaluation	1	2013	1	2013
IOC	2	2013	2	2013
FRP IPR	2	2013	2	2013
System Upgrades	1	2013	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
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 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
3075: *HMS JTRS*	135.936	40.689	179.117	-	179.117	12.452	2.788	0.326	-	0.000	371.308
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY10-FY12, Project No. 3075 represents the total HMS JTRS RDT&E budget for those years.

In FY13-FY16, Program Element (PE) 0604280N represents the Navy share of the funding associated with HMS JTRS. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for a portion of the total program. Thus in FY13-16 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and 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.

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 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 Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: HMS JTRS	135.936	40.689	179.117
Articles:	0	0	0
FY 2010 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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 Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Completed AN/PRC-154 2 Watt Production Rifleman Radio Field Experiment (FE) and Final OE 5.0 Formal Qualification Test (FQT); Provided technical support for Phase 1 and Phase 2; Completed Phase 2 Engineering Development Model (EDM) manufacturing and started Phase 2 Contractor Development Test (CDT); Completed waveform integration on Phase 1 Radios. ***FY 2011 Plans:*** Complete Phase 1 and 2 Contractor Developmental Test (CDT); Complete the Government Developmental Test 2 (GDT2) for Phase 1 AN/PRC-154 Rifleman Radio; Achieve a Milestone C for Phase 1 Radios; Obtain Phase 1 Information Assurance certification; Provide technical support for Phase 1 and Phase 2; Complete Phase 2 GDT1 and Phase 2 Limited User Test (LUT); Obtain Phase 2 Information Assurance certification; Complete SFF-B CDT. ***FY 2012 Plans:*** Perform Phase 1 Initial Operational Test & Evaluation (IOT&E); Complete Phase 2 GDT2, GDT with Mobile User Objective System (MUOS) Regression Testing and Phase 2 Multi-Services Operational Test & Evaluation (MOTE); Achieve an IPR for Phase 2; Complete MUOS porting efforts; Initiate efforts for Shadow Integration and porting Very High Frequency/Ultra High Frequency Line-of-Sight (V/U LOS) with Air Traffice Control (ATC) and Over-The-Air-Rekeying/Over-The-Air-Zeroizing (OTAR/ OTAZ); Initiate and complete enhancement capabilities on the SFF-B.			
Accomplishments/Planned Programs Subtotals	135.936	40.689	179.117

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• RDTEA/0604280A: *HMS JTRS*	0.000	0.000	0.000	0.000	0.000	63.348	43.414	14.198	3.887	Continuing	Continuing
• RDTEF/0604280F: *HMS JTRS*	0.000	0.000	0.000	0.000	0.000	12.610	2.805	0.333	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
• OPN/3057: *COMMUNICATION ITEMS UNDER $5M*	0.000	5.288	3.870	0.000	3.870	3.770	0.717	0.962	0.912	Continuing	Continuing
• PMC/4633: *Radio Systems*	0.000	0.498	8.131	0.000	8.131	10.472	12.849	13.629	13.858	Continuing	Continuing

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

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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*

in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop the 2 Channel Manpack, SFF-B 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 FY12 budget supports the completion of Development, achievement of a Phase 2 In-Process Review (IPR), preparation and completion for the Operational Test for Phase 2, and approved capability enhancements to include the SFF-B, Very High Frequency/Ultra High Frequency Line-of-Sight (VHF/UHF LOS) with Air Traffic Control (ATC,) and Over-The-Air-Rekeying/Over-The-Air-Zeroizing (OTAR/OTAZ).

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 2012 Navy		DATE: February 2011
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total 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	393.641	2.998	Oct 2010	111.689	Oct 2011	-		111.689	0.000	508.328	
JTRS HMS Development System Engineering Support	MIPR	PEO C3T:Ft. Monmouth, NJ	31.167	-		-		-		-	0.000	31.167	31.167
Technology Development efforts	MIPR	PEO C3T:Ft. Monmouth, NJ	13.672	-		-		-		-	0.000	13.672	13.672
		Subtotal	438.480	2.998		111.689		-		111.689	0.000	553.167	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS Technical Support	MIPR	PEO C3T, ARL, CACI, CECOM, CERDEC, LCMC, DSCI:Ft. Monmouth, NJ; APG, MD; San Diego, CA	21.305	11.987	Oct 2010	16.680	Oct 2011	-		16.680	0.000	49.972	
		Subtotal	21.305	11.987		16.680		-		16.680	0.000	49.972	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total 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	0.300	0.300
JTRS Modeling and Simulation.	MIPR	USAIC:Ft. Huachuca, AZ	0.750	0.100	Jul 2011	0.100	Dec 2011	-		0.100	0.000	0.950	0.950
JTRS Test In-house Support & Government	MIPR	PEO C3T:Ft. Monmouth, NJ	20.229	1.112	Oct 2010	1.001	Oct 2011	-		1.001	0.000	22.342	
	MIPR		11.925	6.075	Jan 2011	4.565	Oct 2011	-		4.565	0.000	22.565	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Phase1 T&E (CDT, GDT, LUT, OT)		PEO C3T:Ft. Monmouth, NJ											
Phase2 T&E (CDT, GDT, LUT, OT)	MIPR	PEO C3T:Ft. Monmouth, NJ/APG, MD	6.000	12.135	Dec 2010	22.235	Oct 2011	-		22.235	0.000	40.370	
Enhanced Capabilities	MIPR	EPG, ATEC, AEC, MBL, ARLSLAD, CERDEC:Ft. Huachuca, AZ; Ft. Benning, GA; Ft. Monmouth,	-	-		9.848	Oct 2011	-		9.848	0.000	9.848	
		Subtotal	39.204	19.422		37.749		-		37.749	0.000	96.375	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Office Support	MIPR	PEO C3T:Ft. Monmouth, NJ	34.356	5.061	Oct 2010	10.199	Oct 2011	-		10.199	0.000	49.616	
JTRS Business/ Engineering Management	MIPR	PEO C3T:Ft. Monmouth, NJ	13.113	1.221	Oct 2010	2.800	Oct 2011	-		2.800	0.000	17.134	
Acquistion Workforce Fund	C/FP	Not Specified:Not Specified	0.634	-		-		-		-	0.000	0.634	0.634
		Subtotal	48.103	6.282		12.999		-		12.999	0.000	67.384	

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	547.092	40.689		179.117		-		179.117	0.000	766.898	

Remarks

PYs column only reflects prior year Navy HMS costs for FY07-10. Prior to FY07, HMS JTRS funding resided in Army PE 0604805A, Project 61A.
In FY11 and FY12, Project No. 3075 represents the total HMS JTRS RDT&E budget.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy			DATE: February 2011
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*	

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract

In FY13-16 Project No. 3075 represents a portion of the total HMS JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for a portion of the total
program. Thus, a portion of HMS is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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 2012 Navy		DATE: February 2011
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	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3075				
Increment 1, Phase 1 CDT	1	2010	2	2011
Increment 1, Phase 1 MS C	4	2011	4	2011
Increment 1, Phase 1 GDT2	4	2011	4	2011
Increment 1, Phase 1 IOT&E	3	2012	3	2012
Increment 1, Phase 2 CDT	4	2010	3	2011
Increment 1, Phase 2 GDT1	3	2011	3	2011
Increment 1, Phase 2 LUT	3	2011	3	2011
Increment 1, Phase 2 GDT2	1	2012	1	2012
Increment 1, Phase 2 IPR	2	2012	2	2012
Increment 1, Phase 2 MOTE	3	2012	3	2012
Increment 1 Enhancements	1	2012	4	2014

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
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 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
3076: *JTRS Network Enterprise Domain (JNED)*	198.139	117.574	94.189	-	94.189	32.235	20.638	18.551	15.730	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY10-FY12, Project No. 3076 represents the total JNED RDT&E budget.

In FY13-FY16, Program Element (PE) 0604280N represents the Navy share of the funding associated with JNED. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for a portion of the total program. Thus in FY13-16 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and 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.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Wideband Networking Waveform (WNW)	8.570	6.970	-
Articles:	0	0	
Description: - 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			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
(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. ***FY 2010 Accomplishments:*** Completed development and performed FQT for WNW v4.0 in 1QFY10. Provided post FQT support to platforms during WNW porting activities. Began Software In Service Support for the WNW waveform. ***FY 2011 Plans:*** Continue Software In Service Support for the WNW waveform.			
Title: Soldier Radio Waveform (SRW) ***Articles:*** ***Description:*** 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. ***FY 2010 Accomplishments:*** Completed integration of v1.0c into HMS and conducted Delta-FQT in Q1 FY10. Provided post FQT support to platforms during SRW v1.0c porting activities. Began Software In Service Support for the SRW waveform. ***FY 2011 Plans:*** Continue Software In Service Support for the SRW waveform.	4.438 0	1.076 0	-
Title: Mobile User Objective System (MUOS) ***Articles:*** ***Description:*** 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	57.864 0	30.122 0	6.500 0

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
modify this waveform, making it compatible and certifiable to meet DoD security requirements plus enable porting to JTR sets. Platforms include: HMS and AMF. ***FY 2010 Accomplishments:*** Continued development of MUOS v3.1. ***FY 2011 Plans:*** Complete development and perform FQT of MUOS v3.1 in 4Q FY11. Begin Software In Service Support for the MUOS waveform. ***FY 2012 Plans:*** Continue Software In Service Support for the MUOS waveform.			
Title: Joint Airborne Networking -Tactical Edge (JAN-TE) ***Articles:*** ***Description:*** 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, but allowed the Navy and/or Air Force to continue funding its development independently, if desired. The Navy has budgeted funding for continuation of JAN-TE's development beginning in FY2012. ***FY 2012 Plans:*** Continue development of the JAN-TE waveform.	- -	- -	2.700 0
Title: Network Enterprise Services (NES) ***Articles:*** ***Description:*** 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). Provide JNED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering, problem resolution and support of Software Communications Architecture (SCA) activities. ***FY 2010 Accomplishments:***	72.476 0	39.103 0	41.702 0

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Completed development and performed FQT for SRWNM 1.0R in 2Q FY10. Continued development for ENS Phase 1 (SoftINC and TDC). Began Software In Service Support for Network Managers. ***FY 2011 Plans:*** Complete development and perform FQT for JENM Phase 1 in 2Q FY11 and begin JENM Phase 2 (MUOS) enhancement effort. Complete development and perform FQT for SRWNM 1.0.2. in 2Q FY11. Complete development and perform FQT for ENS Phase 1 SoftINC in 3Q FY11 and ENS Phase 1 TDC in 3Q FY11. Begin Software In Service Support for Network Services. Continue Software In Service Support for Network Managers. ***FY 2012 Plans:*** 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 development and perform FQT for JENM Phase 2 (MUOS) in 1Q FY12 and JENM Phase 2 (Final) in 2Q FY12. Continue Software In Service Support for Network Services. Continue Software In Service Support for Network Managers.			
Title: Legacy Radio Waveforms ***Articles:*** ***Description:*** Legacy Radio Waveforms: Includes the development and acquisition of legacy software and other related activities to support the legacy waveform development. ***FY 2010 Accomplishments:*** Continued to support waveform integration test and evaluation to include hardware and software waveform certification process (SCA compliance testing) to meet program requirements. Completed development and performed FQT for HF v4.0 in 1Q FY10. Completed development and performed FQT for UHF SATCOM v4.1 in 1Q FY10. Continued JNED program management office support. Continued to provide post FQT support to platforms during Legacy Waveform porting activities. Continued Software In Service Support for Legacy waveforms. ***FY 2011 Plans:*** 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 Software In Service Support for Legacy waveforms. ***FY 2012 Plans:***	54.791 0	40.303 0	43.287 0

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
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 Software In Service Support for Legacy waveforms.			
Accomplishments/Planned Programs Subtotals	198.139	117.574	94.189

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• RDTEA/0604280A: *JNED*	0.000	0.000	0.000	0.000	0.000	34.944	23.777	20.115	21.531	Continuing	Continuing
• RDTEF/0604280F: *JNED*	0.000	0.000	0.000	0.000	0.000	30.931	22.468	19.946	22.421	Continuing	Continuing
• O&M, 4A6M: *Service Wide Communications (JNED)*	6.650	40.397	49.600	0.000	49.600	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 FY12 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 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 2012 Navy		DATE: February 2011
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total 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	2.050	0.300	Dec 2010	0.418	Dec 2011	-		0.418	Continuing	Continuing	Continuing
Wideband Networking Waveform (WNW)	C/CPAF	BOEING:Huntington Beach, CA	104.094	-		-		-		-	0.000	104.094	104.094
Soldier Radio Waveform (SRW)	C/CPIF	ITT:Clifton, NJ	89.395	1.076	Dec 2010	-		-		-	0.000	90.471	90.472
Mobile User Objective System (MUOS)	C/CPIF	Lockheed Martin:Sunnyvale, CA	93.820	30.122	Jan 2011	6.500	Dec 2011	-		6.500	0.000	130.442	130.442
Joint Airborne Networking - Tactical Edge (JAN-TE)	C/CPFF	Rockwell Collins:Cedar Rapids, IA	37.310	-		2.700	Dec 2011	-		2.700	Continuing	Continuing	Continuing
Legacy Software-Defined Radio Waveforms	Various	Various:Various	46.515	2.600	Dec 2010	1.246	Dec 2011	-		1.246	Continuing	Continuing	Continuing
Network Enterprise Services Development	Various	BOEING:Huntington Beach	203.717	11.679	Dec 2010	34.266	Dec 2011	-		34.266	Continuing	Continuing	Continuing
Network Enterprise Services Development	Various	ITT:Clifton, NH	49.487	15.700	Dec 2010	-		-		-	0.000	65.187	65.187
Network Enterprise Services Development	Various	RCI:Cedar Rapids, IA	15.046	11.423	Dec 2010	7.018	Dec 2011	-		7.018	0.000	33.487	33.488
Post FQT / Software Sustainment	Various	ITT:Clifton, NJ	1.500	1.359	Dec 2010	7.890	Dec 2011	-		7.890	0.000	10.749	10.749
Post FQT / Software Sustainment	Various	Raytheon:Waltham, MA	-	-	Dec 2010	-	Dec 2011	-		-	0.000	0.000	0.817
Post FQT / Software Sustainment	Various	RCI:Cedar Rapids, IA	1.012	0.678	Dec 2010	4.134	Dec 2011	-		4.134	0.000	5.824	5.824
Post FQT / Software Sustainment	Various	LANT:Charleston, SC	2.043	1.175	Dec 2010	1.175	Dec 2011	-		1.175	0.000	4.393	4.805
Post FQT / Software Sustainment	Various	TBD:TBD	1.248	4.196	Mar 2011	4.193	Dec 2011	-		4.193	Continuing	Continuing	Continuing
Certification (Interim SCA Compliance Testing)	MIPR	NSA:Ft. Meade, MD	13.004	3.000	Nov 2011	1.266	Dec 2011	-		1.266	Continuing	Continuing	Continuing
		Subtotal	660.241	83.308		70.806		-		70.806			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC - MITRE Technical Support	MIPR	MITRE:Ft. Monmouth, NJ	9.981	0.516	Dec 2010	-		-		-	Continuing	Continuing	Continuing
		Subtotal	9.981	0.516		-		-		-			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various	SRA / SSC PAC / SSC LANT:San Diego, CA / San Diego, CA / Charleston, SC	198.447	33.750	Dec 2010	23.383	Dec 2011	-		23.383	Continuing	Continuing	Continuing
Acquisition Workforce Fund	C/FP	Not Specified:Not Specified	1.030	-		-		-		-	0.000	1.030	Continuing
		Subtotal	199.477	33.750		23.383		-		23.383			

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	869.699	117.574		94.189		-		94.189			

Remarks

Remarks: PYs column only reflects prior year Navy JNED costs for FY07-10. Prior to FY07, funding for JNED resided in Army PE 0604280A, Project 162. In FY11 & FY12, Project No. 3076 represents the total JNED RDT&E budget. In FY13-FY16, Project No. 3076 represents a portion of the total JNED RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for a portion of the total program. Thus, some of JNED is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F. Software Sustainment funds to be transferred from RDT&E to O&M,N in fiscal year of execution as part of the JTRS joint program acquisition strategy.

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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 2012 Navy		DATE: February 2011
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	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3076				
WNW v 4.0	1	2010	1	2010
SRW v1.0c Delta for HMS	1	2010	1	2010
MUOS 3.1	4	2011	4	2011
JAN-TE	2	2013	2	2013
JWNM v 4.0	2	2010	2	2010
JENM Phase I	2	2011	2	2011
JENM Phase II (MUOS)	1	2012	1	2012
JENM Phase II (Final)	2	2012	2	2012
JENM Phase III	2	2013	2	2013
SRWNM 1.0R	2	2010	2	2010
SRWNM 1.0.2	2	2011	2	2011
ENS Phase 1 SoftINC	3	2011	3	2011
ENS Phase 1 TDC	3	2011	3	2011
HF v4.0	1	2010	1	2010
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 2012 Navy			DATE: February 2011
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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
3078: *Digital Modular Radio*	-	-	4.500	-	4.500	4.327	-	-	-	0.000	8.827
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Digital Modular Radio previously funded under Project 3073.

A. Mission Description and Budget Item Justification

The Digital Modular Radio (DMR), AN/USC-61(C), is the first software defined radio to have become a communications system standard for the U.S. Military. The compact, multi-channel DMR provides multiple waveforms and multi-level information security for voice and data communications. Digital Modular Radios currently operate aboard U.S. Navy surface and subsurface vessels, fixed-sites and other Department of Defense communication platforms using frequencies ranging from 2 MHz to 2 GHz. Certified to pass secure voice and data at Multiple Independent Levels of Security (MILS) over HF, VHF, UHF, and SATCOM channels, the DMR system was developed to the U.S. Navy's specifications and meets all the stringent environmental, EMI and performance requirements for use in the U.S. Fleet.
This task is to develop Integrated Waveform (IW) capability for the Digital Modular Radio (DMR) in accordance with Military Standards 188-181,2,3. IW uses a TDMA communication system in an attempt to improve satellite bandwidth utilization over legacy SATCOM waveforms. This enables demand assigned services on UHF SATCOM networks to support new applications that require better performance and higher channel throughput.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: DMR	-	-	4.500
Articles:			0
FY 2012 Plans: FY12 funding is for DMR Integrated Waveform (IW) capability development of software version 6.5.1.			
Accomplishments/Planned Programs Subtotals	-	-	4.500

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

As per DMR's Acquisition Strategy / Acquisition Plan, Section 1.2:
The evolutionary acquisition strategy for the DMR program commenced in November 1996 with a Sources Sought Synopses being released in the Commerce Business Daily (CBD) that resulted in the Government receiving responses from industry indicating that sufficient technology and competition existed to satisfy the U.S. Navy's requirements.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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After the evaluation of industry proposals by the Space and Naval Warfare Systems Command (SPAWAR) Technical Evaluation Board (TEB), two multiple award FFP/IDIQ contracts were awarded. One contract was awarded to Raytheon E-Systems Incorporated and the other to Motorola Wireless Information Transfer Systems (now General Dynamics C4 Systems (GDC4S)).

Two delivery orders, one to each vendor, were issued to deliver four Service Test Models (STMs) from each vendor. The vendor with the superior design, to be determined after down select testing, would be issued an order for production DMRs. Extensive Government laboratory Developmental Testing (DT) was conducted on the STMs to determine which vendor proposed the superior DMR product. The Government concluded that, based on the results from the DT, the Motorola DMR was the best value for the Navy and an order for LRIP I DMR production quantities was issued to Motorola.

Due to the fact that GDC4S owns the technical data rights to the DMR, they are the only contractor with the unique capabilities and technical knowhow to perform the required IW upgrade work. This scope will be issued to GDC4S as an option under the sole source contract, N00039-10-C-0069, as authorized by SPAWAR J&A No. 16,351, signed 5 January 2010 by the Assistant Secretary of the Navy (ASN), Research, Development and Acquisition (RD&A).

E. Performance Metrics

The dollar threshold for Earned Value Management (EVM) has not been reached. Therefore, contractor performance will be managed through monthly program review meetings and contract milestones.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
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 3078: *Digital Modular Radio*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IW Developement	C/CPIF	GDC4S:Scottsdale, AZ	-	-		4.500	Nov 2011	-		4.500	0.000	4.500	
		Subtotal	-	-		4.500		-		4.500	0.000	4.500	

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		4.500		-		4.500	0.000	4.500	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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 3078: *Digital Modular Radio*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
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** 3078: *Digital Modular Radio*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3078				
IW SW 6.5.1 Development	1	2012	3	2014
ITU 6.5.1 JTIC Cert	3	2014	4	2014
ITU 6.5.1 NSA Cert	2	2014	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
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*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
9999: *Congressional Adds*	3.585	-	-	-	-	-	-	-	-	0.000	3.585
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 developed SFF-A (1 and 2 Channel), SFF-D, and AN/PRC-154 running Soldier Radio Waveform (SRW) for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 developed 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.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011
Congressional Add: JTRS Handheld Small Form Radio Sys	3.585	-
FY 2010 Accomplishments: Conducted study to determine the technical feasibility of adding the wide-band networking waveform to HMS products.		
Congressional Adds Subtotals	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.