Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	4,174.496	258.811	188.482	66.231	-	66.231	33.188	24.324	7.434	22.180	Continuing	Continuing
0728: *EHF SATCOM Terminals*	586.077	17.476	31.731	21.077	-	21.077	19.502	13.693	0.000	14.557	Continuing	Continuing
0731: *FLTSATCOM*	15.209	4.155	10.828	9.202	-	9.202	5.210	3.469	0.000	0.000	0.000	48.073
2472: *Mobile User Objective Sys (MUOS)*	3,573.210	237.180	145.923	35.952	-	35.952	8.476	7.162	7.434	7.623	130.912	4,153.872
MDAP/MAIS Code(s): 290,345												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Navy Multiband Terminal (NMT) Program is the required Navy component to the Advanced Extremely High Frequency (AEHF) Program for enhancing protected and survivable satellite communications to Naval forces. The NMT system provides an increase in single service capability from 1.5 Megabits per second (Mbps) to 8 Mbps, increases the number of coverage areas and retains Anti-Jam/Low Probability of Intercept (AJ/LPI) protection characteristics. It is compatible with today's Navy Low Data Rate/Medium Data Rate (LDR/MDR) terminals and will sustain the Military Satellite Communications (MILSATCOM) architecture by providing connectivity across the spectrum of mission areas, to include land, air and naval warfare, special operations, strategic nuclear operations, strategic defense, theater missile defense, and space operations and intelligence. The NMT system will replenish and improve on Navy terminal capabilities of the Military Strategic, Tactical & Relay System (MILSTAR), Defense Satellite Communications System (DSCS), Wideband Global Satellite (WGS) and Global Broadcast System (GBS). The new system will equip the warfighters with the assured, jam resistant, secure communications as described in the joint AEHF Satellite Communications System and WGS Operational Requirements Documents (ORD). The NMT will provide multiband Satellite Communications (SATCOM) capability for ship, submarine, and shore platforms.

The Joint Ultra-High Frequency (UHF) Military Satellite Communications (MILSATCOM) Network Integrated Control System (JMINI CS) is a legacy system that commenced in 1998. JMINI CS is a Navy-led, Joint-interest program providing integrated, dynamic, and centralized control of non-processed UHF MILSATCOM 5/25 kHz Demand Assigned Multiple Access (DAMA) and Demand Assigned Single Access (DASA) channels to maximize existing highly sought after SATCOM resources. The system also provides decentralized web-based management of those resources for use as a situational awareness tool for Combatant Commanders, Global SATCOM Support Centers, and Regional SATCOM Support Centers. The system is expected to operate well beyond the original 2015 End of Life (EoL) date to 2033. The JMINI CS Program will perform concept development and exploration to identify cost-effective solutions to address multiple life cycle support issues, in order to minimize loss of service to the fleet. The effort will involve evaluation, development, laboratory and integration testing of Commercial Off-The-Shelf (COTS) and Government off-the-shelf (GOTS) hardware and software to replace obsolete components or subsystems while maintaining interoperability with existing systems.

The Sensitive Compartmented Information Networks (SCI Networks) provides enabling technology for Intelligence, Cryptologic, and Information Warfare Systems with protected and reliable delivery of Special Intelligence (SI)/SCI data through a secure, controllable network interface with the Automated Digital Network System (ADNS)

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*

architecture. This network connectivity allows cryptologic and intelligence personnel to fully interact with shore based nodes to provide support to their commanders, including situational awareness, indications and warning (I&W), enemy force intentions, intelligence preparation for the Battlefield, and Battle Damage Assessment (BDA).

Maritime Integrated Broadcast Service (MIBS) (formerly Tactical Data Information Exchange Subsystem Broadcast (TADIXS-B)) Program Charter is to deliver Integrated Broadcast Service (IBS) data to operational and tactical decision makers aboard United States Navy ships, shore headquarters, and other joint platforms. It will provide means to disseminate organically derived data from Navy platforms to other tactical, operational, and strategic users in theatre. MIBS provides the Navy a capability to deliver near real time data, enhancing the Common Operational Picture (COP), to support operations in all warfare areas, including: Ballistic Missile Defense (BMD), Anti-Air Warfare (AAW), Anti-Surface Warfare (ASW), Undersea Warfare (USW), Electronic Warfare (EW). The program encompasses Navy IBS systems (Joint Tactical Terminal - Maritime (JTT-M)). These systems will provide the Navy and other joint platforms with a coherent approach to fielding maritime IBS systems that takes advantage of all available pathways and services.

Internet Protocol version 6 (IPv6): Manage and resource/coordinate resourcing of experiments and pilot testing of IPv6 technologies to reduce acquisition and operational risk associated with the IPv6 Transition. Experiments identified are in direct support of and identified in the Navy Technical Transition Strategy for IPv6.

The Mobile User Objective System (MUOS) program provides for the development of the next generation Department of Defense (DoD) advanced narrowband communications satellite constellation. The current Ultra-High Frequency (UHF) Follow-On (UFO) constellation is projected to degrade below acceptable availability parameters in 2014.

This MUOS Research Development Test & Evaluation, Navy (RDT&E,N) effort supports Full Operational Capability (FOC) in FY 2017.

FY14: Complete On-Orbit testing phase for Satellite 2, conduct End to End (E2E) Risk Reduction testing, conduct Technical Evaluation 2 (TECHEVAL 2), perform Operational Test Readiness Review (OTRR), initiate and complete the Multiservice Operational Test and Evaluation #2 (MOT&E) effort. Provide fixes to ground software resulting from system testing, and Information Assurance Vulnerability Alerts. Implement ECPs requiring Ground software changes. Complete the accreditation effort to obtain the initial Interim Authority to Operate (IATO) for Niscemi. Continue fixing Information Assurance (IA) vulnerabilities identified during the Information Assurance Control & Validation (IACV) effort for Geraldton, Wahiawa, and Northwest. Conduct new IACVs at all sites to obtain IATO extensions.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*			R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	263.439	188.482	53.734	-	53.734
Current President's Budget	258.811	188.482	66.231	-	66.231
Total Adjustments	-4.628	0.000	12.497	-	12.497
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	2.593	0.000			
• SBIR/STTR Transfer	-7.221	0.000			
• Program Adjustments	0.000	0.000	-8.319	-	-8.319
• Rate/Misc Adjustments	0.000	0.000	20.816	-	20.816

Change Summary Explanation

Schedule:

EHF SATCOM Terminals (project 0728)

Reflects adjustments to ATIP Development and Integration; A2AD Development and associated test events; FRP DR and FOC milestone dates; Airborne XDR FOT&E; PY7 procurements and deliveries; and satellite launches.

Mobile User Objective System (project 2472)

MUOS schedule reflects adjustments to Launch date for satellite #5; test events (including End-to-End integration and test), and Full Operating Capability (FOC). The schedule also removes references to On-Orbit Capability (OOC) per Acquisition Program Baseline (APB) approved in July 2012.

Technical:

No significant technical changes.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*	PROJECT 0728: *EHF SATCOM Terminals*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
0728: *EHF SATCOM Terminals*	586.077	17.476	31.731	21.077	-	21.077	19.502	13.693	0.000	14.557	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Navy Multiband Terminal (NMT) Program is the required Navy component to the Advanced Extremely High Frequency (AEHF) Program for enhancing protected and survivable satellite communications to Naval forces. The NMT system provides an increase in single service capability from 1.5 Megabits per second (Mbps) to 8 Mbps, increases the number of coverage areas, and retains Anti-Jam/Low Probability of Intercept (AJ/LPI) protection characteristics. It is compatible with today's Navy Low Data Rate/Medium Data Rate (LDR/MDR) terminals and will sustain the Military Satellite Communications (MILSATCOM) architecture by providing connectivity across the spectrum of mission areas, to include land, air and naval warfare, special operations, strategic nuclear operations, strategic defense, theater missile defense, and space operations and intelligence. The NMT system will replenish and improve on Navy terminal capabilities of the Military Strategic, Tactical & Relay System (MILSTAR), Defense Satellite Communications System (DSCS), Wideband Global Satellite (WGS), and Global Broadcast System (GBS). The new system will equip the warfighters with assured, jam resistant, secure communications as described in both the joint AEHF Satellite Communications System and the WGS Operational Requirement Documents (ORD). Mission requirements specific to Navy operations, including threat levels and scenarios, are contained in the ORD. The NMT will provide multiband Satellite Communications (SATCOM) capability for ship, submarine, and shore platforms.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: NMT Development	17.476	31.731	21.077
Articles:	0	0	0
Description: Overall program efforts include investigation of emerging technologies through study, development, and associated testing for feasibility of satellite communications-related program insertion. They also include Navy Multiband Terminal (NMT) development for System Design and Development (SDD) for ship, shore, and submarine platforms.			
FY 2012 Accomplishments: Completed the development of Q/Ka, Ship X/Ka, and submarine X-band capabilities. Continued the Developmental Testing (DT) and Operational Testing (OT) of Q/Ka, submarine X-band, and Ship X/Ka capabilities into the NMT system. Prepared for DT of the NMT system for testing with the on-orbit Extended Data Rate (XDR) waveform and demonstration of communications planning with the Tactical Mission Planning Sub-System (T-MPSS). Began the development and integration of the Advanced Time Delay Multiple Access Interface Processor (ATIP) into the NMT Terminal. Performed system modifications to correct deficiencies			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*	PROJECT 0728: *EHF SATCOM Terminals*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
discovered during testing. Continued on going efforts to test the Enhanced Polar System (EPS) functionality within the NMT system. ***FY 2013 Plans:*** Complete the Developmental Testing (DT) and Operational Testing (OT) of Q/Ka, Ship X/Ka, and submarine X-band capabilities into the NMT system. Complete the DT of the NMT system for testing with the on-orbit Extended Data Rate (XDR) waveform and demonstration of communications planning with the Tactical Mission Planning Sub-System (T-MPSS). Continue the development and integration of the Advanced Time Delay Multiple Access Interface Processor (ATIP) into the NMT Terminal. Perform system modifications to correct deficiencies discovered during testing. Continue on going efforts to test the Enhanced Polar System (EPS) functionality within the NMT system. Achieve Initial Operational Capability milestone. ***FY 2014 Plans:*** Prepare for Follow-on Operational Test and Evaluation (FOT&E) of the NMT system for testing with the on-orbit Extended Data Rate (XDR) waveform and demonstration of communications planning with the Tactical Mission Planning Sub-System (T-MPSS). Complete the development and integration of the Advanced Time Delay Multiple Access Interface Processor (ATIP) into the NMT Terminal. Perform system modifications to correct deficiencies discovered during testing. Continue on going efforts to test the Enhanced Polar System (EPS) functionality within the NMT system. Develop Anti-Access Area Denial (A2AD) specifications, perform technical and system risk reduction, and solution analysis for Airborne XDR and AEHF, to implement the A2AD mitigation strategy as prescribed in the Joint Aerial Layer Network (JALN) Analysis of Alternatives (AoA).			
Accomplishments/Planned Programs Subtotals	17.476	31.731	21.077

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPN/3216: *Navy Multiband Terminal (NMT)*	107.242	184.825	215.952		215.952	278.146	128.841	57.129	58.003	64.180	1,267.478

Remarks

D. Acquisition Strategy

Navy Multiband Terminal concept exploration contracts were awarded in FY 2001. Two System Development and Demonstration (SDD) contracts were competitively awarded in FY 2004 for the development and demonstration of four prototype terminals per vendor (eight total). In FY 2007, a down select to Raytheon occurred for

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*	PROJECT 0728: *EHF SATCOM Terminals*

the development, demonstration and procurement of 20 Engineering Development Models (EDMs) which will incorporate integrated multi-band capabilities for Q/Ka band, Submarine X-Band, and Ship X/Ka frequency band communication requirements.

E. Performance Metrics

The RDT&E goal for the NMT program is to create a military satellite communications system that consolidates capabilities of current and future satellite systems in a single terminal.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*	PROJECT 0728: *EHF SATCOM Terminals*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development	C/CPAF	Various:Various	126.499	0.000		0.000		0.000		-		0.000	0.000	126.499	
Hardware Development	C/FFP	Harris:Melbourne, FL	6.136	0.000		0.000		0.000		-		0.000	0.000	6.136	
NMT EDM Development	C/CPAF	Raytheon:Marlborough, MA	198.680	0.000		0.000		0.000		-		0.000	0.000	198.680	
Hardware Development	WR	SSC PAC:San Diego, CA	1.009	0.000		0.000		0.000		-		0.000	0.000	1.009	
Ancillary Hardware Development	C/CPAF	Raytheon:Marlborough, MA	55.923	0.000		0.000		0.000		-		0.000	0.000	55.923	
Software Development	WR	NUWC:Newport, RI	8.581	0.000		0.000		0.000		-		0.000	0.000	8.581	
Software Development	C/CPAF	Raytheon:Marlborough, MA	41.453	8.902	Jan 2012	9.568	Jan 2013	6.920	Jan 2014	-		6.920	Continuing	Continuing	Continuing
Systems Engineering	WR	SSC PAC:San Diego, CA	22.088	0.000		0.000		0.000		-		0.000	0.000	22.088	
Systems Engineering	WR	NUWC:Newport, RI	25.206	3.650	Nov 2011	1.548	Nov 2012	1.033	Nov 2013	-		1.033	Continuing	Continuing	Continuing
Systems Engineering	C/CPAF	Linquest:San Diego, CA	34.905	0.000		0.000		0.000		-		0.000	0.000	34.905	
Systems Engineering	C/CPAF	Systech:San Diego, CA	0.000	1.784	Nov 2011	2.200	Nov 2012	1.454	Nov 2013	-		1.454	Continuing	Continuing	Continuing
Software Development	C/CPAF	Unknown:Unknown	0.000	0.000		14.400	Mar 2013	8.200	Mar 2014	-		8.200	Continuing	Continuing	Continuing
		Subtotal	520.480	14.336		27.716		17.607		0.000		17.607			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	WR	SSC PAC:San Diego, CA	11.412	0.000		0.000		0.000		-		0.000	0.000	11.412	
Logistics Support	WR	SSC PAC:San Diego, CA	3.555	0.000		0.000		0.000		-		0.000	0.000	3.555	
Studies & Analysis	WR	NUWC:Newport, RI	6.869	0.000		0.000		0.000		-		0.000	0.000	6.869	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Information Assurance	WR	SSC PAC:San Diego, CA	3.886	0.000		0.000		0.000		-		0.000	0.000	3.886	
		Subtotal	25.722	0.000		0.000		0.000		0.000		0.000	0.000	25.722	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	SSC PAC:San Diego, CA	17.341	1.468	Nov 2011	1.481	Nov 2012	0.990	Nov 2013	-		0.990	Continuing	Continuing	Continuing
Operational Test & Evaluation 1	WR	COMOPTEVFOR:Norfolk, VA	3.866	0.200	Nov 2011	0.500	Nov 2012	1.000	Nov 2013	-		1.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation	C/CPAF	Raytheon:Marlborough, MA	0.000	0.898	Nov 2011	1.340	Nov 2012	0.890	Nov 2013	-		0.890	Continuing	Continuing	Continuing
		Subtotal	21.207	2.566		3.321		2.880		0.000		2.880			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Management	C/CPFF	BAH:San Diego	8.194	0.247	Nov 2011	0.300	Nov 2012	0.250	Nov 2013	-		0.250	Continuing	Continuing	Continuing
Program Management	C/CPFF	BAH:San Diego	8.214	0.247	Nov 2011	0.300	Nov 2012	0.250	Nov 2013	-		0.250	Continuing	Continuing	Continuing
Acquisition Management	WR	NCCA:Various	0.653	0.000		0.000		0.000		-		0.000	0.000	0.653	
Travel	Reqn	SPAWAR:Various	1.607	0.080	Nov 2011	0.094	Nov 2012	0.090	Nov 2013	-		0.090	Continuing	Continuing	Continuing
		Subtotal	18.668	0.574		0.694		0.590		0.000		0.590			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	586.077	17.476		31.731		21.077		0.000		21.077			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*	PROJECT 0728: *EHF SATCOM Terminals*	

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*	PROJECT 0728: *EHF SATCOM Terminals*

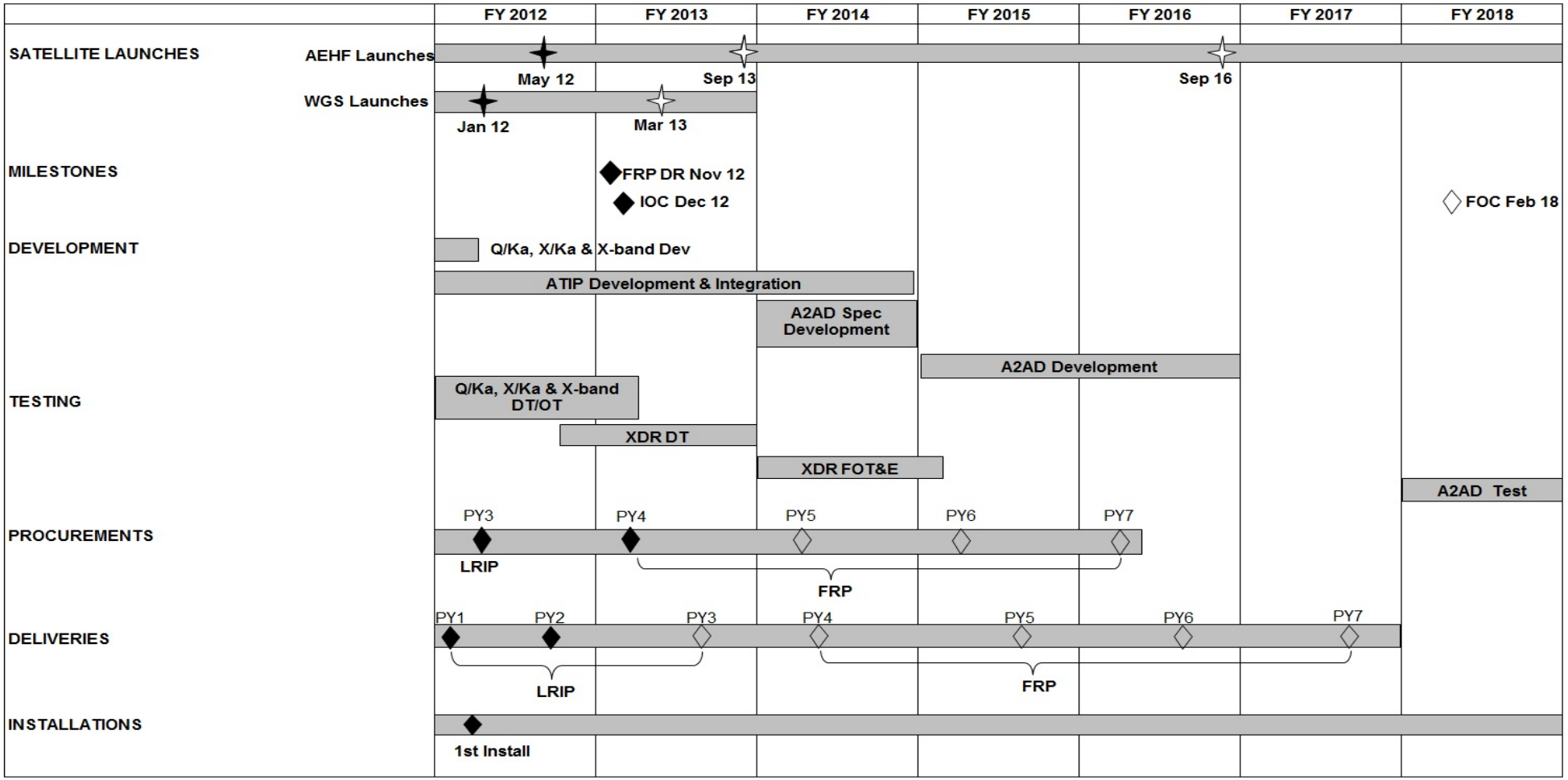

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0303109N: *Satellite Communications (Space)*	**PROJECT** 0728: *EHF SATCOM Terminals*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0728				
Q/Ka, X/Ka & X-band Development	1	2012	2	2012
Q/Ka, X/Ka & X-band DT/OT	1	2012	1	2013
ATIP Development & Integration	1	2012	4	2014
FRP DR	1	2013	1	2013
Procurement Year 3 (PY3)	2	2012	2	2012
LRIP PY1 Delivery	1	2012	1	2012
1st Install	1	2012	1	2012
AEHF Launch SV-2	3	2012	3	2012
WGS Launch #5	2	2012	2	2012
LRIP PY2 Delivery	3	2012	3	2012
Initial Operational Capability (IOC)	1	2013	1	2013
XDR DT	4	2012	4	2013
AEHF Launch SV-3	4	2013	4	2013
Procurement Year 4 (PY4)	1	2013	1	2013
WGS Launch #6	2	2013	2	2013
LRIP PY3 Delivery	3	2013	3	2013
Procurement Year 5 (PY5)	2	2014	2	2014
FRP PY4 Delivery	2	2014	2	2014
Procurement Year 6 (PY6)	2	2015	2	2015
FRP PY5 Delivery	3	2015	3	2015
FRP PY6 Delivery	3	2016	3	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
AEHF Launch SV-4	4	2016	4	2016
NMT Full Operational Capability (FOC)	2	2018	2	2018
XDR FOT&E	1	2014	1	2015
A2AD Spec Development	1	2014	4	2014
A2AD Test	1	2018	4	2018
A2AD Development	1	2015	4	2016
Procurement Year 7 (PY7)	2	2016	2	2016
FRP PY7 Delivery	3	2017	3	2017

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*	PROJECT 0731: *FLTSATCOM*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
0731: *FLTSATCOM*	15.209	4.155	10.828	9.202	-	9.202	5.210	3.469	0.000	0.000	0.000	48.073
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Joint Ultra-High Frequency (UHF) Military Satellite Communications (MILSATCOM) Network Integrated Control System (JMINI CS) is a legacy system that commenced in 1998. JMINI CS is a Navy-led, Joint-interest program providing integrated, dynamic, and centralized control of non-processed UHF MILSATCOM 5/25 kHz Demand Assigned Multiple Access (DAMA) and Demand Assigned Single Access (DASA) channels to maximize existing highly sought after SATCOM resources. The system also provides decentralized web-based management of those resources for use as a situational awareness tool for Combatant Commanders, Global SATCOM Support Centers, and Regional SATCOM Support Centers. The system is expected to operate well beyond the original 2015 End of Life (EoL) date to 2033. The JMINI CS Program will perform concept development and exploration to identify cost-effective solutions to address multiple life cycle support issues, in order to minimize loss of service to the fleet. The effort will involve evaluation, development, laboratory and integration testing of Commercial Off-The-Shelf (COTS) and Government off-the-shelf (GOTS) hardware and software to replace obsolete components or subsystems while maintaining interoperability with existing systems.

(U) Maritime Integrated Broadcast Service (MIBS) (formerly Tactical Data Information Exchange Subsystem Broadcast (TADIXS-B)) Program Charter is to deliver Integrated Broadcast Service (IBS) data to operational and tactical decision makers aboard United States Navy ships, shore headquarters, and other joint platforms. It will provide means to disseminate organically derived data from Navy platforms to other tactical, operational, and strategic users in theater. MIBS provides the Navy a capability to deliver near real time data, enhancing the Common Operational Picture (COP), to support operations in all warfare areas, including: Ballistic Missile Defense (BMD), Anti-Air Warfare (AAW), Anti-Surface Warfare (ASW), Undersea Warfare (USW), Electronic Warfare (EW). The program encompasses Navy IBS systems (Joint Tactical Terminal - Maritime (JTT-M)). These systems will provide the Navy and other joint platforms with a coherent approach to fielding maritime IBS systems that takes advantage of all available pathways and services.

Internet Protocol version 6 (IPv6): The management and coordination of experiments and pilot testing of IPv6 technologies to reduce acquisition and operational risk associated with the IPv6 Transition.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Maritime Integrated Broadcast Service (MIBS)	0.069	0.059	0.000
Articles:	0	0	
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Provided Navy support for the new Common Integrated Broadcast (CIB) waveform Multiservice Operational Test and Evaluation (MOT&E). ***FY 2013 Plans:*** Complete Navy support for the Common Integrated Broadcast (CIB) waveform Multiservice Operational Test and Evaluation (MOT&E) including analysis and final reporting.			
Title: JMINI CS	4.086	10.769	9.202
Articles:	0	0	1
FY 2012 Accomplishments: Concept exploration and development to support product improvement that extends product life cycle, enabling continued support for warfighter missions until alternate capabilities become available. Commenced Hardware and Software development efforts for the JMINI system refresh for solutions to the current obsolescence of the JMINI systems issue. ***FY 2013 Plans:*** Continue concept development and product improvement framework for a cost effective refresh, to extend the planned life cycle of the legacy JMINI program. Begin software development, integration, and testing. ***FY 2014 Plans:*** Continue software development, integration, and testing. Begin prototype development and testing.			
Accomplishments/Planned Programs Subtotals	4.155	10.828	9.202

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPN/2900: *Maritime Integrated Broadcast Service (MIBS)*	13.021	16.026	11.681		11.681	4.988	0.285	0.016	0.013	Continuing	Continuing
• OPN/3215: *Sat Comm - JMINI*	1.545	0.000	0.000		0.000	8.000	6.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

JMINI CS: The Joint Ultra-High Frequency (UHF) Military Satellite Communications (MILSATCOM) is an ACAT IV (T) system that is post-FRP. As a legacy system that commenced in 1998, JMINI CS is expected to operate well beyond the original 2015 End of Life (EoL) date to 2033. The JMINI CS Program of Record (POR) will evaluate the most cost-effective solutions to address multiple life cycle support issues, in order to minimize loss of service to the fleet. The effort will involve evaluating

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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Commercial Off-The-Shelf (COTS) and Government off-the-shelf (GOTS) hardware and software, and conducting laboratory/integration testing to ensure proper functionality and interoperability.

MIBS: The Joint Tactical Terminal (JTT) AN/USC-62 (JTT) will be upgraded, enhancing existing terminal capability to support the Common Integrated Broadcast (CIB), Common Message Format (CMF), and the National Security Agency (NSA) mandated Crypto Modernization Initiative (CMI). The upgrade requires integration testing to be completed by Space and Naval Warfare (SPAWAR) System Center Pacific personnel. Participation in the CIB Multiservice Operational Test and Evaluation (MOT&E) prior installation.

E. Performance Metrics

JMINI CS: The JMINI CS POR will perform concept development and exploration of the JMINI CS 5 KHz and 25 KHz systems, to analyze alternatives for the most advantageous use of new technologies to lengthen the JMINI CS system life span in order to minimize loss of service to the Fleet.

Sensitive Compartmented Information (SCI) Networks: Develops a consolidated SCI architecture that reduces total ownership cost (TOC) of the afloat SI Local Area Network (LAN) systems and reduces the risk for implementation of CANES by introducing a Common Computing Environment (CCE) and an Afloat Cores Services (ACS) Architecture.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JMINI Contractor Engineering Support	C/CPFF	Unknown:Not Specified	11.877	0.000		2.914	Apr 2013	3.864	Apr 2014	-		3.864	2.493	21.148	
JMINI Government Engineering	WR	SSC PAC:San Diego, CA.	0.590	3.786	Feb 2012	7.280	Apr 2013	5.038	Apr 2014	-		5.038	2.494	19.188	
JMINI Certification Authority	WR	SSC LANT:Charleston, SC	0.000	0.300	Aug 2012	0.575	Apr 2013	0.100	Apr 2014	-		0.100	0.000	0.975	
		Subtotal	12.467	4.086		10.769		9.002		0.000		9.002	4.987	41.311	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IPv6 Support	WR	SSC PAC:San Diego	2.418	0.000		0.000		0.000		-		0.000	0.000	2.418	
		Subtotal	2.418	0.000		0.000		0.000		0.000		0.000	0.000	2.418	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JMINI Interoperability Test	WR	JITC:Ft. Huachaca	0.000	0.000		0.000		0.200	Feb 2014	-		0.200	0.000	0.200	
MIBS Development Test & Evaluation	WR	SSC PAC:San Diego, CA.	0.310	0.050	Nov 2011	0.049	Nov 2012	0.000		-		0.000	0.000	0.409	
		Subtotal	0.310	0.050		0.049		0.200		0.000		0.200	0.000	0.609	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MIBS Program Management	WR	SSC PAC:San Diego, CA.	0.014	0.019	Nov 2011	0.010	Nov 2012	0.000		-		0.000	0.000	0.043	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.014	0.019		0.010		0.000		0.000		0.000	0.000	0.043	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	15.209	4.155		10.828		9.202		0.000		9.202	4.987	44.381	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*	PROJECT 0731: *FLTSATCOM*

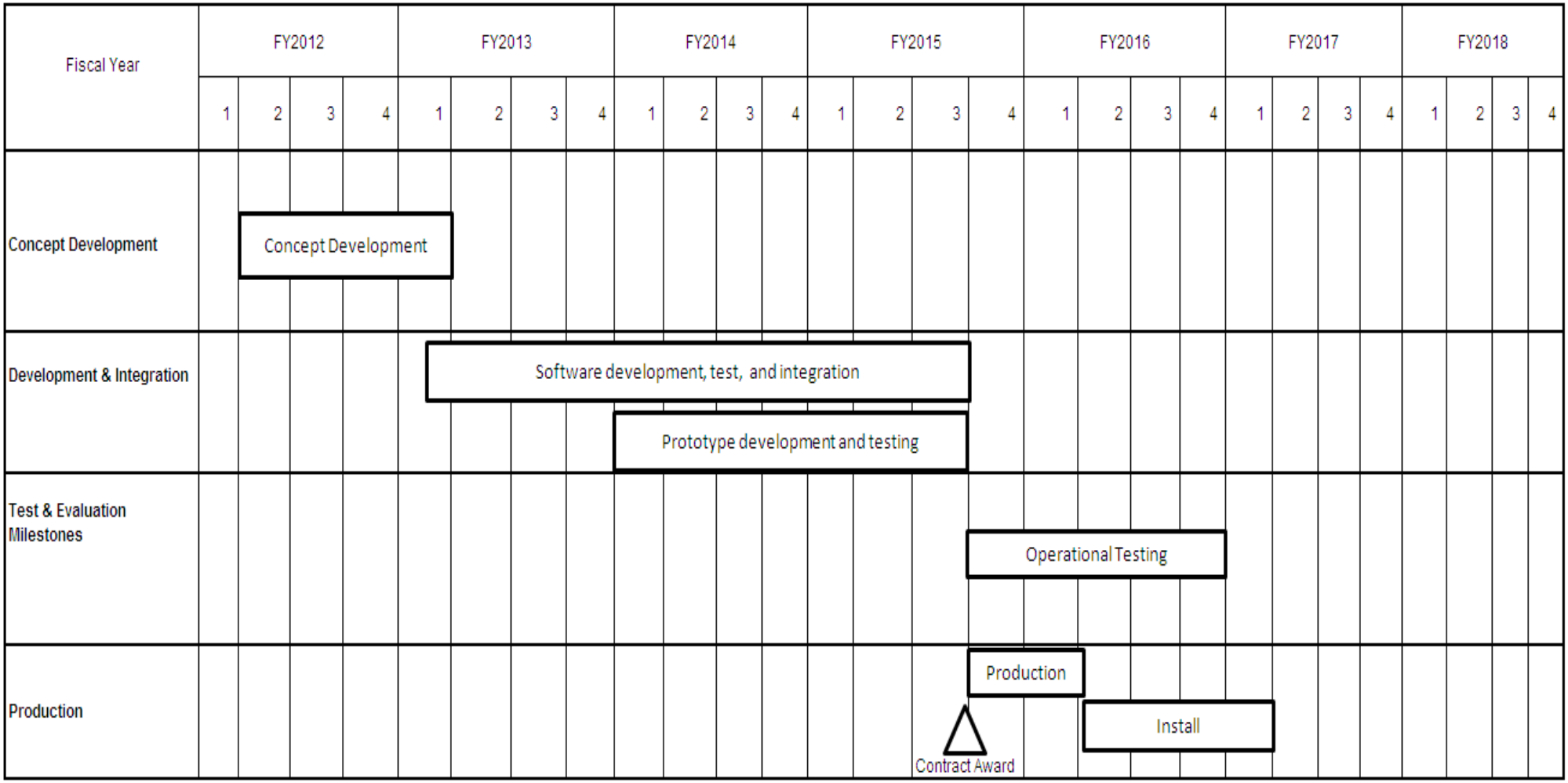

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0303109N: *Satellite Communications (Space)*	**PROJECT** 0731: *FLTSATCOM*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0731				
Concept Development	2	2012	1	2013
Software development, test, and integration	1	2013	3	2015
Prototype development and testing	1	2014	3	2015
Operational Testing	4	2015	4	2016
Production Contract Award	3	2015	3	2015
Production	4	2015	2	2016
Install	2	2016	1	2017

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
2472: *Mobile User Objective Sys (MUOS)*	3,573.210	237.180	145.923	35.952	-	35.952	8.476	7.162	7.434	7.623	130.912	4,153.872
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Mobile User Objective System (MUOS) program provides for the development of the next generation Department of Defense (DoD) advanced narrowband communications satellite constellation. The current Ultra-High Frequency (UHF) Follow-On (UFO) constellation is projected to degrade below acceptable availability parameters in 2014.

This MUOS Research Development Test & Evaluation, Navy (RDT&E,N) effort supports Full Operational Capability (FOC) in FY 2017.

FY14: Complete On-Orbit testing phase for Satellite 2, conduct End to End (E2E) Risk Reduction testing, conduct Technical Evaluation 2 (TECHEVAL 2), perform Operational Test Readiness Review (OTRR), initiate and complete the Multiservice Operational Test and Evaluation #2 (MOT&E) effort. Provide fixes to ground software resulting from system testing, and Information Assurance Vulnerability Alerts. Implement ECPs requiring Ground software changes. Complete the accreditation effort to obtain the initial Interim Authority to Operate (IATO) for Niscemi. Continue fixing Information Assurance (IA) vulnerabilities identified during the Information Assurance Control & Validation (IACV) effort for Geraldton, Wahiawa, and Northwest. Conduct new IACVs at all sites to obtain IATO extensions.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Mobile User Objective Sys (MUOS)	237.180	145.923	35.952
Articles:	0	0	0

FY 2012 Accomplishments:

Completed work on the assembly, integration and testing of satellite 1. Completed satellite 1 shipment, launch vehicle mate operations, launch and on-orbit testing. Completed work on the assembly, integration and testing of satellite 2. Completed installation and testing of initial software versions at Geraldton and Northwest. Began installation of hardware at Niscemi. Began fixes to ground software resulting from site testing, Information Assurance Vulnerability Alerts, and system testing to prepare for launch 2. Continued development and initial testing of the follow-on version of the MUOS waveform.

FY 2013 Plans:

Complete factory testing and launch site preparations, ship to launch site, conduct launch site testing, perform launch vehicle mate operations, launch of satellite 2 and perform on-orbit testing. Complete installation of hardware at Northwest. Complete

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
installation and testing of software updates at Wahiawa, Geraldton, Northwest, and Niscemi in support of Launch 2. Complete acceptance testing of the MUOS follow-on waveform. Conduct IA waveform assessment and remediation of findings. Implement ECPs requiring Ground software changes. ***FY 2014 Plans:*** Complete On-Orbit testing phase for Satellite 2, conduct End to End (E2E) Risk Reduction testing, conduct Technical Evaluation 2 (TECHEVAL 2), perform Operational Test Readiness Review (OTRR), initiate and complete the Multiservice Operational Test and Evaluation #2 (MOT&E) effort. Provide fixes to ground software resulting from system testing, and Information Assurance Vulnerability Alerts. Implement ECPs requiring Ground software changes. Complete the accreditation effort to obtain the initial Interim Authority to Operate (IATO) for Niscemi. Continue fixing Information Assurance (IA) vulnerabilities identified during the Information Assurance Certification & Validation (IACV) effort for Geraldton, Wahiawa, and Northwest. Conduct new IACVs at all sites to obtain IATO extensions.			
Accomplishments/Planned Programs Subtotals	237.180	145.923	35.952

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• WPN/2433: *Mobile User Objective System (MUOS)*	238.215	21.454	23.014		23.014	253.018	40.879	10.355	10.198	778.966	2,932.233

Remarks

D. Acquisition Strategy

Research Development Test & Evaluation, Navy (RDT&E,N) funds in FY12 and out planned for the continuation of the Risk Reduction & Design Development (RRDD) contract for the first 2 MUOS satellites, ground infrastructure, waveform development and associated system engineering and integration, test and evaluation.

Weapons Procurement, Navy (WPN) funds in FY12 and beyond used for production of the remaining four satellites and launch services for all six satellites.

E. Performance Metrics

FY 2012 and beyond: Continue preparation for launch of satellites 1 and 2; installation and test initial and follow-on waveforms; complete acceptance testing of entire ground system. Conduct IA waveform assessment and remediation of findings. Conduct End-to-End (E2E) Risk Reduction testing and integration activities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RRDD AOS Contract	C/CPAF	Lockheed Martin (LM):Sunnyvale, CA	3,162.915	216.221	Nov 2011	128.383	Nov 2012	25.113	Nov 2013	-		25.113	144.807	3,677.439	Continuing
CE Contracts & Demos	C/FFP	LM / Raytheon / Spec Astro / Boeing:VAR	21.320	0.000		0.000		0.000		-		0.000	0.000	21.320	Continuing
CAD Contracts	C/FFP	LM / Raytheon:VAR	105.154	0.000		0.000		0.000		-		0.000	0.000	105.154	Continuing
AoA for MUOS	MIPR	Aerospace:El Segundo, CA	2.782	0.000		0.000		0.000		-		0.000	0.000	2.782	Continuing
Government Studies	MIPR	Aerospace:El Segundo, CA	0.711	0.000		0.000		0.000		-		0.000	0.000	0.711	Continuing
Crypto Procurement	MIPR	NSA:Fort Meade, MD	3.703	0.000		0.000		0.000		-		0.000	0.000	3.703	Continuing
UHF Augmentation	C/CPAF	Lockheed Martin (LM):Sunnyvale, CA	0.491	0.000		0.000		0.000		-		0.000	0.000	0.491	Continuing
		Subtotal	3,297.076	216.221		128.383		25.113		0.000		25.113	144.807	3,811.600	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
UFO TT&C Terminal Upgrades	WR	SSC PAC:San Diego, CA	10.691	0.000		0.000		0.000		-		0.000	0.000	10.691	Continuing
Facilities Modifications	WR	SSC LANT:Norfolk, VA	2.623	0.150	Dec 2011	0.000		0.000		-		0.000	0.000	2.773	Continuing
Australian Site Prep	C/FFP	Boeing:Brisbane, AUS	25.471	0.000		0.000		0.000		-		0.000	0.000	25.471	Continuing
Studies & Analyses (EELV)	MIPR	SMC/FMAIC:El Segundo, CA	0.825	0.000		0.000		0.000		-		0.000	0.000	0.825	Continuing
ISCS Integration	WR	NAVSOC:Point Mugu, CA	7.178	0.000		0.000		0.000		-		0.000	0.000	7.178	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0303109N: *Satellite Communications (Space)*	PROJECT 2472: *Mobile User Objective Sys (MUOS)*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Narrowband SATCOM SE Group (NSSEG) - MUOS E2E	WR	SSC LANT:Charleston, SC	1.869	0.623	Oct 2011	0.000		0.000		-		0.000	0.000	2.492	Continuing
		Subtotal	48.657	0.773		0.000		0.000		0.000		0.000	0.000	49.430	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	SSC PAC:San Diego, CA	11.178	4.143	Oct 2011	3.407	Dec 2012	5.500	Nov 2013	-		5.500	0.000	24.228	Continuing
Operational Test & Evaluation	WR	OPTEVFOR:Norfolk, VA	3.034	1.338	Oct 2011	0.550	Dec 2012	1.750	Nov 2013	-		1.750	0.000	6.672	Continuing
		Subtotal	14.212	5.481		3.957		7.250		0.000		7.250	0.000	30.900	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPAF	Accenture:San Diego, CA	135.030	0.000		0.000		0.000		-		0.000	0.000	135.030	Continuing
Contractor Engineering Support	C/CPFF	Vector Planning and Services, Inc.:San Diego, CA	0.000	10.917	May 2012	8.914	Aug 2013	2.324	Aug 2014	-		2.324	0.000	22.155	Continuing
Government Engineering	WR	SSC PAC:San Diego, CA	30.866	2.324	Nov 2011	1.326	Dec 2012	0.345	Nov 2013	-		0.345	16.800	51.661	Continuing
Program Mgmt Support	C/CPAF	Booz Allen Hamilton:McLean, VA	41.226	0.000		0.000		0.000		-		0.000	0.000	41.226	Continuing
Program Management Support	C/CPFF	Booz Allen Hamilton:McLean, VA	0.000	1.423	Oct 2011	3.143	Dec 2012	0.820	Oct 2013	-		0.820	0.000	5.386	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
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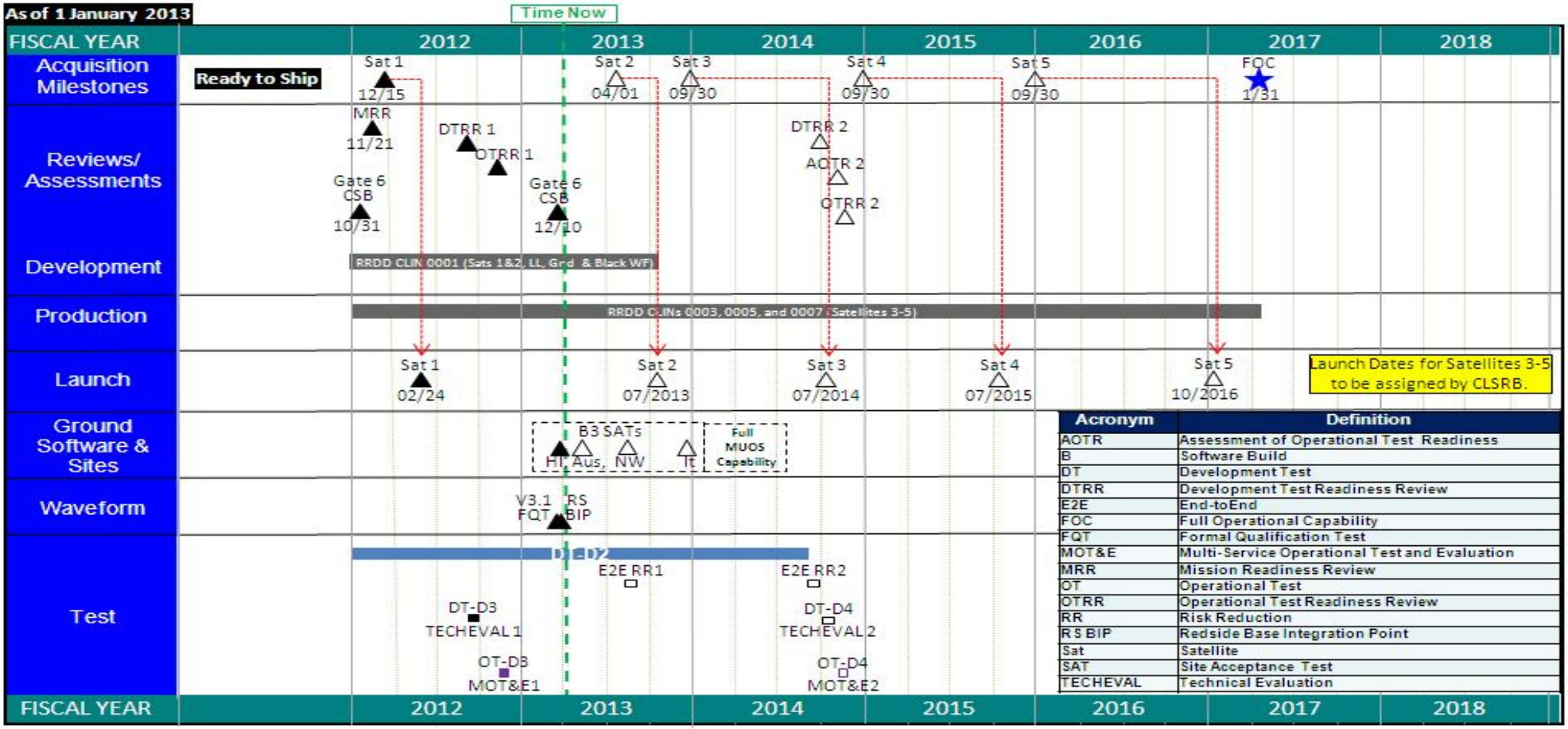
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	WR	PMW 146:San Diego, CA	2.444	0.041	Oct 2011	0.200	Oct 2012	0.100	Oct 2013	-		0.100	0.000	2.785	Continuing
Frequency Filing	C/FFP	ITU:Geneva, CH	0.855	0.000		0.000		0.000		-		0.000	0.000	0.855	Continuing
IPA/ICAT	WR	Aerospace:El Segundo, CA	0.390	0.000		0.000		0.000		-		0.000	0.000	0.390	Continuing
Acquisition Workforce Fund	C/FP	Not Specified:Not Specified	2.454	0.000		0.000		0.000		-		0.000	0.000	2.454	Continuing
		Subtotal	213.265	14.705		13.583		3.589		0.000		3.589	16.800	261.942	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3,573.210	237.180		145.923		35.952		0.000		35.952	161.607	4,153.872	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0303109N: *Satellite Communications (Space)*	**PROJECT** 2472: *Mobile User Objective Sys (MUOS)*



Acronym	Definition
AOTR	Assessment of Operational Test Readiness
B	Software Build
DT	Development Test
DTRR	Development Test Readiness Review
E2E	End-toEnd
FOC	Full Operational Capability
FQT	Formal Qualification Test
MOT&E	Multi-Service Operational Test and Evaluation
MRR	Mission Readiness Review
OT	Operational Test
OTRR	Operational Test Readiness Review
RR	Risk Reduction
RS BIP	Redside Base Integration Point
Sat	Satellite
SAT	Site Acceptance Test
TECHEVAL	Technical Evaluation

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2472				
Gate 6/Configuration Steering Board (CSB) 1	1	2012	1	2012
Mission Readiness Review (MRR)	1	2012	1	2012
Ready to Ship date #1	1	2012	1	2012
Launch of Satellite #1 (MUOS 1)	2	2012	2	2012
Development Test Readiness Review (DTRR) 1	3	2012	3	2012
DT-D3 Tech Eval 1	4	2012	4	2012
Operational Test Readiness Review (OTRR) #1	4	2012	4	2012
OT-D3 Multi-Service Operational Testing & Evaluation (MOT&E 1)	4	2012	4	2012
Redside Waveform V3.1 FQT	1	2013	1	2013
Australia Build 3.1 (B3 SAT)	1	2013	2	2013
Redside Waveform V3.1 BIP (RS BIP)	1	2013	1	2013
Gate 6/Configuration Steering Board (CSB) 2	1	2013	1	2013
Wahiawa Build 3.1 (B3 SAT)	1	2013	2	2013
Northwest Build 3.1 (B3 SAT)	2	2013	3	2013
Ready to Ship date #2	3	2013	3	2013
End-to-End Risk Reduction #1 (E2E RR-1)	3	2013	3	2013
Italy Build 3.1	4	2013	4	2013
Launch of Satellite #2 (MUOS 2)	4	2013	4	2013
Ready to Ship date #3	4	2013	4	2013
End-to-End Risk Reduction #2 (E2E RR-2)	3	2014	4	2014
Development Test Readiness Review (DTRR) 2	4	2014	4	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0303109N: *Satellite Communications (Space)*	**PROJECT** 2472: *Mobile User Objective Sys (MUOS)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
DT-D4 Tech Eval 2	4	2014	4	2014
Launch of Satellite #3 (MUOS 3)	4	2014	4	2014
Operational Test Readiness Review (OTRR) #2	4	2014	4	2014
Assessment of Operational Test Readiness (AOTR)	4	2014	4	2014
OT-D4 Multi-Service Operational Testing & Evaluation (MOT&E 2)	4	2014	4	2014
Ready to Ship date #4	4	2014	4	2014
Launch of Satellite #4 (MUOS 4)	4	2015	4	2015
Ready to Ship date #5	4	2015	4	2015
Launch of Satellite #5 (MUOS 5)	1	2017	1	2017
Full Operational Capability (FOC)	2	2017	2	2017