Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*				R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*							
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
Total Program Element	356.571	279.222	245.298	0.000	245.298	195.723	184.231	154.194	145.370	Continuing	Continuing
2270: *Exp Indirect Fire Gen Supt Wpn Sys*	48.136	25.666	25.747	0.000	25.747	30.410	42.625	43.097	32.520	Continuing	Continuing
2272: *Intel Command and Control (C2) Sys*	17.712	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	203.323
2273: *Air Ops Cmd & Control (C2) Sys*	47.652	66.108	68.465	0.000	68.465	52.196	38.339	42.132	41.626	Continuing	Continuing
2274: *Command & Control Warfare Sys*	6.319	11.801	19.633	0.000	19.633	14.655	14.393	15.407	17.019	Continuing	Continuing
2275: *Joint Tactical Radio System*	10.954	8.713	2.038	0.000	2.038	2.030	4.371	1.546	1.579	Continuing	Continuing
2276: *Comms Switching and Control Sys*	2.385	2.927	4.293	0.000	4.293	4.118	4.405	3.733	2.687	Continuing	Continuing
2277: *System Engineering and Integration*	7.184	6.887	5.580	0.000	5.580	8.640	8.817	8.979	9.205	Continuing	Continuing
2278: *Air Defense Weapons System*	5.700	7.715	5.938	0.000	5.938	8.212	8.432	3.443	3.558	Continuing	Continuing
2510: *MAGTF CSSE & SE*	48.221	61.806	33.538	0.000	33.538	26.696	21.368	21.657	22.230	Continuing	Continuing
3099: *Radar System*	108.928	17.566	24.893	0.000	24.893	34.317	34.344	8.216	8.834	Continuing	Continuing
9999: *Congressional Adds*	15.380	6.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	73.641
9C89: *Marine Ground-Air Radar*	38.000	63.660	55.173	0.000	55.173	14.449	7.137	5.984	6.112	Continuing	Continuing

Note

Ground/Air Task Oriented Radar (G/ATOR) (formerly known as the Multi-Role Radar System (MRRS) was funded under project C30999D prior to FY2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy	DATE: February 2010
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A. Mission Description and Budget Item Justification

This program element provides funding to develop the command and control (C2) support and information infrastructures for the Fleet Marine Force and supporting establishment. Doctrinally, the C2 support system and the information infrastructure form two parts of a triad of capabilities which permits command and control systems to be transformed into a complete operating system. The third element of the triad is command and control organization and is not covered in this program element. USMC command and control is divided into seven functional areas and one supporting functional area as follows: intelligence C2, fire support C2, air operations C2, radio systems C2, combat service support C2, warfare C2, radar systems C2, and C2 support (information processing and communications).

Within this program element, subprojects have been grouped by C2 functional area for more efficient planning. Air defense weapons systems have been added to facilitate planning and a separate project is used for systems assigned to the supporting establishment. Subprojects which support the commander's decision processes have been collected into the Command Post Systems project since these systems must work in close cooperation to ensure effective C2 of Marine Air Ground Task Forces.

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	280.014	287.348	0.000	0.000	0.000
Current President's Budget	356.571	279.222	245.298	0.000	245.298
Total Adjustments	76.557	-8.126	245.298	0.000	245.298
• Congressional General Reductions		-1.163			
• Congressional Directed Reductions		-13.000			
• Congressional Rescissions	0.000	-0.363			
• Congressional Adds		6.400			
• Congressional Directed Transfers		0.000			
• Reprogrammings	81.984	0.000			
• SBIR/STTR Transfer	-5.427	0.000			
• Program Adjustments	0.000	0.000	245.298	0.000	245.298

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2009	FY 2010
Project: 9999: *Congressional Adds*		
Congressional Add: *Media Exploitation Tool Integration with Intelligence C2 Systems*	0.000	1.195
Congressional Add: *BATTLEFIELD SENSOR NETTING*	2.394	2.390

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Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2009	FY 2010
Congressional Add: *PERFORMANCE ENHANCEMENTS FOR IA & IS*	6.381	0.000
Congressional Add: *Center for geospatial intelligence and investigati*	1.516	0.000
Congressional Add: *M2C2*	5.089	2.788
Congressional Add Subtotals for Project: 9999	15.380	6.373
Congressional Add Totals for all Projects	15.380	6.373

Change Summary Explanation

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

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COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2270: *Exp Indirect Fire Gen Supt Wpn Sys*	48.136	25.666	25.747	0.000	25.747	30.410	42.625	43.097	32.520	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Systems assigned to this project are to be used by commanders and their staffs to process, fuse, and tailor information to assist decision-making and enhance situational awareness. They will integrate and share information from sources both internal and external to the Marine Air-Ground Task Force (MAGTF) to provide a shared understanding of the battle space. Maneuver Command and Control (C2) is the executive layer of decision support that retrieves and fuses information from functional areas. It provides an integrated representation of the battle space or a specific area of concern. The subprojects below develop systems that report unit status and location to the Tactical Combat Operations (TCO) System, and disseminate maneuver information throughout the battle space.

A. Mission Description and Budget Item Justification

Advanced Field Artillery Tactical Data System (AFATDS) - Consists of fire support Command and Control C2 software fielded on Marine Corps common hardware. AFATDS provides the MAGTF with the ability to rapidly integrate all supporting arms assets into maneuver plans via a digital link utilizing currently fielded communications equipment. AFATDS automates the fire planning, tactical fire direction, and fire support coordination required to support maneuvers from the sea and subsequent operations ashore. The AFATDS program includes AFATDS software and hardware, the Effects Management Tool (EMT) (a C2PC injector), the Back-up Computer System (BUCS), and the Battery Mobile Tactical Shelter (MTS).

Command and Control Personal Computer (C2PC) - C2PC is the core client and gateway for the Joint Tactical Common Operating Picture Workstation. It is the authoritative data source for the ground common operating picture within the Marine Air Ground Task Force (MAGTF).

Tactical Command Operations System (TCO) - TCO is the principle tool within the Marine Air Ground Task Force (MAGTF) for situational awareness through distribution of the Common Tactical Picture (CTP). It supports tactical operations providing information via high speed computer systems in a timely manner and includes the Intel Operations Workstations/Servers. R&D funds provide science and technology advanced concepts to be applied to the system for an increase in functional capabilities to the warfighter.

Tactical Locator Designation and Handoff System (TLDHS) - Hand-Off System - Provides the ability for Forward Observers (FOs) and Forward Air Controllers (FACs) to: observe their area of interest, quickly and accurately locate ground targets, receive and display Blue Force Situational Awareness information and Fire Support

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Coordination Measures (FSCMs) on map displays interfaced with C2PC. TLDHS can digitally request and provide digital terminal control for target engagements by field artillery (FA) through AFATDS, close air support (CAS) aircraft, and naval surface fire support (NSFS), and the machine-to-machine interface of the system reduces the potential for fratricide due to human error and by displaying friendly positions and target locations to the terminal controller. TLDHS Block II also provides the capability to designate targets for laser-guided munitions and laser spot trackers. TLDHS Block II is comprised of and integrates two major subsystems: the Targeting Subsystem and the Target Hand-Off Subsystem. USMC Milestone C for TLDHS Block II was June 2005 and Fielding and Full rate Production Decisions were October 2006. Fluctuations of R&D across the FYDP are due to the nature of a spiral development approach.

Marine Air Ground Task Force (MAGTF) Command and Control (C2) Systems Applications - MAGTF C2 SA merges the development, integration and testing of 45 existing C2 systems and applications into one common enterprise capability. They reside in all Combat Operations Centers (COCs) and related USMC C2 platforms. This effort provides greater economies of scale/affordability with system developers, technical design agents, integration agents and individual program offices. MAGTF C2 SA efforts are in alignment with MCCDC's requirements for: Net-Centric systems, Service Oriented Architecture, Open Architecture components, Maximize C2 capabilities, Enhance the war-fighter's Situational Awareness, Increase/Maximize the Commander's decision space.

Joint Battle Command - Platform (JBC-P) - will provide a single integrated Joint Blue Force Situational Awareness (JBFSA) capability solution for C2, Position Location Information (PLI), Mapping, Messaging, Overlays, and Routes, as required by Joint Requirements Oversight Council Memoranda 163-04, and 161-03. JBC-P will replace, DDACT, MRC, and BFT family of systems.

Blue Force Situational Awareness (BFSA) - is the Marine Corps' Situational Awareness family of systems comprised of the Mounted and Dismounted variants of terrestrial (EPLRS/SINCGARS) systems, and the mounted celestial (SATCOM) system.

Data Automated Communications Terminal (DACT) (BFSA) - is the Marine Corps' Blue Force Tracking Program of Record. It is the primary source of all tactical ground tracks below the Marine battalion, and is the primary provider of Position Location Information (PLI) into the Combat Operations Center (COC) and to Joint forces viewing the Common Operational Picture (COP). DACT is one tool in the Joint Combat ID toolbox that the Marine Commander uses to reduce the potential for fratricide.

The Mounted Refresh Computer (MRC) (BFSA) - MRC is the replacement for the Mounted DACT and consists of a militarized central processing unit with Joint Capability Release (JCR) software integrated with various tactical vehicle platforms and communications systems through the use of a Vehicle Modification (VM) kit. It is mounted in vehicles from the battalion to the mechanized platoon (HMMWV, AAV, LAV and tanks).

The Dismounted Data Automated Communications Terminal (D-DACT) (BFSA) - The Dismounted DACT is a smaller, lighter handheld device having greater battery life, consisting of the Rugged Personal Digital Assistant (R-PDA) with Windows Command and Control CE (C2CE) software. The Dismounted DACT is intended for the dismounted user at the platoon level. Future DACT improved capabilities for replacement systems will meet stipulated Operational Requirements and OIF-derived

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Requirements to provide Blue Force Tracking and automated communications support for commander in tactical operations. New capabilities will include Non Line of Sight (NLOS) and enhanced communication paths; improved Graphic User Interface (GUI) software, a larger screen, and Selective Availability Anti-Spoofing Module (SAASM) GPS integration.

Blue Force Tracker (BFT) (BFSA) System is a satellite-based Tracking and Communication System. BFT provides the capability to identify position, track progress, and communicate with the operators of tactical vehicles. The BFT is employed at the battalion level below to provide operational commanders with USMC/Army Position Location Information within a given area of operations. It is mounted in vehicles at the Battalion level and below down to the individual vehicle (HMMWV, AAV, LAV and tanks).

Identity Dominance System (IDS) - will provide a user friendly biometric authentication technology that will be employed to deny the enemy freedom of movement within the populace and positively identify known insurgents within an Area of Responsibility (AOR). It will enable Marine Corps and host-nation security personnel to detain, apprehend or deny entry to unwanted individuals in critical areas. The capability will enhance overall Force Protection and High-Value Target Identification by providing a means to rapidly ascertain whether or not a detained individual is wanted for criminal or terrorist activity, badge local workers and support post incident investigation by allowing collected evidence to be compared to available biometrics to identify likely suspects. Specifically, these items will enable enhanced perimeter security for high-visibility events such as national elections on foreign soil; high profile dignitary meetings between U.S. military officials and host nation political and military leaders; and U.S. military demonstrations. This capability will also enable enhanced prisoner management for the efficient administration of detainees, and improve Civil Action of DoD personnel by providing a means to track payments to host-nation workers and managed local labor who support/access facilities where military/ Marines are located. Finally, this capability will enhance available intelligence by allowing "link analysis" on individuals to reveal criminal or terrorist associations not readily apparent when records are reviewed individually.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*TLDHS: Software Development, New Functionality and Sustainment	1.448	3.722	0.878	0.000	0.878
FY 2009 Accomplishments: Link16 implementation in support of Close Air Support for legacy aircraft.					
FY 2010 Plans: Commercial Joint Mapping Tool Kit (CJMTK)/ Situational Awareness Data Link (SADL) implementation					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Net Enabled Weapons (NEW) implementation					
*TLDHS: Test Development and Integration Support *FY 2009 Accomplishments:* Link16 testing *FY 2010 Plans:* Commercial Joint Mapping Tool Kit (CJMTK)/ Situational Awareness Data Link (SADL)testing *FY 2011 Base Plans:* Net Enabled Weapons (NEW) testing	0.213	0.342	0.108	0.000	0.108
*AFATDS: Development of BackUp Computer System (BUCS) & Software (SW) *FY 2009 Accomplishments:* Development of BackUp Computer System (BUCS) and Software (SW) *FY 2010 Plans:* Continuation of BUCS and SW refresh *FY 2011 Base Plans:* Continuation of BUCS and SW refresh	1.000	1.100	1.192	0.000	1.192
*AFATDS: Software Development, Testing, and Integration *FY 2009 Accomplishments:* Development of Increment I AFATDS software.	2.786	3.081	3.024	0.000	3.024

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Continued development of Increment I capabilities. Incorporates new munition changes as well as Fire Planning and digital C2 interoperability upgrades. Also supports AFATDS Mobile Tactical Shelter (MTS) integration testing. -SPAWAR: SPAWAR will conduct testing on the MTS to ensure it meets the requirements of the PO. *FY 2011 Base Plans:* Development of Increment II capabilities. Supports the modification of AFATDS into application level software and will break it away from a stovepipe system.					
*AFATDS: Program Management, Engineering Support *FY 2009 Accomplishments:* Program Management and Engineering Support *FY 2010 Plans:* Continuation of Program Management and Engineering Support *FY 2011 Base Plans:* Continuation of Program Management and Engineering Support	0.587	0.311	0.321	0.000	0.321
*AFATDS: MCTSSA/MCOTEA testing new Software (SW) and Federation of Systems (FEDOS) *FY 2009 Accomplishments:* Supported Engineering User Evaulations and provided software test support. *FY 2010 Plans:* Continued Engineering User Evaulations and software test support.	0.313	0.354	0.392	0.000	0.392

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Continued Engineering User Evaulations and software test support.					
*AFATDS: USMC and Joint Systems. Enhancement to EMT and C2PC interface. *FY 2009 Accomplishments:* Interoperability testing with JTCW software. These tests will ensure the application extention continues to meet the JTCW fire support needs as the Army migrates away from the software. *FY 2010 Plans:* Continued interoperability testing with JTCW software. *FY 2011 Base Plans:* Continued interoperability testing with JTCW software.	0.300	0.304	0.308	0.000	0.308
*C2PC: Engineer Change Proposals *FY 2009 Accomplishments:* Engineer Change Proposals of the client and gateway	0.260	0.000	0.000	0.000	0.000
*MAGTF C2: Engineering, research, development, integration and testing support for 2010 MAGTF release *FY 2009 Accomplishments:* Primary focus in FY 09 was establishing and maintaining the MAGTF software baseline as it relates to the Combat Operations Centers (COCs), Intelligence Operations Workstation (IOW) and related USMC C2 platforms and migrating existing systems and applications. Extensive developmental work conducted on creating Service Oriented Infrastructure on which future development will be based.	36.583	4.266	2.178	0.000	2.178

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Complete developmental of Service Oriented Infrastructure, integrate legacy Tactical Data Systems, complete systems integration and conduct developmental/operational testing. *FY 2011 Base Plans:* Complete developmental of Service Oriented Infrastructure, integrate legacy Tactical Data Systems, complete systems integration and conduct developmental/operational testing.					
*MAGTF C2: Engineering, research, and software development for 2012 MAGTF capability release. *FY 2010 Plans:* Focus of effort is initiating adaptation, development and integration of entity, task and presentation services from multiple programs of record to operate with the Service Oriented Infrastructure. *FY 2011 Base Plans:* Focus of effort is initiating adaptation, development and integration of entity, task and presentation services from multiple programs of record to operate with the Service Oriented Infrastructure.	0.000	5.193	5.600	0.000	5.600
*MAGTF C2: Program Support. Software engineering program support. *FY 2009 Accomplishments:* Federally Funded Research Center (FFRDC) software engineering support to provide appropriate government direction in design and development of software. *FY 2010 Plans:* Federally Funded Research Center (FFRDC) software engineering support to provide appropriate government direction in design and development of software.	0.921	0.900	0.900	0.000	0.900

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Federally Funded Research Center (FFRDC) software engineering support to provide appropriate government direction in design and development of software.					
*BFSA: Increased Capabilities *FY 2009 Accomplishments:* Supported developmental efforts for new software (JCR) training curriculum and enhance bandwidth GPS transceiver (BFT II) capability. *FY 2010 Plans:* Continuing improvements of a new satellite network and processor unit. *FY 2011 Base Plans:* Continuing improvements of a new satellite network and processor unit.	1.424	1.019	0.800	0.000	0.800
*BFSA: Software Integration. *FY 2009 Accomplishments:* URN Database integration, JCR integration on unique USMC devices,and Information Assurance activities. Also supported C2CE development and integration. *FY 2010 Plans:* Continued URN Database integration, JCR integration on unique USMC devices, and Information Assurance activities. *FY 2011 Base Plans:* Continued URN Database integration, JCR integration on unique USMC devices, and Information Assurance activities.	1.068	1.075	0.266	0.000	0.266

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*JBC-P: Software Development/Integration. *FY 2010 Plans:* Requirements identification/decomposition as well as funding a position in Huntsville, AL to serve as a liaison and integrated team member in the development of the JBC-P Core software. Federally Funded Research Center (FFRDC) software engineering support funded to provide appropriate government direction in design and development of software, Contract support funded to assist and serve as subject matter experts in this effort, as well as SPAWAR in later integration efforts. *FY 2011 Base Plans:* Requirements identification/decomposition as well as funding a position in Huntsville, AL to serve as a liaison and integrated team member in the development of the JBC-P Core software. Federally Funded Research Center (FFRDC) software engineering support funded to provide appropriate government direction in design and development of software, Contract support funded to assist and serve as subject matter experts in this effort, as well as SPAWAR in later integration efforts.	0.000	1.630	1.441	0.000	1.441
*JBC-P: Training Development. *FY 2010 Plans:* User juries and update of the existing JCR training efforts in support of the evolution to JBC-P. *FY 2011 Base Plans:* User juries and update of the existing JCR training efforts in support of the evolution to JBC-P.	0.000	0.525	0.250	0.000	0.250
*JBC-P: Developmental Test (DT)/Operational Test (OT) *FY 2011 Base Plans:* Test planning and development as well participation and evaluation of s/w and some h/w test events.	0.000	0.000	2.500	0.000	2.500
*JBC-P: System Engineering, Programmatic, and Logistics Program Support	0.000	0.000	0.476	0.000	0.476

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Support personnel and travel					
*TCO: System testing and integration to develop additional functional capabilities. Hardware upgrade solutions were researched and documented, in preparation for seamless transition to future technology and increased software capability. *FY 2010 Plans:* TCO, as a part of the USMC Global Command and Control System Family of Systems (GCCS FoS), is considered to be in sustainment during FY10. However FY10 is also considered a transition year for all the services GCCS FoS with each service planning to development enhanced Command and Control (C2) capabilities if joint funding is provided. The Marine Corps is planning on maturing the C2 Alerting Capability Module (CM) originally developed in FY09 under the Net Enabled Command Capability (NECC). This maturing will consist of backwards compatibility with the services current GCCS FoS as well as increased functionality in accordance with the JC2 CDD, formally the NECC CDD. As part of this FY10 effort, development will use advanced concepts and technologies specifically Net Centric Service Oriented Architecture (SOA). *FY 2011 Base Plans:* The Marine Corps is planning on developing Registration and Orchestration Capability Modules (CM) originally signed to and agreed upon by the Marine Corps under the Net Enabled Command Capability (NECC). This development will consist of backwards compatibility with the services current GCCS FoS as well as increased functionality in accordance with the JC2 CDD, formally the NECC CDD.	0.000	0.126	2.140	0.000	2.140
*TCO: Integrate software changes into new system and perform testing.	0.344	0.355	0.648	0.000	0.648

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Updated software that was released by the Joint Staff and DISA was successfully integrated into the TCO system and in house validation testing was completed. to work with sister USMC and Joint C2 Systems. *FY 2010 Plans:* The Marine Corps is planning on maturing the C2 Alerting Capability Module (CM) originally developed in FY09 under the Net Enabled Command Capability (NECC). As part of this FY10 effort, development will use advanced concepts and technologies specifically Net Centric Service Oriented Architecture (SOA). This development will include integration of the advanced concepts and technologies on existing, as well as possible upgraded hardware. *FY 2011 Base Plans:* The Marine Corps is planning on developing Registration and Orchestration Capability Modules (CM) originally signed to and agreed upon by the Marine Corps under the Net Enabled Command Capability (NECC). As part of this FY11 effort, development will use advanced concepts and technologies specifically Net Centric Service Oriented Architecture (SOA). This development will include integration of the advanced concepts and technologies on existing, as well as possible upgraded hardware.					
*TCO: Testing and validations of advanced concepts and technologies. *FY 2009 Accomplishments:* Formal Joint Interoperability Certification Testing (JITC) was successfully completed for both hardware and software changes/upgrades. *FY 2010 Plans:* The Marine Corps is planning on maturing the C2 Alerting Capability Module (CM) originally developed in FY09 under the Net Enabled Command Capability (NECC). This maturing will consist of backwards compatibility with the services current GCCS FoS as well as increased functionality in accordance with	0.220	0.232	0.557	0.000	0.557

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
the JC2 CDD, formally the NECC CDD. All the above with go through detailed testing, certification and accreditation before being deployed throughout the Marine Corps or the joint community. *FY 2011 Base Plans:* FY11 is also considered a transition year for all the services GCCS FoS with each service planning to development enhanced Command and Control (C2) capabilities if joint funding is provided. The Marine Corps is planning on developing Registration and Orchestration Capability Modules (CM) originally signed to and agreed upon by the Marine Corps under the Net Enabled Command Capability (NECC). All the above with go through detailed testing, certification and accreditation before being deployed throughout the Marine Corps or the joint community.					
*IDS: Concept and Technology Development Background information: On 6 July 2009, USD AT&L issued an ADM in which he emphasized the ACAT 1 - Special Interest designation for all DoD biometrics activities. The USD AT&L also tasked the Army, as the DoD Executive Agent for Biometrics, to conduct an Analysis of Alternatives (AoA) for the Biometric Enterprise Capability and the Biometrics Tactical Collection Devices, as well as developing an architecture into which all services and components can fit. The Army is to return to the Office of the Secretary of Defense (OSD) Biometrics Overarching Integrated Product Team (OIPT) for a review to present the initial AoA findings and a description of the biometrics enterprise architecture no later than February 2010. Based on the results of this review, the USD AT&L will consider service recommendations for new ACAT designations, milestone point of entry and delegation of MDA responsibility.	0.000	1.057	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2270: *Exp Indirect Fire Gen Supt Wpn Sys*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: The IDS acquisition process for the Marine Corps is streamlined and is based on an approach that includes relying on the Army Analysis of Alternatives(AoA) due in Feb 2010 for the majority of the market research required for a hardware platform solution, followed by additional testing, and a limited FUE to ensure system operational suitability prior to fielding. Integration efforts will focus on integrating COTS and NDI hardware, and COTS and GOTS software for a robust open system architecture, fully compliant with Common Operating Environment standards and requirements. To the maximum extent possible the Marine Corps will utilize the same procurement solution as the Army and, where necessary, evaluate and integrate COTS/NDI systems to satisfy unique USMC requirements. Future IDS upgrades will be based on commercial technology to the maximum extent possible. At this time, there is no material solution defined.					
*IDS: System Development and Testing *FY 2011 Base Plans:* The IDS acquisition process for the Marine Corps is streamlined and is based on an approach that includes relying on the Army Analysis of Alternatives (AoA)due in Feb 2010 for the majority of the market research required for a Hardware platform solution, followed by additional testing, and a limited FUE to Ensure system operational suitability prior to fielding. Integration efforts will Focus on integrating COTS and NDI hardware, and COTS and GOTS software for a Robust open system architecture, fully compliant with Common Operating Environment standards and requirements. To the maximum extent possible the Marine Corps will utilize the same procurement solution as the Army and, where necessary, Evaluate and integrate COTS/NDI systems to satisfy unique USMC requirements. Future IDS upgrades will be based on commercial technology to the maximum extent	0.000	0.000	1.508	0.000	1.508

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
possible. At this time, there is no material solution defined.					
*BFSA: Test support *FY 2009 Accomplishments:* Funding supported engineering efforts for C2CE SW interoperability testing, DACT and JCR certification. Also, support went to software (JCR) developmental testing efforts. *FY 2010 Plans:* Continued engineering efforts for C2CE SW interoperability testing, DACT and JCR certification. Also, support to software (JCR) developmental testing efforts. *FY 2011 Base Plans:* JCR software operational testing efforts.	0.669	0.074	0.260	0.000	0.260
Accomplishments/Planned Programs Subtotals	48.136	25.666	25.747	0.000	25.747

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PMC/46310001: *MCOIC*	0.548	0.336	0.343	0.000	0.343	0.352	0.361	0.371	0.382	Continuing	Continuing
• PMC/4631002: *AFATDS*	7.219	16.337	12.057	0.000	12.057	2.487	29.859	20.138	2.667	Continuing	Continuing
• PMC/4631003: *BFSA*	124.830	37.709	3.230	10.500	13.730	7.360	42.150	44.830	24.397	Continuing	Continuing
• PMC/4631004: *GCCS*	4.672	7.356	7.587	0.000	7.587	1.980	2.215	2.278	2.350	Continuing	Continuing
• PMC/4631005: *TCO*	0.843	0.772	5.881	24.381	30.262	6.175	1.972	10.331	13.019	Continuing	Continuing
• PMC/4631006: *TLDHS*	4.153	10.197	3.923	0.000	3.923	3.013	3.041	2.119	2.187	Continuing	Continuing

D. Acquisition Strategy

TLDHS: The acquisition of components (software/hardware) for the TLDHS initiative will maximize the use of existing COTS, GOTS, NDI and GFE. Software development is conducted utilizing a sole source small-business contract. Software must maintain compatibility with 5 POR and 7 Operational Flight Programs (OFP).

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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AFATDS: AFATDS is a Cost Plus Award Fee contract through Army CECOM, Ft. Monmouth, NJ. R&D efforts will be a combined effort between the software developer (Raytheon), the Army PM and the USMC of software enhancements for the next planned versions of AFATDS.

TCO: Contracting is done with various vendors for software test and integration, COTS evaluation and documentation to develop advanced concepts and additional functional capabilities. The PMO conducts quarterly performance reviews. Specific hardware is also procured for test purposes which include environmental and shock testing.

MAGTF C2 SA: MAGTF C2 SA is a spiraled development of capabilities. Spiral 1 Initial Operational Capability (IOC) in 2010 has the following capabilities/attributes: Single integrated air and ground picture; full real time to near real time, and non real time data exchange; integrated fire control. Each spiral will be accepted as an integrated whole, running on the target hardware, following a contractor development test.

BFSA: These programs develop software and hardware for a family of systems that provide C2/SA and operate on both a terrestrial and celestial network. The Army (Force Battle Command XXI Brigade and Below (FBCB2)) is the lead Service for celestial devices and the lead for key interoperability software development, the Marine Corps is responsible for its devices that operate on the terrestrial network. Programs include DDACT, MRC, JCR, and the BFT (includes the KGV-72 and BFT II transceiver).

JBC-P: Currently, PM FBCB2/BFT is using a broadly defined projected schedule for JBC-P. The Marine Corps' program office will continue to work with the FBCB2 program office in the development of a detailed program schedule. PM FBCB2/BFT will fund research and development for JBC-P unless there are Service unique requirements, which the Marine Corps program office will fund. The Marine Corps' program office will participate in all design and readiness reviews and a joint IOT&E will be conducted.

E. Performance Metrics

Milestone Reviews

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2270: *Exp Indirect Fire Gen Supt Wpn Sys*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
TLDHS	C/CPFF	Stauder Tech St. Louis, MO	10.886	3.722	Mar 2010	0.878	Mar 2011	0.000		0.878	Continuing	Continuing	Continuing
AFATDS	C/CPAF	Raytheon Fort Wayne, IN	14.801	4.181	May 2010	4.217	May 2011	0.000		4.217	Continuing	Continuing	Continuing
AFATDS	WR	SPAWAR Charleston, SC	1.474	0.304	May 2010	0.308	May 2011	0.000		0.308	Continuing	Continuing	Continuing
C2PC	C/CPIF	NGMS San Diego	16.173	0.000		0.000		0.000		0.000	0.000	16.173	Continuing
MAGTF C2	C/CPIF	NGMS San Diego	10.269	1.943	Feb 2010	0.000		0.000		0.000	0.000	12.212	Continuing
MAGTF C2	WR	SPAWAR Charleston, SC	20.827	6.241	Feb 2010	2.178	Feb 2011	0.000		2.178	Continuing	Continuing	Continuing
MAGTF C2	WR	NSWC Panama City, FL	0.460	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
MAGTF C2	C/CPFF	GD Scottsdale, AZ	18.160	0.000		0.000		0.000		0.000	0.000	18.160	Continuing
MAGTF C2	C/CPFF	Viecore NJ	0.402	0.000		0.000		0.000		0.000	0.000	0.402	Continuing
MAGTF C2	C/CPFF	MCSC Quantico, VA	6.146	0.000		5.000	Feb 2011	0.000		5.000	Continuing	Continuing	Continuing
BFSA	WR	SPAWAR Charleston, SC	2.478	0.905	Feb 2010	0.691	Jan 2011	0.000		0.691	Continuing	Continuing	Continuing
BFSA	MIPR	CECOM Ft. Monmouth, NJ	0.890	0.114	Mar 2010	0.000		0.000		0.000	0.000	1.004	Continuing
TCO	MIPR	SPAWAR	4.186	0.481	Feb 2010	2.788	Dec 2010	0.000		2.788	Continuing	Continuing	Continuing

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Charleston, S.C.											
JBC-P	WR	SPAWAR Charleston, SC	0.000	1.500	Feb 2010	1.000	Dec 2010	0.000		1.000	Continuing	Continuing	Continuing
JBC-P	MIPR	CECOM Ft. Monmouth, NJ	0.000	0.500	Feb 2010	0.494	Dec 2010	0.000		0.494	Continuing	Continuing	Continuing
JBC-P	C/CPFF	MCSC Quantico, VA	0.000	0.000		0.250	Dec 2010	0.000		0.250	Continuing	Continuing	Continuing
IDS	WR	SPAWAR Charleston, SC	0.000	1.057	Nov 2009	1.508	Nov 2010	0.000		1.508	Continuing	Continuing	Continuing
		Subtotal	107.152	20.948		19.312		0.000		19.312			

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF C2	WR	MCTSSA Camp Pendleton, CA	1.195	0.250	Oct 2009	0.200	Oct 2010	0.000		0.200	Continuing	Continuing	Continuing
		Subtotal	1.195	0.250		0.200		0.000		0.200			

Remarks

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
TLDHS	WR	MCOTEA Quantico, VA	1.185	0.342	Mar 2010	0.108	Nov 2010	0.000		0.108	Continuing	Continuing	Continuing
AFATDS	WR	MCTSSA Camp Pendleton, CA	2.317	0.114	Mar 2010	0.116	Nov 2010	0.000		0.116	Continuing	Continuing	Continuing
AFATDS	WR	MCOTEA Quantico, VA	0.340	0.240	Mar 2010	0.276	Nov 2010	0.000		0.276	Continuing	Continuing	Continuing
MAGTF C2	WR	MCOTEA Quantico, VA	0.532	0.125	Feb 2010	0.125	Oct 2010	0.000		0.125	Continuing	Continuing	Continuing
MAGTF C2	WR	MCTSSA Camp Pendleton, CA	1.384	0.600	Dec 2009	0.175	Oct 2010	0.000		0.175	Continuing	Continuing	Continuing
MAGTF C2	MIPR	JITC Ft. Huachuca, AZ	0.000	0.300	Dec 2009	0.100	Oct 2010	0.000		0.100	Continuing	Continuing	Continuing
BFSA	WR	MCTSSA Camp Pendleton, CA	0.274	0.000		0.100	Jan 2011	0.000		0.100	Continuing	Continuing	Continuing
BFSA	WR	MCOTEA Quantico, VA	1.061	0.074	Feb 2010	0.160	Nov 2010	0.000		0.160	Continuing	Continuing	Continuing
BFSA	MIPR	DISA Not Specified	0.000	0.000		0.050	Jan 2011	0.000		0.050	Continuing	Continuing	Continuing
DACT	WR	MCOTEA Quantico, VA	0.468	0.000		0.000		0.000		0.000	0.000	0.468	Continuing
JBC-P	WR	MCOTEA Quantico, VA	0.000	0.000		1.500	Dec 2010	0.000		1.500	Continuing	Continuing	Continuing
JBC-P	MIPR	CECOM	0.000	0.000		1.000	Dec 2010	0.000		1.000	Continuing	Continuing	Continuing

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Ft Monmouth, NJ											
TCO	MIPR	SPAWAR Charleston, S.C.	0.000	0.232	Feb 2010	0.557	Dec 2010	0.000		0.557	0.000	0.789	Continuing
		Subtotal	7.561	2.027		4.267		0.000		4.267			

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AFATDS	C/FFP	MCSC Quantico, VA	1.624	0.311	Mar 2010	0.320	Mar 2011	0.000		0.320	Continuing	Continuing	Continuing
MAGTF C2	MIPR	CECOM/MITRE Ft Monmouth, NJ	0.025	0.900	Nov 2009	0.900	Nov 2010	0.000		0.900	Continuing	Continuing	Continuing
BFSA	C/FFP	MCSC Quantico, VA	1.068	1.075	Mar 2010	0.325	Mar 2011	0.000		0.325	Continuing	Continuing	Continuing
JBC-P	C/FFP	MCSC Ft Monmouth, NJ	0.000	0.155	Feb 2010	0.423	Feb 2011	0.000		0.423	Continuing	Continuing	Continuing
		Subtotal	2.717	2.441		1.968		0.000		1.968			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
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	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	118.625	25.666		25.747		0.000		25.747			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2270: *Exp Indirect Fire Gen Supt Wpn Sys*

ADVANCED FIELD ARTILLERY TACTICAL DATA SYSTEM (AFATDS)

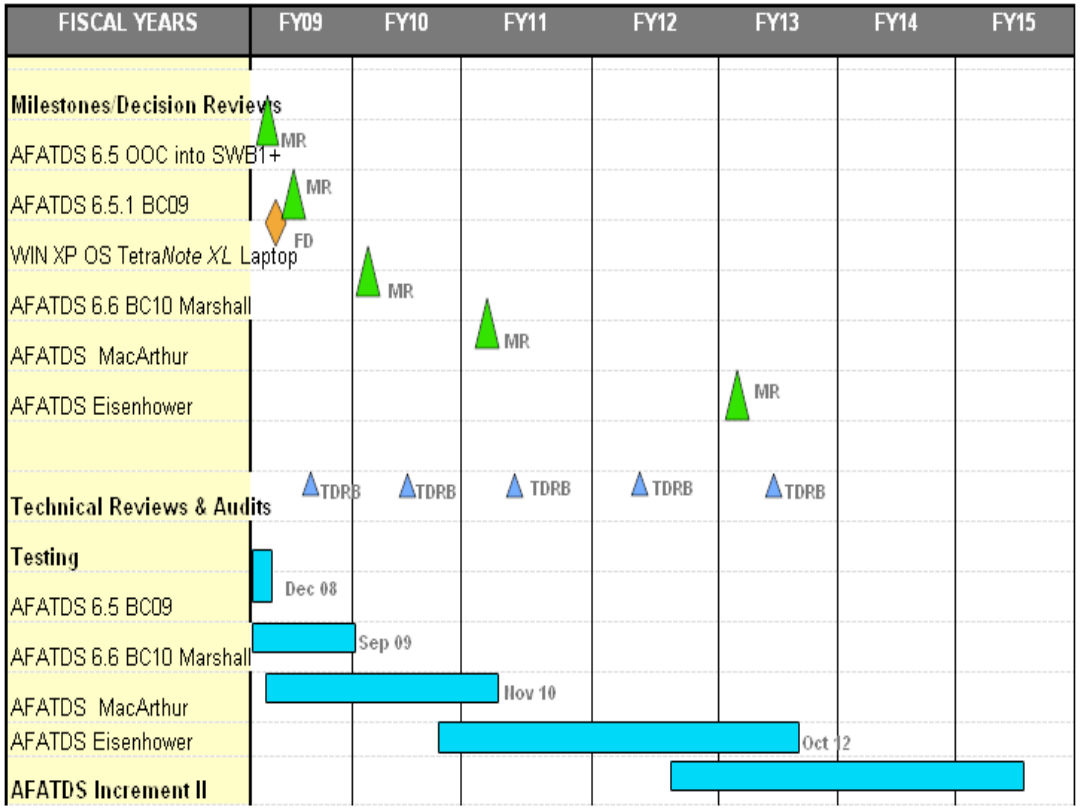

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206313M: *Marine Corps Comms Systems*	**PROJECT** 2270: *Exp Indirect Fire Gen Supt Wpn Sys*

MAGTF C2 Systems and Applications

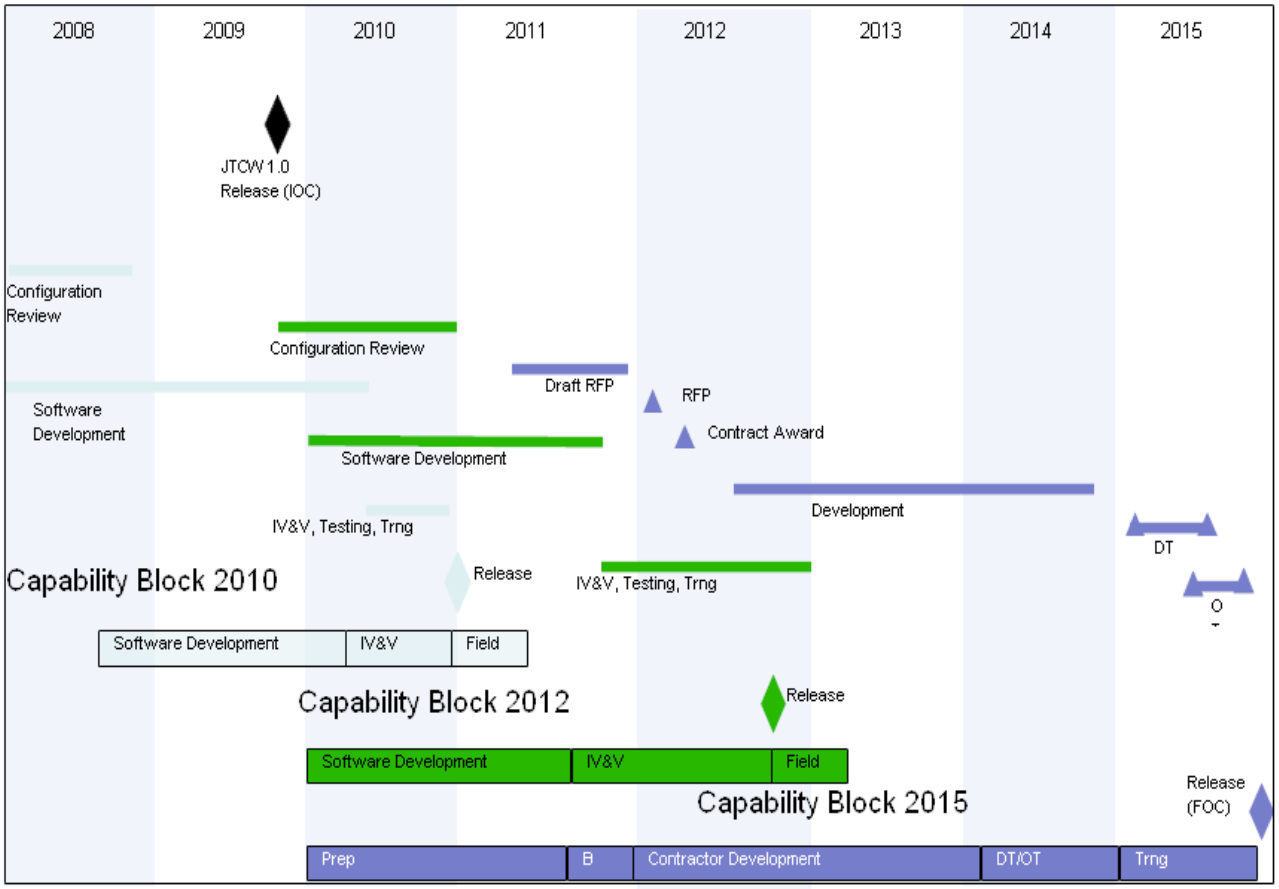

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206313M: *Marine Corps Comms Systems*	**PROJECT** 2270: *Exp Indirect Fire Gen Supt Wpn Sys*

BFSA/DACT SCHEDULE

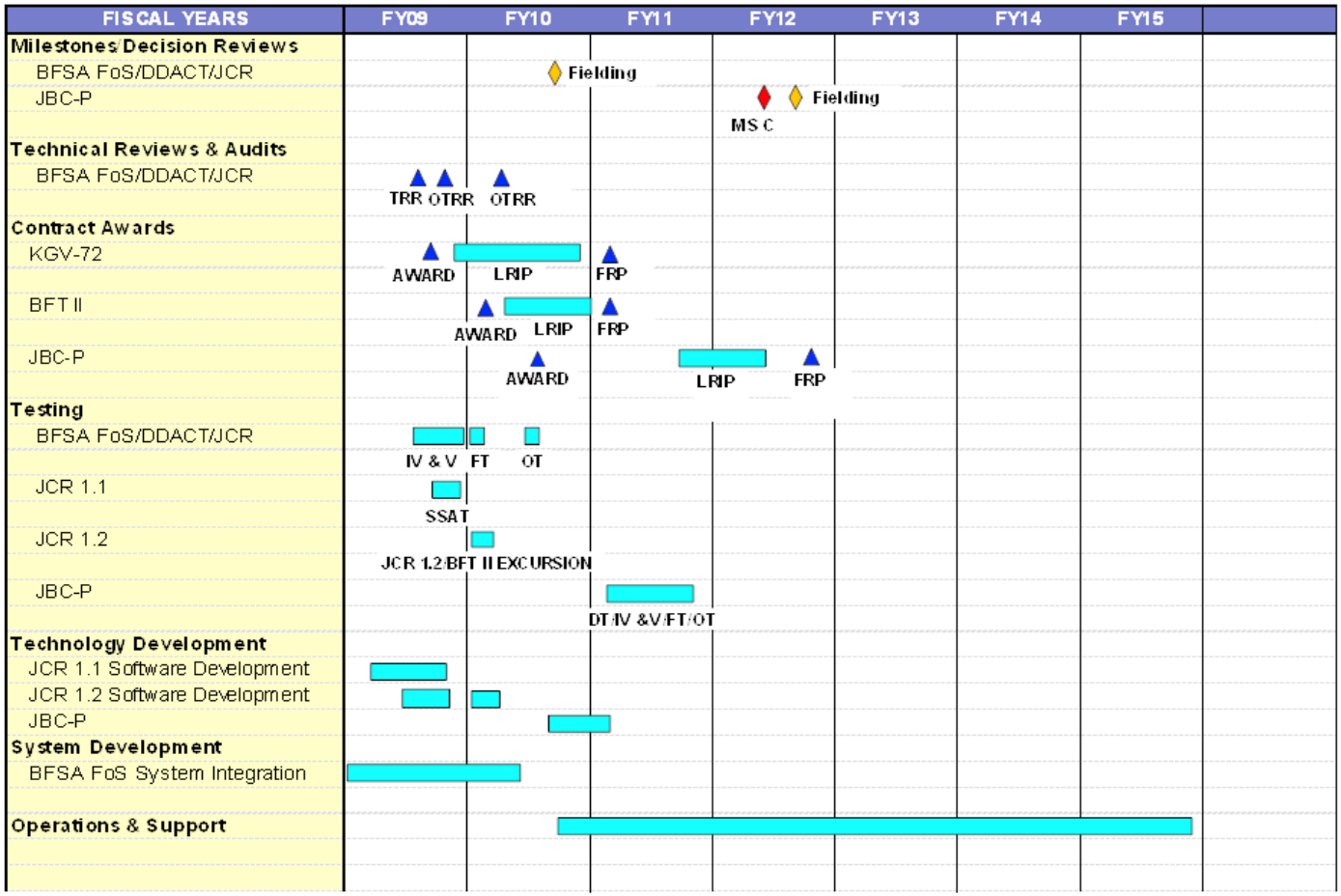

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
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TLDHS SCHEDULE

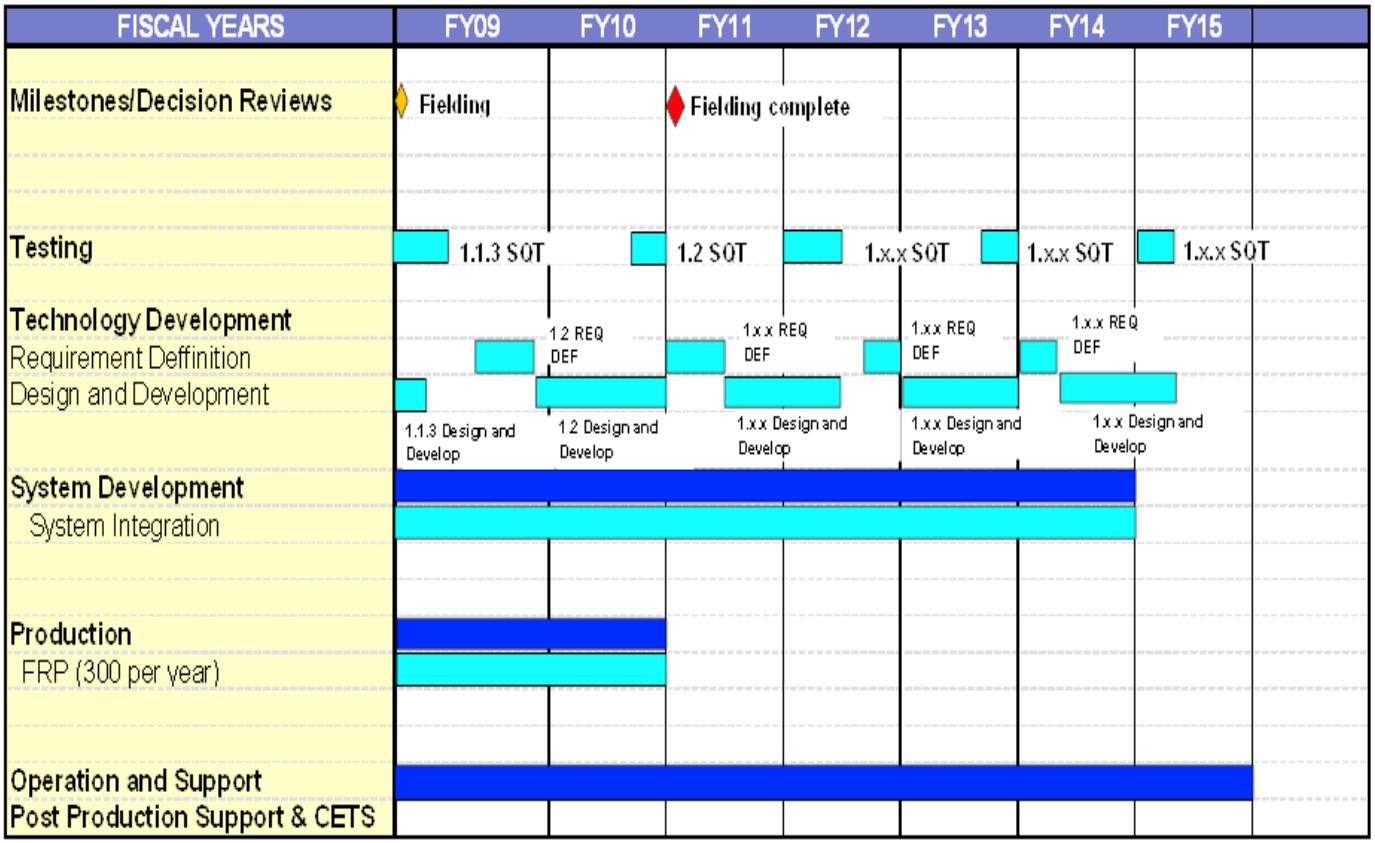

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206313M: *Marine Corps Comms Systems*	**PROJECT** 2270: *Exp Indirect Fire Gen Supt Wpn Sys*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
MAGTF C2 SA Capability Block 2010 Release	3	2010	3	2010
MAGTF C2 SA Capability Block 2012 Release	3	2012	3	2012
MAGTF C2 SA Capability Block 2015 Release	3	2015	3	2015
AFATDS SW Block 2 Delivery	2	2009	2	2009
AFATDS 6.6 Delivery	2	2010	2	2010
AFATDS Follow on SW Delivery	2	2011	3	2015
AFATDS EMT SW Delivery	3	2009	3	2015
BFSA MRC/D-DACT/C2CE Test	2	2009	2	2009
BFSA JCR Follow on Test	3	2009	3	2009
BFSA JCR Operational Test	1	2010	1	2010
BFSA JCR MFD	2	2010	2	2010
BFSA JCR Initial Operational Capability (USMC-USA Tactical Interoperability and COP)	4	2010	4	2010
BFSA USMC Type-1 Safety Certification for JCR	1	2011	1	2011
BFSA USMC BFT-II (Tactical Latency reduction of minutes to seconds)	1	2011	1	2011
BFSA USMC C2 and SA preplanned product improvements	3	2011	3	2013
TLDHS IOC	1	2009	1	2009
TLDHS Spiral Development 1.1.3	3	2009	3	2009
TLDHS Spiral Development 1.2	3	2010	3	2010

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
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	Start		End	
Event	Quarter	Year	Quarter	Year
TLDHS Spiral Development 1.X.X	3	2011	3	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
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COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2272: *Intel Command and Control (C2) Sys*	17.712	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	203.323
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

(U) Intelligence Command and Control (C2) supports the employment of reconnaissance, surveillance, and target acquisition resources and the timely planning and processing of all-source intelligence. It ensures that all-source tactical intelligence is tailored to meet specific mission requirements. The systems below collect and convert raw intelligence data on the battlefield into processed information and deliver the processed products to the Intelligence Analysis Systems (IAS) for analysis and dissemination.

Global Command and Control System Integrated Imagery and Intelligence (GCCS I3) is a joint program that is designed to enhance the operational Commander's situation awareness and track management through the use of a standard set of integrated, linked tools and services that maximize commonality and interoperability across the tactical theater, and national communities. GCCS-I3 operates in joint and service specific battlespace and is interoperable, transportable, and compliant with the DoD mandated Common Operating Environment (COE).

Distributed Common Ground System-Marine Corps (DCGS - MC) - formerly known as Distributed Common Ground/Surface-Integration (DCGS-I), is a collection of Service Systems that will contribute to joint and combined warfighter needs for ISR support, with the Global Information Grid (GIG) providing unconstrained communications circa 2012 to support the Department of Defense (DoD) Intelligence, Surevillance and Reconnassiance (ISR) Enterprise end-state. The DCGS Integrated Backbone (DIB) is the architecture that will tie the Service DCGS systems together into one Family of Systems (FOS). The DIB will provide the tools, standards, architecture, and documentation for the DCGS community to achieve a Multi-Intelligence (Multi-INT) (e.g. Imagery Intelligence (IMINT), Signals Intelligence (SIGINT), Measurement and Signature Intelligence (MASINT), Counterintelligence/Human Intelligence (CI/HUMINT)), network centric environment with the interoperability to afford individual nodes' access to the information needed to execute their respective missions to include Irregular Warfare. The Marine Corps will conduct DIB integration reseach and development to meet a congressionally mandated implementation deadline.
Trojan Spirit II - is an SHF multi-band satellite communications terminal, available in either HMMWV-mounted or transit case configuration, that provides dedicated tactical communications capability at the TS/SCI and Secret Collateral levels to USMC intelligence units. TROJAN SPIRIT terminals provide connectivity into JWICSs, NSANET and SIPRNET via the TROJAN Network Control Center.

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Technical Control Analysis Center (TCAC). consisting of the AN/UYQ-83 TCAC Remote Analysis Workstation (RAWS), AN/MYQ-9 TCAC Transportable Workstation, Multi-Level Security (MLS) and One Roof system is the focal point of Radio Battalions (RADBN) , Marine Corps Special Operations Command (MARSOC), and Fixed Wing Marine Electronic Attack Squadron (VMAQ) Signals Intelligence (SIGINT) operations. The TCAC automatically collects, stores, retrieves and plays back digital voice signals; fuses and analyzes SIGINT data from tactical, theater and national collectors and dtatbases for dissemination to tactical commanders. TCAC provides SIGINT analysis applications to deployedable MAGTF units capable of directing and managing the technical and operational functions of other RADBN SIGINT/EW assets. The TCAC provides termination of national, theater and tactical data networks for data exchange with the tactical SIGINT/EW assets, the Intelligence Analysis System (IAS), national databases, and provided USMC tactical SIGINT collection and analytical dtat into the Real-Time Regional Gateway (RTRG) and Distributed Common Ground System (DCGS).

Joint Surveillance Target Attack Radar (JSTARS) connectivity program will research and integrate a client software connectivity solution which will allow the JSTARS Moving Target Indicator (MTI), Fixed Target Indication (FTI) and Synthetic Aperture Radar (SAR) data to be passed from the JSTARS Common Ground Station (CGS) to lower echelons within the MAGTF. Additionally, the Marine Corps will continue future MTI, CDL and MTI sensor capabilities research and development .

Tactical Remote Sensor System (TRSS-PIP) - TRSS is a suite of hand emplaced and air-delivered unattended sensors, ground relays, and sensor monitoring stations, which are used by the Intelligence Battalions, Ground Sensor Platoons (GSPs). It provides the MEF/MAGTF Commander with an organic capability to conduct unattended, all-weather, semi-covert, ground surveillance of distant areas within his Area of Operations (AO). Through the use of seismic, acoustic, magnetic, infra-red, and imaging sensors, this suite provides an additional surveillance capability of personnel and/or vehicular activity, during tactical pre-assault, assault and post assault operations. TRSS covers gaps in the overall intelligence collection effort and reduces the requirement to employ Marines behind enemy lines for extended periods of time.

Team Portable Collection System - Multi-Platform Capable (TPCS-MPC) - is a semi-automated, man/team portable system providing intercept, collection, direction-finding, reporting and collection management to MAGTF commander. It provides special signals intercept, and DF capability for each system and is modular, lightweight and team transportable. The next upgrades will be the multi-platform capability and will allow the system to exploit information from more technically advanced target sets and will provide the MAGTF commander with a modular and scalable carry on/carry off suite of equipment.

Topographic Production Capability (TPC) is an integrated, independently deployed, self-contained terrain analysis system designed for data acquisition, manipulation, analysis and output, providing commanders and staff with geospatial intelligence (GEOINT) support at the Marine Expeditionary Force (MEF) and the Marine Expeditionary Wing (MEW) levels. The TPC configurations consist of Commercial-off-the-Shelf (COTS)/Government-off-the-Shelf(GOTS) software packages, servers, workstations, large-format printing/plotting devices and large-format scanning devices, all mounted in transit cases. The TPC provides critical, timely, and accurate digital and hardcopy geospatial information to support mission planning and execution. The TPC provides the capability to collect, process, exploit, analyze, produce, disseminate, and use all-source geospatical information as a foundation for a Common Operational Picture (COP) for the Marine Air Ground Task Force (MAGTF) Commander. The TPC is used by the Topographic Platoon of the MEF and provides deployable modules down to the Major Subordinate Command (MSC) and

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the Marine Expeditionary Unit (MEU). It supports the Commander, Joint Task Force or Marine Component Commander. The TPC provides the frame work for the Common Tactical Picture (CTP) of the battlefield; terrain analysis in support of the Intelligence Preparation of the Battlefield (IPB) process; all source terrain.

Wide Field of View Persistent Surveillance (WFVPS) (formerly Angel Fire) is a capability that supports persistent Inelligence, Surveillance and Reconnaissance (ISR), Improvised Explosive Device (IED) mitigation, and actionable intelligence in urban and other operations (e.g. disaster relief, security, etc). It delivers broad area, near real time, geo-registered imagery down to the tactical level of execution. Consisting of airborne and ground components such as the Airborne payload consists of an imager sensor (currently Electro-Optical (EO), on-board processors, and an air-to-ground communication link. Ground distribution network consist of the ground receive station, servers, storage and viewer client stations. AF is hosted on manned platforms, currently the King Air A-90p pilots fly the plane while the sensors can be controlled from the ground through autonomous software. The USMC objective EFVPS system will reside on an UAS.

MAGTF Secondary Imagery Dissemination System (MSIDS) is the only ground prospective Family of Systems (FoS) that provides organic tactical digital imagery collection, transmission and receiving capability to the MAGTF Commander. MSIDS is comprised of components necessary to enable Marines to capture, manipulate, annotate, transmit or receive images in Near Real Time (NRT), internally with subordinate commands that are widely separated throughout the area of operations and externally with higher adjacent commands. MSIDS capability resides with the MAGTF G/S-2 sections and
Ground Reconnaissance Battalions, Light Armored Reconnaissance Battalions, Infantry Battalion Scout Sniper Platoons and Marine Special Operations Command. The MSIDS FoS extends the digital imaging capability to all echelons within the MEF, down to and including battalions and squadrons. Captured images are capable of being forwarded throughout the MAGTF through the use of Base Station Workstation/Communication Interface (BW/CI), Out Station Workstation/Communication Interface (OW/CI) or existing C4ISR architecture. Images can also be transmitted to the Tactical Exploitation Group (TEG) for more detailed processing and analysis. A recent increase of the MSIDS Video Exploitation Workstatin (VEW) requirement within Infantry Battaliions and Wing units, down to the squadron level, has grown from 18to 140 in the past year. The VEW is utilized to import, manipulate, annotate still and video imager, create intelligence products, lift still frames from video, view multi-format TV signals and provide a field briefing capability. MSIDS FoS is currently employed in every location world-wide where the Marine Corps participates in military operations to include Irregular Warfare. MSIDS is currently, or has recently, been employed in Iraq, Kuwait, Afghanistan, Haiti, Philippines, and Horn of Africa.

Intelligence Equipment Readiness (IER) - The IER provides a responsive capability to alleviate Marine Corps intelligence systems shortfalls created by the rapidly evolving missions, threats and command relationships associated with the Overseas Contingencies Operations (OCO). The program provides for rapid technology insertion, as well as quick reaction training and logistics, to meeting the time sensitive intelligence infrastructure requirements of Marine Corps Operatng Forces and the theater and service intelligence organizations supporting those forces. IER rapidly mitigates intelligence infrastructure shortfalls through exploitation of COTS, GOTS and Non-Developmental Item technology to the greatest extent practical. This effort also centralizes support for Marine Corps intelligence infrastructure items and systems that are not separately identified within the program funding lines. IER addresses requirements that span the entire Marine Corps intelligence systems architecture.

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Intelligence Analysis Systems (IAS) supports the employment of reconnaissance, surveillance, and target acquisition resources and the timely planning and processing of all-source intelligence; it ensures that tactical intelligence is tailored to meet specific mission requirements to include Irregular Warfare.

Radio Reconnaissance Equipment Program (RREP) provides the Radio Battalions, Radio Reconnaissance Platoons (RRP) and the Marine Corps Forces Special Operations Command (MARSOC) Direct Support Teams with mission unique Signals Intelligence/Ground Electronic Warfare (SIGINT/EW) Equipment suites. The latest suite of equipment, the SIGINT Suite 3 (SS-3) is comprised of technology and equipment necessary to prosecute advanced wireless signals. The RRP Marines are trained and equipped to support the full spectrum of Marine Expeditionary Unit Special Operations Capable (MEU SOC) mission profiles as well as provide real time, imbedded support to any special operations scenario. This provides the supported commander greater flexibility in employing his SIGINT assets when the use of conventional Radio Battalion assets are not feasible. RREP is currently maintaining the SS-3 using a spiral development approach that inserts the latest technology into the suite as it becomes mature and MARSOC. This enables the SS-3 to remain a current platform against emerging threats.

Counterintelligence (CI) and Human Intelligence (HUMINT) Equipment Program (CIHEP) provides the MAGTF with integrated, standardized, and interoperable information (automated data processing), communication, and specialized equipment to conduct the full spectrum of tactical CI/Force Protection to include Irregular Warfare, HUMINT, and technical collection operations in accordance with (IAW) applicable national oversight directives. CIHEP provides each CI/HUMINT Company (CIHCo) with a suite of state-of-the-market equipment comprised of commercial-off-the-shelf, government-off-the-shelf, and non-developmental items (COTS/GOTS/NDI). It integrates audio, video, imagery, communications, technical surveillance and computer equipment into lightweight, modular, scalable, deployable packages. CIHEP enhances the capability to collect, receive, process, and disseminate CI/HUMINT information from overt, sensitive, technical, tactical, and Force Protection, in the service, joint, and combined forces area of operations.

Intelligence Broadcast Receiver (IBR) provides Marine tactical commanders access to National level Near Real-Time intelligence data provided over the Integrated Broadcast Service. IBR is employed across the MAGTF echelons through the following Host Systems; Intelligence Analysis System; Tactical Air Operations Center; Technical Control and Analysis Center; Tactical Air Command Center; Joint STARS Common Ground Station; Tactical Electronic Reconnaissance Processing and Evaluation System and Common Air Command and Control Systems and Joint Stars Work Station.

Tactical Exploitation of National Capabilities (TENCAP) is a program designed to enhance the ability of tactical Marine Corps forces to exploit the capabilities of national intelligence-gathering systems. Congressionally directed, it requires close liaison with the intelligence community and involves complex and highly-sensitive activities.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*GCCS-I3: Program Support, Integration and Software Engineering	0.434	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Program Support, Integration and Software Engineering of software upgrades.					
*GCCS-I3: Software Engineering Support *FY 2009 Accomplishments:* Software Engineering Support for software upgrades.	0.612	0.000	0.000	0.000	0.000
*GCCS-I3: Engineering/Acq Logistics Support *FY 2009 Accomplishments:* Engineering/Acq Logistics Support for software upgrades.	0.080	0.000	0.000	0.000	0.000
*GCCS-I3: Program Testing *FY 2009 Accomplishments:* Program Testing for software upgrades.	0.100	0.000	0.000	0.000	0.000
*DCGS-MC - USMC DCGS Testing and Evaluation Support *FY 2009 Accomplishments:* Testing and Evaluation Support to Program Office Systems Engineering and Test and Evaluation Working Integrated Product Team.	0.086	0.000	0.000	0.000	0.000
*DCGS-MC - Research and Development and Integration Efforts *FY 2009 Accomplishments:* Research and Development and Integration Efforts in support of the system integration of TEG and TPC.	0.290	0.000	0.000	0.000	0.000
*DCGS-MC - Engineering and Technical Services	0.290	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Engineering and Technical Services for program documentation updates.					
*DCGS-MC - Hardware and Enterprise Services *FY 2009 Accomplishments:* Hardware and Enterprise Services for DIB Integration.	3.625	0.000	0.000	0.000	0.000
*TROJAN SPIRIT: Engineering and Technical Support *FY 2009 Accomplishments:* Engineering and Technical support for product improvement of systems.	0.431	0.000	0.000	0.000	0.000
*TCAC: Software Development and Testing *FY 2009 Accomplishments:* Software Development and Testing for the development of an automated Collections Planning/ Management Application for Organic USMC Collection Systems.	1.389	0.000	0.000	0.000	0.000
*TCAC: Program Management Support *FY 2009 Accomplishments:* Program Management Support for system storage requirements and solutions.	0.058	0.000	0.000	0.000	0.000
*JSTARS: Engineering and Technical, Management Support *FY 2009 Accomplishments:* Engineering and Technical Management Support for the continuation of CDL capabilities and future MTI capabilities.	0.186	0.000	0.000	0.000	0.000
*JSTARS: MTI Capability	0.050	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: MTI capability and development of MTI exploitation tools.					
*TRSS-PIP: Software development of HHPM *FY 2009 Accomplishments:* Software development of software refresh efforts in support of HHPM.	0.451	0.000	0.000	0.000	0.000
*TRSS-PIP: Management support - MCSC *FY 2009 Accomplishments:* Management support for ECP efforts for the CSR, GSSV, and Imager III.	0.020	0.000	0.000	0.000	0.000
*TRSS-PIP: Development of Imaging Processor Board I *FY 2009 Accomplishments:* Development and support of the Imaging Processor Board upgrade.	0.135	0.000	0.000	0.000	0.000
*TRSS-PIP: Support IOT&E and Increment II efforts *FY 2009 Accomplishments:* Support IOT&E and Increment II efforts for software refresh.	0.103	0.000	0.000	0.000	0.000
*TPCS-MPC: Training development and test support *FY 2009 Accomplishments:* Training development and test support for Block 1 upgrades.	0.450	0.000	0.000	0.000	0.000
*TPCS-MPC: Program support and management *FY 2009 Accomplishments:* Program support and management for upgrades to SIGINT suites.	0.567	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*TPC: Hardware, Software and Spiral Development Support *FY 2009 Accomplishments:* Hardware, Software and Spiral Development Support to incorporate the Common Data Link (CDL) to support expeditionary operations.	0.318	0.000	0.000	0.000	0.000
*TPC: Contractor Support *FY 2009 Accomplishments:* Contractor Support to participate in Joint Service Testing events.	0.049	0.000	0.000	0.000	0.000
*TEG: Enhanced and TEG-RWS functionality *FY 2009 Accomplishments:* Develop and integrate of the Spiral Upgrade to the TEG-RWS functionality.	0.320	0.000	0.000	0.000	0.000
*TEG: Airborne Imagery Sensor Interface *FY 2009 Accomplishments:* Develop and integrate a required upgrades/interfaces to accommodate emerging Airborne Sensors.	0.227	0.000	0.000	0.000	0.000
*TEG: Program Management and Technical Support *FY 2009 Accomplishments:* Program Management and Technical Support for the next generation TEG-M.	0.339	0.000	0.000	0.000	0.000
*TEG: Video Capture and Exploitation capability *FY 2009 Accomplishments:* Integration efforts of the Video Capture and Exploitation capability.	0.063	0.000	0.000	0.000	0.000
*TEG: Mandated DCGS/DIB interfaces and communication architectures	0.116	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Mandated DCGS/DIB interfaces and communication architectures in support of the merge into DCGS-MC.					
*TEG: Common Data Link (CDL) Capability *FY 2009 Accomplishments:* Continued research and development efforts for the next generation of Common Data Link (CDL) Capability.	0.234	0.000	0.000	0.000	0.000
*TEG: Engineering/Technical Management *FY 2009 Accomplishments:* Engineering/Technical Management in support of the merging TEG capabilities into the DCGS-MC Geographic Intelligence sub-system.	0.329	0.000	0.000	0.000	0.000
*TEG: IPv6, GIG and others mandated integration *FY 2009 Accomplishments:* IPv6, GIG and others mandated integration efforts.	0.156	0.000	0.000	0.000	0.000
*WFVPS (ANGEL FIRE): Engineering and Technical Support *FY 2009 Accomplishments:* Engineering and Technical Support Angel Fire Sensors.	0.106	0.000	0.000	0.000	0.000
*MSIDS: Program Management and Technical Support *FY 2009 Accomplishments:* Program Management and Technical Support to test and evaluate commercial products for use with the MSIDS.	0.216	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*MSIDS: Engineering Support *FY 2009 Accomplishments:* Engineering Support to identify, test and evaluate commercial products for use with the MSIDS.	0.047	0.000	0.000	0.000	0.000
*IER: Program Management and Technical Support *FY 2009 Accomplishments:* Program Management and Technical Support for transition of MLS solution into USMC intelligence systems.	0.203	0.000	0.000	0.000	0.000
*IAS MOD KIT: Software Engineering and Management Support *FY 2009 Accomplishments:* Software Engineering and Management Support for the continuation of the development of software modification to support Joint Operability.	0.434	0.000	0.000	0.000	0.000
*IAS MOD KIT: Program, Logistic and Admin Support *FY 2009 Accomplishments:* Program, Logistic and Admin Support to improve the operability of the USMC and Joint ISR systems.	0.633	0.000	0.000	0.000	0.000
*CIHEP: Engineering, Integration and Technical Support *FY 2009 Accomplishments:* Engineering, Integration and Technical Support of Biometric Capabilities.	0.039	0.000	0.000	0.000	0.000
*CIHEP: Program Management Support *FY 2009 Accomplishments:* Program Management Support to evaluate improvements to CIHEP DPM.	0.091	0.000	0.000	0.000	0.000
*IBR: Engineering and technical service support	0.084	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Engineering and technical service support for the alternative IBR solutions in place of the ENTR.					
*IBR: Test and Evaluation of USB ENTR *FY 2009 Accomplishments:* Test and Evaluation of USB ENTR development effort and CIBS-M.	0.250	0.000	0.000	0.000	0.000
*IBR: Contract and Program Support *FY 2009 Accomplishments:* Contract and Program Support of Common Data Translator Investigation and Analysis.	0.150	0.000	0.000	0.000	0.000
*TENCAP: Program Support and Management *FY 2009 Accomplishments:* Program Support and Management	3.800	0.000	0.000	0.000	0.000
*TENCAP: Technical Assessments *FY 2009 Accomplishments:* Technical Assessments	0.151	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	17.712	0.000	0.000	0.000	0.000

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C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

(U) ACQUISITION STRATEGY TROJAN SPIRIT: Procure and continuously improve USMC TROJAN SPIRIT systems to meet evolving Marine Corps operational needs while maintaining interoperability with the Army TROJAN Network and maintaining, as closely as practical, configuration common to the Army TROJAN SPIRIT systems.

(U) ACQUISITION STRATEGY TCAC: The acquisition of components for the TCAC will maximize the use of existing equipment, NDI/COTS/GFE equipment/ software. The integration effort for TCAC hardware components will be accomplished under the control of the SSA, MCSC. Software integration and support will be accomplished by contractors under the control of the Project Officer. These activities report to and are directed by the Program Manager, Intelligence Systems, Marine Corps Systems Command (MARCORSYSCOM). Maintenance support will be managed by MARCORLOGBASES Albany and MCSC, Albany and through separate contractual agreements.

(U) ACQUISITION STRATEGY JSTARS: JSTARS will utilize ongoing Army JSTARS contracts for continue development of MTI and MTI Sensor capabilities as well as upgrades to the JSTARS Common Software baseline. IPv6 research is being conducted in conjunction with the Army. Post Deployment Software Support (PDSS) will be provided through the Communications-Electronics Command (CECOM), Ft Monmouth, NJ. Surveillance Control Data Link (SCDL) refresh efforts will conducted in conjunction with the Army JSTARS Program Office. Development of a Moving Target Indicator capability for integration into the Distributed Common Ground System-Marine Corps will continue through MTCSC and a Northrup Grumman sub-contract, via SPAWAR, Charleston SC.

(U) ACQUISITION STRATEGY TRSS: The TRSS are typically Non-Developmental Item (NDI) integration efforts, making maximum use of the efforts of hardware and software initially developed by other DoD organizations and programs. The initial phases of each Increments are cost-plus fixed-fee efforts, while the production phase, which encompasses the production, fielding, training and initial support of the systems, are firm-fixed price efforts.

(U) ACQUISITION STRATEGY TPCS: TPCS, the ever-increasing sophistication of target threats and information technology necessitates an evolutionary acquisition approach. TPCS will make incremental improvements through maximum use of COTS, GOTS and NDI. These technology insertions and product improvements will ensure the Radio Battalions maintain cutting edge technologies and collection capabilities.

(U) ACQUISITION STRATEGY TPC: The TPC will refresh and upgrade the existing TPC equipment as technology advances. As new technology emerges, the current fielded systems will need incremental hardware and software refreshes to sustain operational requirements and to meet the ORD requirement of compliancdee with the NGA US Imagery and Geospatial Information System. The TPC program uses existing Government contracts for hardware/software developmet and integration. Full-time contractor support is provided through the Commercial Enterprise Omnibus Support Services (CEOss) contract. Additionall full time engineering and integration support is provided by Northrop Grumman Information Technology TASC through the Information Technology Omnibus Procurement II (ITOP II) contract under the auspices of the MCSC Information Technology Modernization 2000 (ITM2K) Project Office. Maintenance support will be managed by MARCORLOGBASES Albany and MCSC, Albany and through separate contractual agreements.

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(U) ACQUISITION STRATEGY TEG: The TEG Program Office leverages the advantages of its multi-service common software baseline and inherent Joint service interoperability. Development, integration, interoperability, security certification and accreditation and acquisition is divided between three prime contractors: Northrop Grumman Electronic Systems, Baltimore, MD (NGB) (through a classified contract); Space and Naval Warfare Systems Center, Charleston, SC (SSCC), and MTC Services Corporation. An incremental refresh is currently ongoing for the TEG Main.
(U) ACQUISITION STRATEGY WFVPS: MCCDC maintains sponsorship of the Angel Fire UUNS. Marine Corps funds Air Force Research Lab to support the United States Air Force (USAF) in the development of subsequent sensor spirals as a technology demonstration supporting Marines operating in the CENTCOM AOR. In keeping with the Program Decision Memorandum (PDM) of November 2007. Development, integration, interoperability and testing are divided between AFRL, Los Alamos National Laboratory (LANL) and the NRL.
(U) ACQUISITION STRATEGY MSIDS: Full Operational Capability (FOC) in 2QTR FY03. Subsequent "increment refreshes" are under way in order to keep the systems from becoming unreliable and unsupportable. The increment refresh approach will effectively leverage technological advances. Each increment of upgrades will refresh 1/3 of the fielded components.
(U) ACQUISITION STRATEGY IER: This program seeks to support a wide range of technology solutions based on the requests received from the Operating Forces and/or PM Intelligence Program of Record. The request must require solution evaluation beyond merely acquisition to be recommended as an Intelligence Systems Readiness (ISR) candidate. Each request will be validated by the ISR team and approved by the Project Officer and PM Intel before solution evaluation begins. The ISR program will use COTS/GOTS/NDI solutions to the greatest extent possible.
(U) ACQUISITION STRATEGY IAS: The IAS program uses existing Government contracts for hardware and software development and integration. The system is comprised primarily of Commercial Off-the-Shelf (COTS) and Government Off-The-Shelf (GOTS) equipment. The IAS FoS utilizes an evolutionary strategy to ensure periodic incorporation of state-of-the-art technology that meets both current and future Marine Corps intelligence requirements while maintaining system readiness and reliability.
(U) ACQUISITION STRATEGY RREP: Research, test and integrate new technology will keep pace with the evolving Marine Corps operational needs. Acquisition will maximize the use of NDI/COTS hardware and software to ensure the supporting units maintain cutting edge technology and collection capabilities.
(U) ACQUISITION STRATEGY CIHEP: CIHEP will use the Integrated Team Solutions Facility for hardware and software upgrades as necessary. CIHEP will coordinate acquisition of communications equipment with the Program Manager Communications section for planned upgrades to the Communications Module. SPAWAR, Charleston will be utilized for the technology dictates.
(U) ACQUISITION STRATEGY IBR: In house contracts will be used to conduct engineering studies and test and evaluation activities associated with the Marine Corps implementation of the Integrated Broadcast Service, Common Message Format, ENTR integration and test and evaluation.
(U) ACQUISITION STRATEGY TENCAP: Work will be led in-house. Necessary contractor support will be acquired using already existing contracts.

E. Performance Metrics

N/A

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COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2273: *Air Ops Cmd & Control (C2) Sys*	47.652	66.108	68.465	0.000	68.465	52.196	38.339	42.132	41.626	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Common Aviation Command and Control System (CAC2S) is a coordinated modernization effort to replace the existing aviation command and control equipment of the Marine Air Command and Control System (MACCS) and to provide the Aviation Combat Element with the necessary hardware, software, equipment, and facilities to effectively command, control, and coordinate aviation operations. The CAC2S system will accomplish the MACCS missions with a suite of operationally scalable modules to support the Marine Air Ground Task Force (MAGTF), Joint, and Coalition Forces. The CAC2S integrates the functions of aviation command and control into an interoperable system that will support the core competencies of all Marine Corps warfighting concepts. The CAC2S, in conjunction with MACCS organic sensors and weapons systems, supports the tenets of Expeditionary Maneuver Warfare and fosters joint interoperability. CAC2S Increment I will replace legacy aviation command and control systems in the following Marine aviation agencies: Direct Air Support Center (DASC), Tactical Air Command Center (TACC), and Tactical Air Operations Center (TAOC).

Theater Battle Management Core Systems (TBMCS) - provides the commander the automated tools necessary to generate, disseminate, and execute the Air Tasking Order (ATO), as mandated by the Chairman, Joint Chiefs of Staff in July 1993. It is an evolutionary acquisition, allowing for the rapid development/fielding of hardware and software to meet today's rapidly advancing technology. It is fielded to all four Marine Tactical Air Command Squadrons (MTACS) and the supporting establishment.

The Composite Tracking Network (CTN) - will provide the Marine Air Ground Task Force (MAGTF) Commander a ground based sensor netting solution that significantly improves situational awareness by correlating sensor measurement data (target position, speed, heading, Identification Friend and Foe (IFF), etc.) from local and remote radars in the Cooperative Engagement Capability (CEC) network, which is then provided to the warfighter in the form of composite, real-time, air surveillance tracks.

The Marine Air Command and Control System (MACCS) Sustainment - consists of various command and control agencies designed to provide the Aviation Combat Element (ACE) commander with the ability to monitor, supervise and influence the application of Marine aviation assets in support of MAGTF operations. The MACCS Sustainment provides funding to keep these fielded systems ready, relevant and capable until their functions are replaced by the Common Aviation Command and Control System (CAC2S).

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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Single Integrated Air Picture (SIAP) - is the product of fused, common, continual, unambiguous tracks of airborne objects within the surveillance area. A SIAP will be achieved through the use of a model-based architecture computerized specification (the Integrated Architecture Behavior Model, or IABM). The IABM provides the common architectural standard (Platform-Independent Model, or PIM) for systems that make up the joint SIAP SoS. Each of the Services, through their respective SIAP program offices, develops Platform-Specific Models (PSM) of the IABM that are used to develop SIAP solutions for incorporation into Service-designated platforms.

Battlefield Target Identification Device (BTID) - In FY09 and beyond - will be a cooperative battlefield target identification device that employs encrypted, Ka band, millimeter wave, question and answer technology. It will consist of interrogator and transponder antennae, transceiver, and communications/electrical interface unit. It will be fielded as three variants: interrogaror/transponder system for Expeditionary Fighting Vehicle (EFVs), Light Amphibious Vehicles (LAVs), and M1A1s; interrogator-only for Heavy Machine Gun (HMG), Anti-Tank Guided Missile (ATGM), and Target Location Data Hand-off System (TLDHS); and transponder-only system for combat support and combat service support vehicles. When fielded, mounted weapon systems will have the capability to identify targets as friendly or unknown, at ranges to 6 km, before engaging them. They and all other designated vehicles will also possess the capability to rapidly identify themselves as friendly to weapon systems equipped with comparable systems prior to being engaged. As a result, incidents of fratricide and collateral damage will decline, while the range at which targets may be engaged without fear of misidentification will increase dramatically. The system will be interoperable with Joint, Allied, and Coalition forces' cooperative target identification systems.

Combat Operations Center (COC) AN/TSQ-239 (V)2/3/4 is a deployable, self-contained, modular, scalable and centralized facility which provides digital, shared Command and Control/Situational Awareness functionalities to enhance the Common Operational Picture (COP) for the Command Element, Ground Command Element, Air Combat Element, and Logistics Combat Element. It is a commercial-off-the-shelf integrated hardware solution using unit provided radios, re-hosted tactical data systems, and available Marine Corps prime movers to transport the system. FY10 funds required for H/W refresh for Golf model 2010 upgrades. Funding also supports 2 MEB Urgent Universal Needs Statement (UUNS) (Mar 09) to include OEF supplemental kits of various configurations, Tactical Collaboration Work Station (TCWS) integration (MCCDC) LOC and OIF Force retrograde.

Remote Video Viewing Terminal (RVVT) - Provides warfighter with video connectivity to multiple types of aerial platforms (Pioneer, Dragon Eye, Raven B, Shadow, Predator, Fire Scout, and Litening Pod on P-3, AV8-B, and F/A-18). Data is displayed to Regimental Combat Teams and Forward Air Controller operators who coordinate with higher headquarters for fires. Program Office is pursuing a MS B in FY11.

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Joint Interface Control Office (JICO) Support System (JSS) - will provide net-centric services through a transformational management system to enable internet protocol-based networks of the future to operate efficiently with current tactical networks. It will manage complex tactical networks through an automated toolset and information repository that enables planning, management and analysis of communications before, during and after operations.

GROUP 1 (formerly known as TIER I UAS) - The Program Office is pursuing a rapid acquisition approach to quickly field new technology and capabilities to the warfighter. The strategy is to use evolutionary acquisition with two incremental developments to meet the final desired SURSS requirements. The SURSS Block 0, Dragon Eye, was the first increment and is currently fielded to deployed units. For the Block 1 increment the USMC adopted the USSOCOM Rucksack Portable UAV (RPUAV) ORD, which meets the USMC's requirement and began migrating to the joint materiel solution, the Raven B. The Army Program Manager for Unmanned Aircraft Systems is the program manager of record. By leveraging off of this joint program already in the production phase, the USMC is able to rapidly field systems to deployed warfighters.

TIER II/UAS - This is a combined Navy (PE#0305204N) and Marine Corps (PEs#0206313M/#0206625M) budget submission. The Tier II/UAS is a new start program that will provide persistent, Intelligence, Surveillance, and Reconnaissance (ISR) support for tactical level maneuver decisions and unit level force defense/force protection for Navy ships and Marine Corps land forces. This system will fill the ISR capability shortfalls identified by the Navy Small Tactical Unmanned Aircraft System (STUAS) and Marine Corps Tier II UAS efforts. Consisting of four air vehicles, two ground control stations, multiple payloads, and associated launch, recovery and support equipment, this system will support the Navy missions including building the Recognized Maritime Picture, Maritime Security Operations, Maritime Interdiction Operations, and support of Navy units operating from sea/shore in OCO and the Marine Cops close range (<50 nautical miles (nm)) UAS enabling enhanced decision-making and improved integration with ground schemes of maneuver. This submission is the Marine Corps portion of the program and has been coordinated with the Navy budget submission PE# 0305204N. This program was moved to Program Element 0206625M in FY10 and beyond.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*JICO Support System: Software Sustainment & Integration Support	0.000	0.062	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Funding will be sent to the Joint program office to support production software integration for USMC systems					
*JICO Support System: Engineering and Technical Support Services *FY 2010 Plans:* Funding will be sent to the Joint Program Office to fund for On-Site Engineering Support for our test systems.	0.000	0.028	0.000	0.000	0.000
*JICO Support System: Program Management Support *FY 2010 Plans:* Program Office travel, MCTSSA and MCOTEA support of Multi-Surface Operational Test and Evaluation. *FY 2011 Base Plans:* Program Office travel. MCTSSA support for Increment 2 developement.	0.000	0.402	0.489	0.000	0.489
*BTID: System Product Development *FY 2009 Accomplishments:* Upgraded transponder units, integrated BTID on F/A-18 aircraft, and executed the Bold Quest (BQ) Exercise which demonstrated BTID in the Air-to-Ground Mission area. *FY 2010 Plans:* Per DEPSECDEF guidance, refocus BTID from vehicle-vehicle Cooperative Target ID (CTI) to Fires on Dismounts CTI and Air-Ground CTI to meet the needs of the current fight. To support this direction, efforts will include: Dismount CTI technology development/technology maturation to support a Military	1.262	1.530	12.300	0.000	12.300

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Utility Assessment during an FY10/11 BQ demonstration and technology down-select and preparing acquisition documentation to support an FY12 MS A decision. *FY 2011 Base Plans:* Continue Technology Development and the maturing process with multiple contractors providing systems in support of BQ-11 goals that support DSD guidance and objectives. This effort will require a minimum of six to eight contractors whose products can meet Technology Readiness Assessment goals that will define a maturity level required in a field evaluation under realistic conditions in late FY11.					
*BTID: JCTI-G Joint Product Evaluation *FY 2009 Accomplishments:* Conducted Pre-Milestone B activities and developed MS B documentation for the joint Cooperative Target ID-Ground. *FY 2010 Plans:* Per DEPSECDEF guidance, refocus BTID from vehicle-vehicle Cooperative Target ID (CTI) to Fires on Dismounts CTI and Air-Ground CTI to meet the needs of the current fight. To support this direction, efforts will include: Dismount CTI technology development/technology maturation to support a Military Utility Assessment during an FY10/11 BQ demonstration and technology down-select and preparing acquisition documentation to support an FY12 MS A decision. *FY 2011 Base Plans:* Execute BQ-11 as a Joint/Coalition exercise that will culminate in FY-11 with an MUA supporting DSD guidance and the Milestone Decision Authorities goal for a MS-A/B decision in late FY11 or early FY12.	1.211	0.110	2.000	0.000	2.000
*BTID: SDD Developmental Test Articles	0.000	0.180	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Per DEPSECDEF guidance, refocus BTID from vehicle-vehicle Cooperative Target ID (CTI) to Fires on Dismounts CTI and Air-Ground CTI to meet the needs of the current fight. To support this direction, efforts will include: Dismount CTI technology development/technology maturation to support a Military Utility Assessment during an FY10/11 BQ demonstration and technology down-select and preparing acquisition documentation to support an FY12 MS A decision.					
*BTID: Management Services *FY 2010 Plans:* Per DEPSECDEF guidance, refocus BTID from vehicle-vehicle Cooperative Target ID (CTI) to Fires on Dismounts CTI and Air-Ground CTI to meet the needs of the current fight. To support this direction, efforts will include: Dismount CTI technology development/technology maturation to support a Military Utility Assessment during an FY10/11 BQ demonstration and technology down-select and preparing acquisition documentation to support an FY12 MS A decision. *FY 2011 Base Plans:* Complete Joint AoA. Provide Management oversight to product development efforts. Complete all documentation to support MDD at MS-A/B with associated Requests for Proposals and Source Selection. Provide resources to an established Component Lead Joint Program management team at Aberdeen Proving Grounds, MD to support Technology development/Engineering and Manufacturing Development based on MDA direction for a SI Program in anticipation of 1st Qtr FY-12 contact awards.	0.000	0.814	6.074	0.000	6.074
*COC: Continued Capability Solution *FY 2009 Accomplishments:* Model G ECP analysis initiated. Transition Switch Module integration analysis and Operations Trailer Ease-of-Use preliminary ECP initiated.	2.029	6.982	1.047	0.000	1.047

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Complete Model G design, documentation, and testing *FY 2011 Base Plans:* Complete Model G design, documentation, and testing					
*COC: Support of Systems Integration *FY 2009 Accomplishments:* Funded support services for analyzing technology insertion and integration of MAGTF C2 requirements into the COC baseline.	0.200	0.000	0.000	0.000	0.000
*COC: Test and Evaluation *FY 2009 Accomplishments:* Funded MCOTEA for initial planning of Model G testing. *FY 2010 Plans:* N/A	0.038	0.100	0.000	0.000	0.000
*COC: Program Management Support *FY 2009 Accomplishments:* Provided continued support to PM MC2S.	0.057	0.000	0.000	0.000	0.000
*TIER I: Mini digital data-Link development for small aircraft systems. *FY 2009 Accomplishments:* Funded Tactical Network Sensor Suite (TNS2) program. This initiative supports the experimentation, integration and product enhancement of the Marine Corps UAS program, communications hardware and C2 software.	0.163	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*TIER I: ACTD, OEF/OIF, CONOPS, TTP. *FY 2009 Accomplishments:* Funded Tactical Network Sensor Suite (TNS2) program. This initiative supports the experimentation, integration and product enhancement of the Marine Corps UAS program, communications hardware and C2 software.	0.200	0.000	0.000	0.000	0.000
*CTN: Engineering Development Model (EDM). *FY 2009 Accomplishments:* Refurbished test assets for IOT&E, MBIT SW, OS SW update. *FY 2010 Plans:* Funds to be used for USG 4B HW development. *FY 2011 Base Plans:* Funds to be used for USG 4B development, IFC kernel.	0.437	0.665	0.370	0.000	0.370
*CTN: CAC2S, AN/TPS-59 long range radar, G/ATOR and FoS upgrades interfaces. Program was incorrectly decremented $5M for FY10, controls were locked before adjustments were made, adjustments will be made during execution. *FY 2009 Accomplishments:* Developed AC2, AN TPS-59 Mode 5, and G/ATOR IDD, begin SW development of a G/ATOR and AC2 adaptive layer. *FY 2010 Plans:* Continue SW development of GATOR and AC2 adaptive layer, SW engineering load for integration testing.	1.212	5.884	1.000	0.000	1.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Final SW release for development testing.					
*CTN: Certification of Interfaces *FY 2009 Accomplishments:* Certified Software CEC Baseline 2.1.9.3 *FY 2010 Plans:* Certification of CEC Baseline 2.1.9.5, Functional Quality Test of Air Control 2 adaptive layer. *FY 2011 Base Plans:* Certification of Baseline 2.1.10	1.000	1.530	1.365	0.000	1.365
*CTN: Program Management Support. *FY 2009 Accomplishments:* Used for system engineering support, Testing & Evaluation support, Information Analysis support, CM support, and Logistics. *FY 2010 Plans:* To be used for system engineering support, Testing & Evaluation support, Information Analysis support, CM support, and Logistics. *FY 2011 Base Plans:* To be used for system engineering support, Testing & Evaluation support, Information Analysis support, CM support, and Logistics.	0.327	0.160	1.457	0.000	1.457
*MACCS SUSTAINMENT: TAOM, ADCP and CDLS.	1.164	1.204	1.158	0.000	1.158

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Developed and implemented radio mount and transport pallet modifications for TAOM. Developed and Tested Joint Range Extension software version 5.0 *FY 2010 Plans:* Design and prototype modification kits for Commercial Item Technology Refresh for TAOM, SAAWF, TIU and MCIU. *FY 2011 Base Plans:* Design and prototype modification kits for Commercial Item Technology Refresh for TAOM, SAAWF, TIU and MCIU.					
*MACCS SUSTAINMENT: TAOM, SAAWF, TIU, MCIU, ADCP, CIS and CDLS *FY 2009 Accomplishments:* Funded TAOC Life Cycle Support contract for engineering investigations. Funded TAOC Software PDSS contract. Funded USMC portion of JICO Support System JPO R&D costs. Funded NSWC Crane for ADCP PDSS efforts.	2.154	0.000	0.000	0.000	0.000
*MACCS SUSTAINMENT: Program Management Support *FY 2009 Accomplishments:* Funded MCSC Project Office internal and external travel requirements in support of test events.	0.115	0.000	0.000	0.000	0.000
*TIER II UAS: Marine Corps C4I network Integration. *FY 2009 Accomplishments:* STUAS RFP released 3 April. First small tactical UAS program to go through a formal DoD 5000 Acquisition Process. In June to July 2009, conducted successful Flight Demonstrations of proposed STUAS systems at YUMA Training Center (YTC) Yuma. AZ as part of the solicitaion effort. Innovative	0.080	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
and "first of its kind" solicitation approach to help mitigate proposal risk and evaluate a best value solution to the government for rapidly maturing UAV technologies.					
*TIER II UAS: MCCDC Support *FY 2009 Accomplishments:* STUAS RFP released 3 April. First small tactical UAS program to go through a formal DoD 5000 Acquisition Process.	0.620	0.000	0.000	0.000	0.000
*TIER II UAS: Operational Testing (OT) *FY 2009 Accomplishments:* STUAS RFP released 3 April. First small tactical UAS program to go through a formal DoD 5000 Acquisition Process. In June to July 2009, conducted successful Flight Demonstrations of proposed STUAS systems at YUMA Training Center (YTC) Yuma. AZ as part of the solicitaion effort. Innovative and "first of its kind" solicitation approach to help mitigate proposal risk and evaluate a best value solution to the government for rapidly maturing UAV technologies.	0.214	0.000	0.000	0.000	0.000
*TIER II UAS: Navy Program Management Support. *FY 2009 Accomplishments:* STUAS RFP released 3 April. First small tactical UAS program to go through a formal DoD 5000 Acquisition Process. In June to July 2009, conducted successful Flight Demonstrations of proposed STUAS systems at YUMA Training Center (YTC) Yuma. AZ as part of the solicitaion effort. Innovative and "first of its kind" solicitation approach to help mitigate proposal risk and evaluate a best value solution to the government for rapidly maturing UAV technologies.	11.057	0.000	0.000	0.000	0.000
*TIER II UAS: Program Management Support .	1.212	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: STUAS RFP released 3 April. First small tactical UAS program to go through a formal DoD 5000 Acquisition Process. In June to July 2009, conducted successful Flight Demonstrations of proposed STUAS systems at YUMA Training Center (YTC) Yuma. AZ as part of the solicitaion effort. Innovative and "first of its kind" solicitation approach to help mitigate proposal risk and evaluate a best value solution to the government for rapidly maturing UAV technologies.					
*RVVT: Preparation of MS C and Full Rate Production and Fielding activities *FY 2010 Plans:* Continue Pre-Milestone B activities (Acquisition Plan, Source Selection Plan, RFP). Material Development Decision (AOA Study Plan and Statement of Need). *FY 2011 Base Plans:* Preparation of Milestone C and Full Rate Production and Fielding activities.	0.000	0.663	0.467	0.000	0.467
*TBMCS: USMC TBMCS development. *FY 2009 Accomplishments:* USMC TBMCS development. *FY 2010 Plans:* USMC TBMCS development. *FY 2011 Base Plans:* USMC TBMCS development.	0.242	0.221	0.150	0.000	0.150
*TBMCS: MCTSSA TBMCS software support.	0.203	0.180	0.047	0.000	0.047

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: MCTSSA TBMCS software support. *FY 2010 Plans:* MCTSSA TBMCS software support. *FY 2011 Base Plans:* MCTSSA TBMCS software support.					
*TBMCS: Program management support. *FY 2009 Accomplishments:* Program Management support. *FY 2010 Plans:* Program Management support. *FY 2011 Base Plans:* Program Management support.	0.260	0.366	0.274	0.000	0.274
*TBMCS: Test and Evaluation for TBMCS Upgrades Joint Interoperability. *FY 2009 Accomplishments:* Test and Evaluation for TBMCS Upgrades Joint Interoperability. *FY 2010 Plans:* Test and Evaluation for TBMCS Upgrades Joint Interoperability. *FY 2011 Base Plans:* Test and Evaluation for TBMCS Upgrades Joint Interoperability.	0.077	0.081	0.083	0.000	0.083

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*CAC2S: Program Management Support. *FY 2009 Accomplishments:* Program management support. *FY 2010 Plans:* Program management support. *FY 2011 Base Plans:* Program management support.	3.607	3.900	4.200	0.000	4.200
*CAC2S: Test and Evaluation Testing and Information Assurance Certification. *FY 2009 Accomplishments:* CAC2S: System development testing, operational assessment, and live interface testing in accordance with continued sensor interface/integration, communications interface/interoperability validation. Additionally, regression testing following DT & OT system corrections; as well as, Information Assurance certification test scans. *FY 2010 Plans:* CAC2S: System development testing, operational assessment, and live interface testing in accordance with continued sensor interface/integration, communications interface/interoperability validation. Additionally, regression testing following DT & OT system corrections; as well as, Information Assurance certification test scans. *FY 2011 Base Plans:* CAC2S: System development testing, operational assessment, and live interface testing in accordance with continued sensor interface/integration, communications interface/interoperability validation. Additionally, regression testing following DT & OT system corrections; as well as, Information Assurance certification test scans.	1.456	2.320	1.950	0.000	1.950

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*CAC2S: EDM, TR, Gov't DT, MROC ECP	5.443	13.056	12.542	0.000	12.542
FY 2009 Accomplishments: Design, Development and Testing of Engineering Developmental Models (EDM). Contract activities to complete Phase I integration to include Trouble Reports (TR) corrections following Gov't DT. Additionally, MROC directed Engineering Change Proposals (ECP) development and implementation. *FY 2010 Plans:* Design, Development and Testing of Engineering Developmental Models (EDM). Funding to be used to fund MCOTEA and IOT&E. *FY 2011 Base Plans:* Design, Development and Testing of Engineering Developmental Models (EDM). Support integration testing and DT with G/ATOR and AC2.					
*CAC2S: Operational Assessments.	6.864	19.771	18.170	0.000	18.170
FY 2009 Accomplishments: Data and information fusion componet hardware and software development and support, including developmental testing, field user evaluations and operational assessments. *FY 2010 Plans:* Data and information fusion componet hardware and software development and support, including developmental testing, field user evaluations and operational assessments. *FY 2011 Base Plans:* Data and information fusion componet hardware and software development and support, including developmental testing, field user evaluations and operational assessments.					
*CAC2S: Engineering, Management and Logistics Support	1.352	2.750	3.322	0.000	3.322

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Engineering, Management & Logistics Support *FY 2010 Plans:* Engineering, Management & Logistics Support *FY 2011 Base Plans:* Engineering, Management & Logistics Support					
*SIAP: Develop Joint SIAP capability. *FY 2009 Accomplishments:* Develop Joint SIAP capability. *FY 2010 Plans:* Develop Joint SIAP capability.	3.396	3.149	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	47.652	66.108	68.465	0.000	68.465

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PMC/4640001: *CTN*	14.467	24.751	15.808	0.000	15.808	0.516	0.000	0.000	0.000	Continuing	Continuing
• PMC/4640002: *MACCS Sustainment*	2.474	6.422	1.226	35.661	36.887	1.201	1.164	1.201	1.219	Continuing	Continuing
• PMC/4640003: *TBMCS*	3.889	3.455	2.216	3.770	5.986	3.580	3.659	5.215	5.681	Continuing	Continuing
• PMC/4747004: *TIER I UAS*	15.348	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PMC/4757005: *TIER I UAS*	0.000	41.492	6.189	0.000	6.189	5.445	4.529	4.787	4.576	Continuing	Continuing
	0.000	0.551	0.512	0.000	0.512	1.021	1.052	1.076	1.099	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• RDT&E,N/PE #0305232M: *TIER I UAS*											
• RDT&E,N/PE #0305234M: *TIER II UAS*	0.000	18.685	26.209	0.000	26.209	16.864	22.764	11.546	9.657	Continuing	Continuing
• PMC/4757003: *TIER II UAS*	0.000	0.000	26.301	0.000	26.301	39.343	67.893	65.071	67.106	Continuing	Continuing
• PMC/464: *BTID*	6.235	0.000	0.000	1.600	1.600	1.600	0.000	0.000	0.000	Continuing	Continuing
• PMC/4190005: *COC*	92.468	19.771	10.776	112.424	123.200	17.966	21.739	18.224	18.722	Continuing	Continuing
• APN/0444006: *STUAS*	0.000	10.099	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PMC/4640007: *RVVT*	0.000	6.305	5.643	0.000	5.643	2.942	3.076	0.000	0.000	Continuing	Continuing
• PMC/4640008: *CAC2S*	0.000	4.086	42.675	0.000	42.675	39.417	62.854	46.285	65.299	Continuing	Continuing

D. Acquisition Strategy

CAC2S will employ an evolutionary acquisition strategy utilizing an incremental and phased approach for development and fielding of the CAC2S. The CPD identifies two increments to achieve the full requirements of CAC2S. This acquisition strategy addresses Increment I of the CAC2S development process and focuses on the requirements that will modernize the assault and air support, air defense and control, and ACE battle management capabilities of the MACCS. Increment I of the CAC2S will be accomplished through a two phased approach. Phase 1 will address the requirements to establish the baseline CAC2S capabilities for the MACCS and improve AC2 performance and effectiveness. Phase 2 will address the requirements for remaining ACE BMC2 requirements

Theater Battle Management Core Systems (TBMCS) - TBMCS is an ACAT 1AC, USAF Program with joint interest/oversight. It was mandated by the Chairman, Joint Chiefs of Staff in July 93 for Air Tasking Order (ATO) Interoperability among all services. The USMC will not be letting any competitive contracts for TBMCS, but following the USAF lead, utilizing USAF TBMCS contracts and fielding only the joint modules of TBMCS. As USMC unique requirements are identified and funded, they will be provided to the USAF (to include funding) for inclusion within TBMCS utilizing the USAF delivery order (fixed price) contract. Over the course of the FYDP, the USMC will leverage USAF software support activities vice funding strictly USMC software support.

MACCS SUSTAINMENT - The family of systems that comprise the MACCS Sustainment program include all of the currently fielded Air Command and Control assets. These include the Tactical Air Operations Module (TAOM), Communications Data Link System (CDLS), Sector Anti-Air Warfare Facility (SAAWF), Air Defense Communication Platform (ADCP), Direct Air Support Central Airborne (DASCA), Direct Air Support Central Airborne System (DASCAS), TAOM Interface Unit (TIU), Multi-Channel Interface Unit (MCIU), Communication Interface System (CIS), Joint Tactical Information Distribution System (JTIDS), and Joint Range Extension (JRE).

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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CTN - The USMC's CTN acquisition strategy is to participate in the USN's program procurement and testing, making necessary modifications to support the Marine Corps' requirement.

BTID - Economy of scales dictate a strategy that highly leverages Joint/coalition evolutionary development and acquisition efforts. The Coalition Combat ID Advanced Concept Technology Demonstration (CCID ACTD) completed in October 2005 resulted in a process that evaluated the Military Utility of a Standard NATO Agreement (STANAG) 4579 Compliant millimeter wave (mmW) Target Identification system and other technologies with the objective of identifying the best system to satisfy the Marine Corps requirement. The resultant analysis and action by the Army Marine Corps Board in March 2006 directed a combined Service program with the Army (PD TIMS) as the Component Lead Program. During FY07 the JFCOM sponsored Bold Quest exercise refined the BTID Ground-to-Ground requirement. In July 2008 the Army and the Marine Corps signed a Memorandum of Agreement which outlines the path to execute the program. The Army will be the lead for the Combined Program. The USMC will resource unique Marine Corps integration and programmatic requirements through the System Development and Demonstration (SDD) Program Phase. In Jan 2009, USD AT&L designated BTID as a Special Interest program.

RVVT - Program initiation in FY10 with entrance into the acquisition process at MS B. Anticipate MS B and intial contract award in early FY11. The program office expects to utilize a competitive acquisition approach to quickly field a capability with limited development.

COC - The Combat Operations Center (COC) AN/TSQ-239 (V)2/3/4 is the foundation of USMC C2, meeting near term communications and network requirements in OEF, OIF and RWOT. There is a continuing developmental effort to evolve the COC into a fully integrated MAGTF C2 capability.

E. Performance Metrics

N/A

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Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CAC2S	WR	NSWC Crane, IN	6.379	11.024	Oct 2009	7.922	Oct 2010	0.000		7.922	0.000	25.325	Continuing
CTN	WR	NSWC Crane, IN	0.907	2.829	Oct 2009	0.680	Dec 2010	0.000		0.680	0.000	4.416	Continuing
CTN	WR	NAVSEA PEO IWS Not Specified	1.273	1.000	Oct 2009	0.690	Dec 2010	0.000		0.690	0.000	2.963	Continuing
Tier II	WR	MCTSSA San Diego, CA	0.157	0.000		0.000		0.000		0.000	0.000	0.157	Continuing
Tier II	C/TBD	Navy PMA-263	6.670	0.000		0.000		0.000		0.000	0.000	6.670	Continuing
Tier I	MIPR	Wright Patterson AFB OH	0.219	0.000		0.000		0.000		0.000	0.000	0.219	Continuing
Tier I	WR	NASW Dahlgren, VA	0.270	0.000		0.000		0.000		0.000	0.000	0.270	Continuing
Tier I	MIPR	NATICK Redstone, AL	2.000	0.000		0.000		0.000		0.000	0.000	2.000	Continuing
RVVT	C/FP	OEM Not Specified	0.000	0.000		0.250	Mar 2011	0.000		0.250	0.000	0.250	Continuing
MACCS Sustainment	Reqn	NGES Woodland Hills, CA	15.232	1.204	Jun 2010	1.158	Jun 2011	0.000		1.158	Continuing	Continuing	Continuing
MACCS Sustainment	MIPR	NSWC Crane, IN	1.648	0.000		0.000		0.000		0.000	0.000	1.648	Continuing
MACCS Sustainment	Reqn	L-3 Comm	0.381	0.000		0.000		0.000		0.000	0.000	0.381	Continuing

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Stafford, VA											
MACCS Sustainment	Reqn	NAVSEA PEO IWS 6	1.500	0.000		0.000		0.000		0.000	0.000	1.500	Continuing
JSS	MIPR	NSWC Crane, IN	0.000	0.062	Oct 2009	0.000		0.000		0.000	0.000	0.062	Continuing
COC	WR	SPAWAR Charleston, SC	7.483	4.796	Jan 2010	0.593	Jan 2011	0.000		0.593	Continuing	Continuing	Continuing
COC	Reqn	General Dynamics Not Specified	24.852	2.186	Jan 2010	0.454	Jan 2011	0.000		0.454	Continuing	Continuing	Continuing
COC	Reqn	Coherent Johnstown, PA	0.299	0.000		0.000		0.000		0.000	0.000	0.299	Continuing
COC	WR	NSWC Crane, IN	0.220	0.000		0.000		0.000		0.000	0.000	0.220	Continuing
BTID	WR	NSWC Crane, IN	4.346	1.530	Nov 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
BTID	WR	USMC/Army Contractor Not Specified	0.000	0.000		12.300	Jan 2011	0.000		12.300	Continuing	Continuing	Continuing
BTID1	WR	NAVAIR Pax River, MD	0.145	0.000		0.000		0.000		0.000	0.000	0.145	Continuing
BTID2	Reqn	NAVAIR Pax River, MD	1.830	0.000		0.000		0.000		0.000	0.000	1.830	Continuing
CAC2S	C/CPIF	General Dynamics Quantico, VA	3.000	3.200	Dec 2009	4.475	May 2010	0.000		4.475	0.000	10.675	Continuing

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CAC2S	C/CPIF	MCSC Quantico, VA	11.121	10.875	Aug 2010	10.472	Jan 2011	0.000		10.472	0.000	32.468	Continuing
CAC2S	WR	NSWC Dahlgren, VA	8.293	6.650	Jan 2010	6.460	Jan 2011	0.000		6.460	0.000	21.403	Continuing
TBMCS	MIPR	ESC Hanscom AFB	1.204	0.239	Jan 2010	0.100	Jan 2011	0.000		0.100	0.000	1.543	Continuing
TBMCS	MIPR	Greater Hampton Hampton VA	0.552	0.167	Mar 2010	0.075	Mar 2011	0.000		0.075	0.000	0.794	Continuing
Need Item Text	C/FP	Not Specified Not Specified	0.000	0.000		0.000		0.000		0.000	0.000	0.000	Continuing
		Subtotal	99.981	45.762		45.629		0.000		45.629			

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Tier I	C/FP	MCSC Quantico, VA	0.108	0.000		0.000		0.000		0.000	0.000	0.108	Continuing
Tier II	C/FP	Eagan Mcallister Lexington	1.240	0.000		0.000		0.000		0.000	0.000	1.240	Continuing

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CTN	WR	NSWC Dahlgren, VA	0.015	0.570	Nov 2009	0.120	Nov 2010	0.000		0.120	0.000	0.705	Continuing
CTN	WR	NSWC PHD	0.068	0.050	Nov 2009	0.000		0.000		0.000	0.000	0.118	Continuing
CTN	C/FP	Lockheed Martin Syracuse, NY	0.100	0.000		0.000		0.000		0.000	0.000	0.100	Continuing
MACCS Sustainment	WR	NGES Woodland Hills, CA	3.186	0.000		0.000		0.000		0.000	0.000	3.186	Continuing
MACCS Sustainment	Reqn	CRI Van Nuys, CA	3.184	0.000		0.000		0.000		0.000	0.000	3.184	Continuing
MACCS Sustainment	Reqn	KATMAI Van Nuys, CA	2.256	0.000		0.000		0.000		0.000	0.000	2.256	Continuing
MACCS Sustainment	MIPR	Hanscome AFB Not Specified	0.092	0.000		0.000		0.000		0.000	0.000	0.092	Continuing
MACCS Sustainment	WR	NSWC Crane, IN	4.437	0.000		0.000		0.000		0.000	0.000	4.437	Continuing
JSS	WR	MCTSSA Camp Pendelton, CA	0.000	0.028	Oct 2009	0.000		0.000		0.000	0.000	0.028	Continuing
BTID	Reqn	MCSC Quantico, VA	1.832	0.110	Mar 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
COC	MIPR	NUWC Newport, RI	0.200	0.000		0.000		0.000		0.000	0.000	0.200	Continuing
CTN	WR	SPAWAR Charleston, SC	0.375	0.000		0.000		0.000		0.000	0.000	0.375	Continuing

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CAC2S	C/Various	Travel-TAD Not Specified	0.000	0.500	Oct 2009	0.500	Oct 2010	0.000		0.500	0.000	1.000	Continuing
CAC2S	WR	NSWC Carderock Carderock, MD	0.000	0.250	Dec 2009	0.260	Dec 2010	0.000		0.260	0.000	0.510	Continuing
CAC2S	WR	JITC Fort Huachuca, AZ	0.471	0.200	Jan 2010	0.200	Jan 2011	0.000		0.200	0.000	0.871	Continuing
CAC2S	MIPR	MITRE Boston, MA	3.163	0.900	Nov 2010	1.400	Nov 2011	0.000		1.400	0.000	5.463	Continuing
CAC2S	WR	MACCS-X Camp Pendleton	0.964	0.500	Jan 2010	0.500	Jan 2011	0.000		0.500	0.000	1.964	Continuing
CAC2S	WR	MCTSSA Camp Pendleton	1.356	0.750	Jan 2010	0.750	Jan 2011	0.000		0.750	0.000	2.856	Continuing
CAC2S	WR	NSWC Corona Corona, CA	0.907	1.048	Jan 2010	1.145	Jan 2011	0.000		1.145	0.000	3.100	Continuing
CAC2S	C/FP	BAH Stafford, VA	1.503	0.500	Sep 2010	0.500	Sep 2011	0.000		0.500	0.000	2.503	Continuing
TBMCS	WR	MCTSSA Camp Pendleton	0.533	0.180	Jan 2010	0.140	Jan 2011	0.000		0.140	0.000	0.853	Continuing
BTID	WR	USMC/Army Contractor Not Specified	0.000	0.000		2.000	Dec 2010	0.000		2.000	0.000	2.000	Continuing
SIAP	C/FP	RNB Technologies Stafford VA	2.225	3.149	Feb 2010	0.000		0.000		0.000	0.000	5.374	Continuing
		Subtotal	28.215	8.735		7.515		0.000		7.515			

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

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

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CTN	WR	NWAS Corona, CA	0.633	0.470	Nov 2009	0.400	Nov 2010	0.000		0.400	0.000	1.503	Continuing
CTN	WR	John Hopkins APL Not Specified	0.278	0.150	Feb 2010	0.000		0.000		0.000	0.000	0.428	Continuing
CTN	WR	JTIC Not Specified	0.042	0.050	Feb 2010	0.000		0.000		0.000	0.000	0.092	Continuing
CTN	WR	MCTSSA Not Specified	0.080	0.040	Feb 2010	0.040	Feb 2011	0.000		0.040	0.000	0.160	Continuing
CTN	WR	NSWC Crane, IN	0.000	0.300	Feb 2010	0.000		0.000		0.000	0.000	0.300	Continuing
CTN	WR	NAVSEA PEO IWS Not Specified	0.300	0.200	Feb 2010	0.000		0.000		0.000	0.000	0.500	Continuing
CTN	WR	DT/OT Not Specified	0.430	1.228	Feb 2010	2.037	Feb 2011	0.000		2.037	0.000	3.695	Continuing

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CTN	WR	MACS-24 Not Specified	0.064	0.100	Feb 2010	0.000		0.000		0.000	0.000	0.164	Continuing
CTN	WR	MCOTEA Testing Not Specified	1.322	0.370	Jul 2010	0.225	Jul 2011	0.000		0.225	0.000	1.917	Continuing
Tier II	WR	MCOTEA Testing Not Specified	0.214	0.000		0.000		0.000		0.000	0.000	0.214	Continuing
Tier I	WR	NSWC Carderock, MD	0.033	0.000		0.000		0.000		0.000	0.000	0.033	Continuing
RVVT	MIPR	MCOTEA Testing Not Specified	0.000	0.269	Nov 2009	0.217	Nov 2010	0.000		0.217	0.000	0.486	Continuing
COC	MIPR	MCOTEA Quantico, VA	0.628	0.100	Jan 2010	0.000		0.000		0.000	0.000	0.728	Continuing
BTID	WR	MCOTEA Quantico, VA	0.000	0.180	Nov 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
MACCS Sustainment	WR	NSWC Crane, IN	0.198	0.000		0.000		0.000		0.000	0.000	0.198	Continuing
CAC2S	WR	MCOTEA Quantico, VA	3.550	1.400	Jan 2010	1.400	Jan 2011	0.000		1.400	0.000	6.350	Continuing
TBMCS	WR	MCOTEA Quantico, VA	0.378	0.082	Jan 2010	0.063	Jan 2011	0.000		0.063	0.000	0.523	Continuing
		Subtotal	8.150	4.939		4.382		0.000		4.382			

Remarks

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Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CTN	WR	MCSC Quantico, VA	0.000	0.882	Oct 2009	0.000		0.000		0.000	0.000	0.882	Continuing
Tier II	Various/ Various	QNA Stafford, VA	1.000	0.000		0.000		0.000		0.000	0.000	1.000	Continuing
Tier II	WR	MCSC Quantico, VA	0.030	0.000		0.000		0.000		0.000	0.000	0.030	Continuing
Tier II	WR	NSWC Dahlgren, VA	0.182	0.000		0.000		0.000		0.000	0.000	0.182	Continuing
Tier II-1	WR	Navy PMA-263	3.725	0.000		0.000		0.000		0.000	0.000	3.725	Continuing
Tier II-2	WR	Navy PMA-263	0.662	0.000		0.000		0.000		0.000	0.000	0.662	Continuing
RVVT	Various/ Various	QNA Stafford, VA	0.000	0.394	Mar 2010	0.000		0.000		0.000	0.000	0.394	Continuing
BTID	C/FFP	QNA Stafford, VA	0.000	0.479	Mar 2010	0.524	Mar 2011	0.000		0.524	Continuing	Continuing	Continuing
BTID	WR	MCSC Quantico, VA	0.000	0.335	Oct 2009	0.335	Oct 2010	0.000		0.335	Continuing	Continuing	Continuing
MACCS Sustainment	C/FFP	MCSC Quantico, VA	0.115	0.000		0.000		0.000		0.000	0.000	0.115	Continuing
MACCS Sustainment	C/FFP	QNA Stafford, VA	0.514	0.000		0.000		0.000		0.000	0.000	0.514	Continuing
JSS	WR	MCSC Quantico, VA	0.000	0.102	Oct 2009	0.089	Oct 2010	0.000		0.089	Continuing	Continuing	Continuing
JSS	Reqn	TBD	0.000	0.300	Mar 2010	0.400	Mar 2011	0.000		0.400	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2273: *Air Ops Cmd & Control (C2) Sys*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Not Specified											
COC	Reqn	MCSC Quantico, VA	0.057	0.000		0.000		0.000		0.000	0.000	0.057	Continuing
COC	Reqn	NGMS Stafford, VA	4.053	0.000		0.000		0.000		0.000	0.000	4.053	Continuing
CAC2S	C/FFP	QNA Stafford, VA	5.596	4.000	Nov 2009	4.200	Nov 2010	0.000		4.200	0.000	13.796	Continuing
TBMCS	C/FFP	QNA Stafford VA	1.455	0.180	Nov 2009	0.176	Nov 2010	0.000		0.176	0.000	1.811	Continuing
BTID	WR	USMC/Army Contractor Not Specified	0.000	0.000		5.215	Jan 2011	0.000		5.215	0.000	5.215	Continuing
		Subtotal	17.389	6.672		10.939		0.000		10.939			

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	153.735	66.108		68.465		0.000		68.465			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2273: *Air Ops Cmd & Control (C2) Sys*

Composite Tracking Network (CTN) Program Schedule

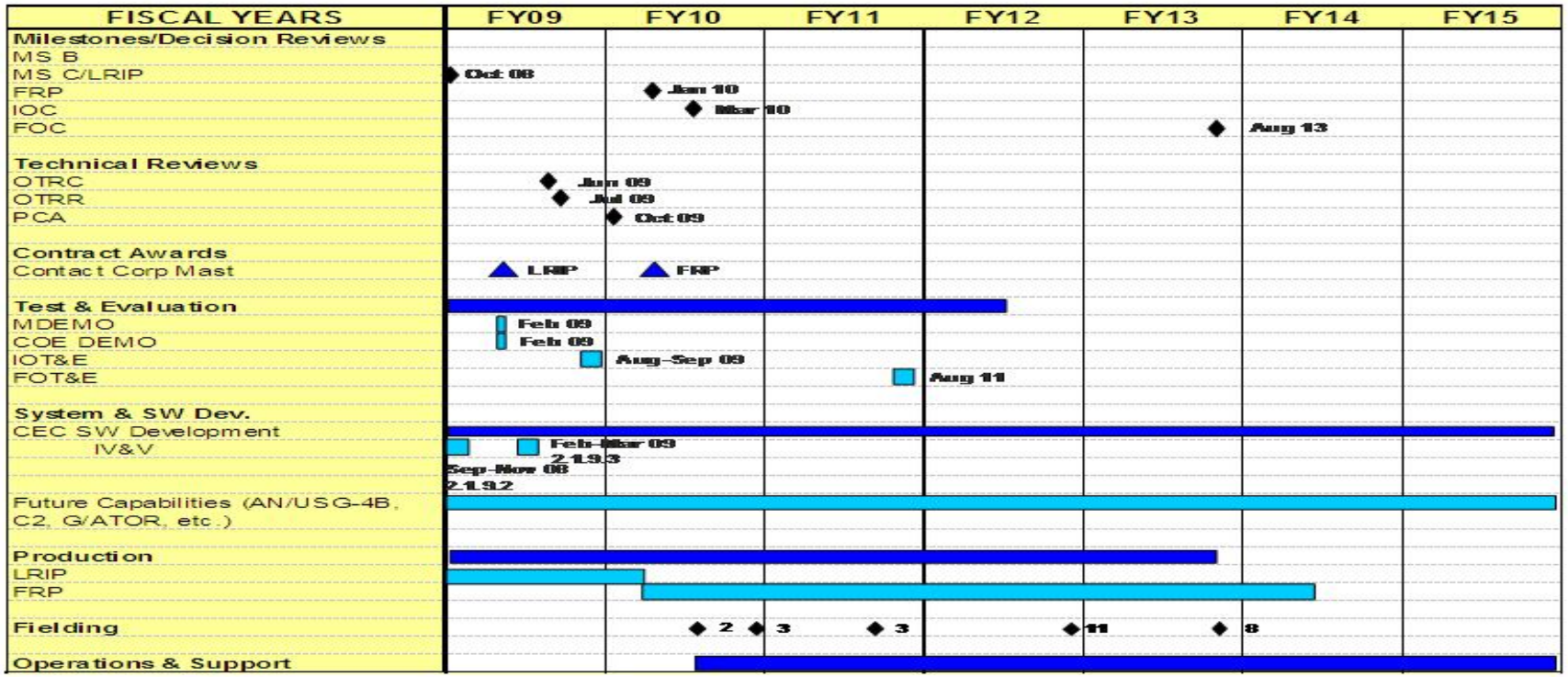

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2273: *Air Ops Cmd & Control (C2) Sys*

Remote Video Viewing Terminal (RVVT) Program Schedule

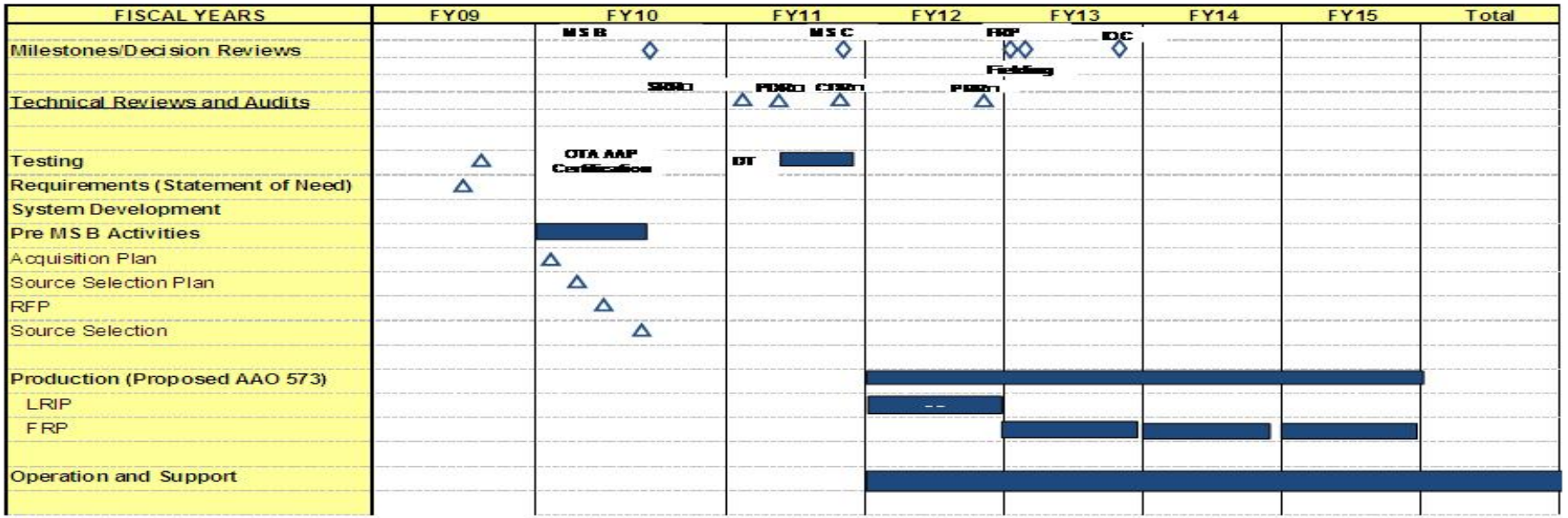

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2273: *Air Ops Cmd & Control (C2) Sys*

BATTLEFIELD TARGET IDENTIFICATION DEVICE (BTID) PROGRAM SCHEDULE

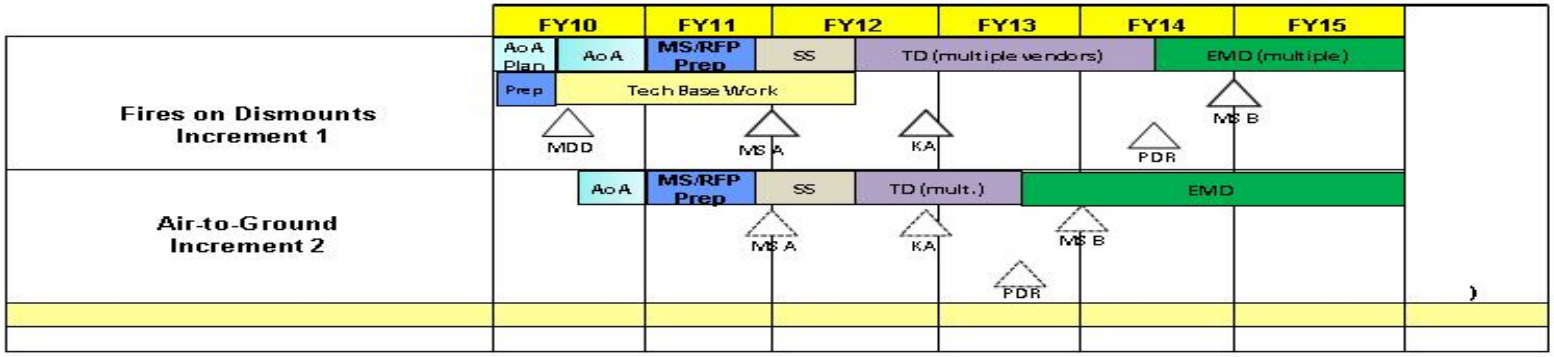

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206313M: *Marine Corps Comms Systems*	**PROJECT** 2273: *Air Ops Cmd & Control (C2) Sys*

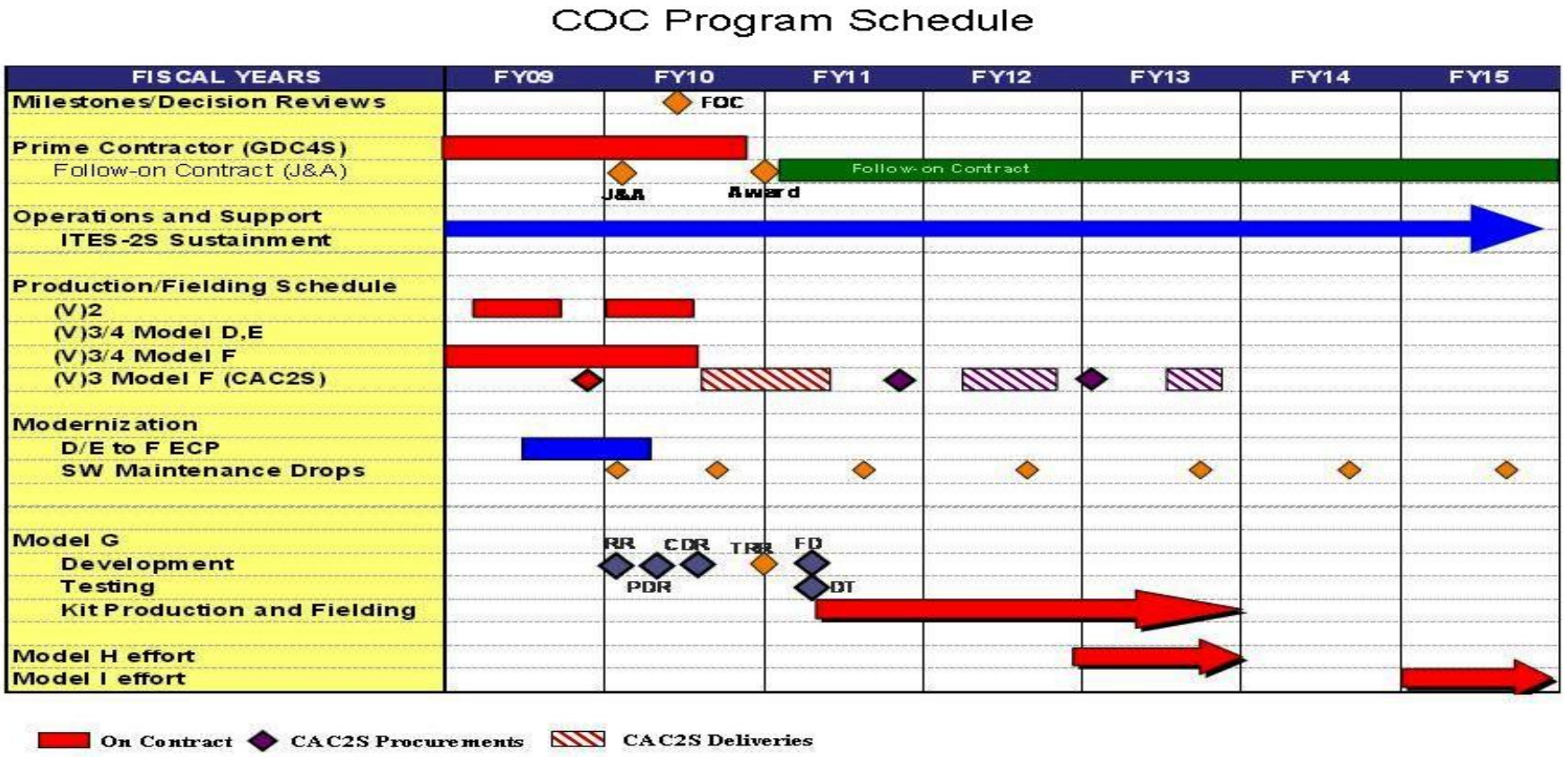

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2273: *Air Ops Cmd & Control (C2) Sys*

CAC2S Program Schedule

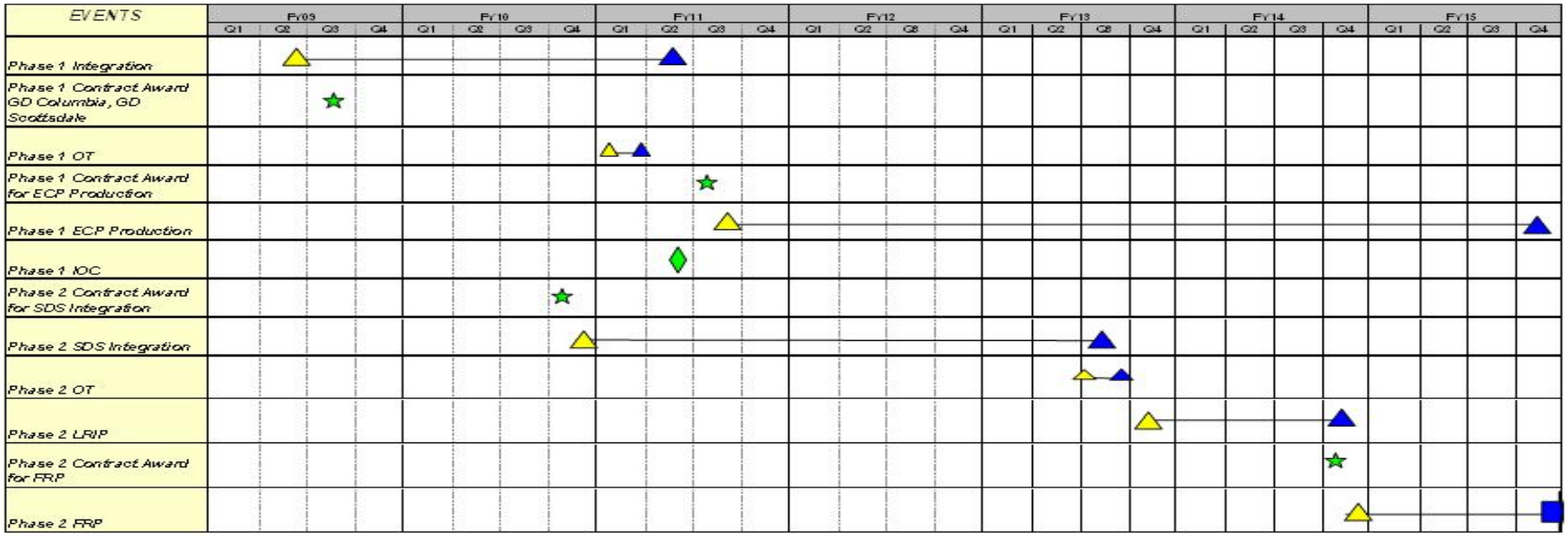

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206313M: *Marine Corps Comms Systems*	**PROJECT** 2273: *Air Ops Cmd & Control (C2) Sys*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
CTN Milestone B	1	2009	1	2009
CTN IOT&E	4	2009	4	2009
CTN Production	1	2009	2	2014
CTN Delivery	3	2009	2	2014
CTN IOC	2	2010	2	2010
CTN FOC	4	2013	4	2013
CAC2S Milestone C (completed 1st Qtr FY08; rescinded as of Dec 2009)	1	2009	1	2009
CAC2S Phase 1 OT	1	2011	1	2011
CAC2S Phase 1 IOC	2	2011	2	2011
CAC2S Phase 2 OT	3	2013	3	2013
CAC2S Phase 2 LRIP	4	2013	4	2013
CAC2S Phase 2 FRP	4	2014	4	2014
RVVT MS B	3	2010	3	2010
Developmental Test	2	2011	4	2011
RVVT MS C	4	2011	4	2011
RVVT Full Rate Production	1	2013	4	2013
RVVT Initial Operational Capability	4	2013	4	2013
BTID Fires on Dismount Increment I MS A	1	2012	1	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206313M: *Marine Corps Comms Systems*	**PROJECT** 2273: *Air Ops Cmd & Control (C2) Sys*

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
BTID Fires on Dismount Increment I MS B	1	2015	1	2015
BTID Air to Ground Increment II MS A	1	2012	1	2012
BTID Air to Ground Increment II MS B	1	2014	1	2014
COC FOC	3	2010	3	2010
COC Operational Sustainment	1	2009	4	2015
COC Version 2	2	2009	3	2010
COC Version 3/4 Model F	1	2009	3	2010
COC Model G Developmental testing	2	2011	2	2011
COC Model G Production/Fielding	2	2011	4	2013
COC Model H Production/Fielding	4	2012	4	2013
COC Model I Production/Fielding	1	2015	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2274: *Command & Control Warfare Sys*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2274: *Command & Control Warfare Sys*	6.319	11.801	19.633	0.000	19.633	14.655	14.393	15.407	17.019	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Command and Control (C2) Warfare Project includes the following tactical electronic intercept, direction finding, and electronic attack systems. RREP moves to PE 0206625M, C2272, Intelligence C2 Systems in FY10 and out.

A. Mission Description and Budget Item Justification

COUNTER RCIED ELECTRONIC WARFARE (USMC CREW) provides full spectrum protection against high and low power threats. USMC CREW systems are capable of being integrated in all Marine Corps Tactical Ground Vehicles. This program is an ongoing effort to develop new techniques, improve capabilities, enhance software and develop upgrades to counter evolving threat and prevent technology obsolenscence.

RADIO RECONNAISSANCE EQUIPMENT PROGRAM (RREP) provides the Radio Battalions, Radio Reconnaissance Platoons (RRP) and the Marine Corps Forces Special Operations Command (MARSOC) Direct Support Team with mission unique Signals Intelligence/Ground Electronic Warfare (SIGINT/EW) Equipment suites. The latest suite of equipment, the SIGINT Suite 3 (SS-3) is comprised of technology and equipment necessary to prosecute advanced wireless signals. The RRP Marines are trained and equipped to support the full spectrum of Marine Expeditionary Unit Special Operations Capable (MEU SOC) mission profiles as well as provide real time, imbedded support to any special operations scenario. This provides the supported commander greater flexibility in employing his SIGINT assets when the use of conventional Radio Battalion assets are not feasible. RREP is currently maintaining the SS-3 using a spiral development approach that inserts the latest technology into the suite as it becomes mature and MARSOC. This enables the SS-3 to remain a current platform against emerging threats.

COMMUNICATION EMMITTER SENSING AND ATTACKING SYSTEM (CESAS)/(FLAMES). The AN/ULQ-30 CESAS is an advanced Electronic Attack (EA) system that can be mounted in a variety of platforms including High Mobility Multi-Purpose Wheeled Vehicles (HMMWV), waterborne platforms, helipcopters, and the MV-22. The system provides Marine Air-Ground Task Forces (MAGTFs) with the capability to detect, disrupt and deny enemy radio communications during amphibious assaultsand subsequent operations ashore. The system is being integrated into existing armored vehicle assets, currently M1151s and into an MRAP vehicle by FY10.

GROUND-BASED OPERATIONAL SURVEILLANCE SYSTEM (GBOSS). This program provides persistent (24/7) tracking of objects of interest through the use of a unique, 360-degree, high resolution, day/night surveillance capability for enhanced target recognition and situational awareness, which enables timely and appropriate

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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response options (direct air attack, indirect fire, and ground patrol/attack). Each system can operate independently and consists of five main components: elevated platform, multi-spectral sensor suite, radar sensor systems suite, as well as a ground control system (GCS) and a remote ground station (RGS). The elevated platform is a 106-foot tower. The optical sensor consists of an Electro-Optic color daytime camera, an Infrared black and white day or night camera, spotter scope, a laser range finder (LRF) and a laser pointer (LP). The radar sensor systems are modular and composed of tailorable sensor groups using multiple ground-sensing technologies (doppler, thermal, seismic, acoustic, audio) consisting of multimode sensors for detection, location and classification to perform mission tasks such as perimeter defense, surveillance and situational awareness.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*USMC CREW - Product Development	0.292	3.080	3.379	0.000	3.379
FY 2009 Accomplishments: Accomplished Waveform/loadset development for CREW 2.0 and 2.1 systems; developed vehicle installation kits to integrate and mount CREW 2.1 CVRJ systems into Marine Corps Vehicle Platforms *FY 2010 Plans:* Planned Development of Waveform/loadsets to support CREW 2.1 CVRJ (mounted) and CREW 3.1 THOR III (dismounted) systems and vehicle installation kits for additional platform variants. *FY 2011 Base Plans:* Planned Development of Waveform/loadsets to support CREW 2.1 CVRJ (mounted) and CREW 3.1 THOR III (dismounted) systems and vehicle installation kits for additional platform variants.					
*USMC CREW - Support	4.497	1.909	1.951	0.000	1.951
FY 2009 Accomplishments: Accomplished the systems engineering and integration support required to support transition to Increment 2.1 CVRJ *FY 2010 Plans:* Planned systems engineering and integration support required for continued system enhancements, the planned Band C Upgrade and transition to JCREW 3.3					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2274: *Command & Control Warfare Sys*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Planned systems engineering and integration support required for continued system enhancements, the planned Band C Upgrade and transition to JCREW 3.3					
*USMC CREW - Test and Evaluation *FY 2009 Accomplishments:* Accomplished the testing required to transition to CREW 2.1 CVRJ *FY 2010 Plans:* Planned Testing required to support enhancements to CREW 2.1 *FY 2011 Base Plans:* Planned Testing required to support enhancements to CREW 2.1 and transition to JCREW 3.3	0.197	2.377	2.628	0.000	2.628
*USMC CREW - Management *FY 2009 Accomplishments:* Accomplished radio frequency mapping and engineering support. *FY 2010 Plans:* Planned CO site mitigation for fielded assets and test support. Logistics support for radio frequency mapping and systems integration and test support. *FY 2011 Base Plans:* Planned CO site mitigation for fielded assets and test support. Logistics support for radio frequency mapping and systems integration and test support.	0.082	0.646	0.692	0.000	0.692
*RREP - Program management and upgrade support services	0.859	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2274: *Command & Control Warfare Sys*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Accomplished upgrade support services					
*CESAS - Engineering and Program Management Support services *FY 2009 Accomplishments:* Accomplished Research and Development of techniques, tactics and procedures. Provide engineering and prototype hardware support	0.392	0.000	0.000	0.000	0.000
*GBOSS - Product Development *FY 2010 Plans:* Planned system integration test support and prototype hardware support. *FY 2011 Base Plans:* Planned system integration test support, prototype hardware support, CO site mitigation for expeditionary systems integration.	0.000	2.100	5.000	0.000	5.000
*GBOSS - Support *FY 2010 Plans:* Planned logistics support *FY 2011 Base Plans:* Planned logistics support	0.000	0.652	2.000	0.000	2.000
*GBOSS - Test and Evaluation. *FY 2010 Plans:* Planned system integration and test support	0.000	0.370	0.900	0.000	0.900

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2274: *Command & Control Warfare Sys*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Planned system integration and test support					
*GBOSS - Management. *FY 2010 Plans:* Planned CO Site mitigation and system integration support. *FY 2011 Base Plans:* Planned CO Site mitigation and system integration support.	0.000	0.667	3.083	0.000	3.083
Accomplishments/Planned Programs Subtotals	6.319	11.801	19.633	0.000	19.633

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PMC 6520: *USMC CREW*	213.845	11.181	12.199	173.250	185.449	11.237	115.877	116.823	120.187	0.000	957.959
• PMC 6438: *GBOSS*	50.854	2.720	0.000	0.000	0.000	16.492	26.107	26.045	19.256	0.000	141.474

D. Acquisition Strategy

Counter RCIED Electronic Warfare (USMC CREW). Continue to develop new techniques, improve capabilities, enhance software and develop upgrades to counter evolving threat and prevent technology obsolenscence. Activities include waveform development, non-recurring engineering for system enhancements and capability upgrades, integration of the enhancements and the tests/ government studies required to support these changes. This will upgrade of existing systems to the next technology sprial (CREW 2.1).

CESAS: Designated an ACAT IV (T) Program (December 2006) and represents the state-of-the-art available in a tactical Electronic Warfare (EW) platform. Its components are suitable for integration into multiple ground and air platforms. It is designed to operate with other CESAS platforms to detect and attack threat emitters, as well as, being mission configured to work cooperatively with multiple ground and airborne platforms to attack target emitters. CESAS also leverages previous integration experience conducted under the Team Portable Collection System (TPCS) program for commonality of equipment and cooperative communications

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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capabilities. The September 2007 DT indicates that CESAS is currently exceeding the performance required by the Capability Development Document. Therefore, the CESAS M1165 PIK will continue to complete all required program testing necessary to move into Operational Testing and Evaluation during 3QFY08 with projected IOT&E during 4QFY08. Program plan is to move into a Fielding Decision with FRP in 1QFY09. Field Testing and Operational Assessment of the M1165 Armored PIK will begin in 1QFY 09.

RREP: The Radio Reconnaissance Equipment Program (RREP) SIGINT Suite-3 (SS-3) is the fourth generation of Radio Reconnaissance Equipment. Previously the systems were developed as repackaged and hardened Commercial Off-The-Shelf (COTS) items. The Radio Reconnaissance Teams (RRT) would use systems for three years and replace the entire suite with the next generation of equipment. An equipment refresh every three years allowed the RRTs to take advantage of the newest commercial single channel scanner technology when the previous generation of equipment wore out. The SS-3 deviates from this approach and will focus on the use of the technology and equipment necessary to prosecute advanced wireless communications devices and begin a sprial development approach. RREP will incorporate and integrate cutting edge technologies through the use of COTS/Government off the Shelf (GOTS) and Non-Development Items (NDI) components.

GBOSS: The acquisition approach has been to use existing government contracts (U.S Army/U.S. Air Force) for Commercial-Off-the-Shelf (COTS) and Government-Off-the-Shelf (GOTS) material and services that meet the basic requirements of the UUNS and give priority to materials and services already integrated into an existing or similar architecture. This approach is the most expeditious to deliver equipment and services to the forces in theater.

E. Performance Metrics

Milestone Reviews

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
USMC CREW	Various/ Various	NAVSEA BALTIMORE, MD	0.292	2.580	Mar 2010	2.625	Jan 2011	0.000		2.625	0.000	5.497	Continuing
USMC CREW	Various/ Various	MCSC QUANTICO, VA	0.000	0.500	Aug 2010	0.754	Aug 2011	0.000		0.754	0.000	1.254	Continuing
GBOSS	WR	NSWC CRANE, IN	0.000	2.115	Feb 2010	5.000	Jan 2011	0.000		5.000	0.000	7.115	Continuing
		Subtotal	0.292	5.195		8.379		0.000		8.379	0.000	13.866	

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
USMC CREW	Various/ Various	MCSC QUANTICO, VA	3.256	0.000		0.000		0.000		0.000	0.000	3.256	Continuing
GBOSS	Various/ Various	NSWC CRANE, IN	0.000	0.652	Feb 2010	2.000	Jan 2011	0.000		2.000	0.000	2.652	Continuing
RREP	Various/ CPFF	NSMA STAFFORD, VA	0.350	0.000		0.000		0.000		0.000	0.000	0.350	Continuing
RREP	Various/ Various	NSWC CRANE, IN	0.503	0.000		0.000		0.000		0.000	0.000	0.503	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2274: *Command & Control Warfare Sys*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CESAS	Various/ Various	DMEA VAR	0.262	0.000		0.000		0.000		0.000	0.000	0.262	Continuing
CESAS	Various/ Various	VAR VAR	0.130	0.000		0.000		0.000		0.000	0.000	0.130	Continuing
USMC CREW	Various/ Various	NSMA STAFFORD, VA	1.241	0.000		0.000		0.000		0.000	0.000	1.241	Continuing
USMC CREW	Various/ Various	SPAWAR CHARLESTON, SC	0.000	0.674	Feb 2010	0.689	Dec 2010	0.000		0.689	0.000	1.363	Continuing
USMC CREW	Various/ Various	NSWC CRANE, IN	0.000	1.235	Feb 2010	1.262	Dec 2010	0.000		1.262	0.000	2.497	Continuing
		Subtotal	5.742	2.561		3.951		0.000		3.951	0.000	12.254	

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
USMC CREW	Various/ Various	VAR VAR	0.100	0.100	Apr 2010	0.100	Apr 2011	0.000		0.100	0.000	0.300	Continuing
GBOSS	Various/ Various	MCOTEA QUANTICO, VA	0.000	0.370	Feb 2010	0.900	Jan 2011	0.000		0.900	0.000	1.270	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2274: *Command & Control Warfare Sys*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
USMC CREW	Various/ Various	MCOTEA QUANTICO VA	0.097	0.351	Mar 2010	0.576	Oct 2010	0.000		0.576	0.000	1.024	Continuing
USMC CREW	Various/ Various	YPG YUMA, AZ	0.000	0.750	May 2010	0.767	Oct 2010	0.000		0.767	0.000	1.517	Continuing
USMC CREW	Various/ Various	SPAWAR CHARLESTON, SC	0.000	0.750	May 2010	0.750	May 2011	0.000		0.750	0.000	1.500	Continuing
USMC CREW	Various/ Various	NSWC DAHLGREN, VA	0.000	0.426	Jan 2010	0.435	Jan 2011	0.000		0.435	0.000	0.861	Continuing
		Subtotal	0.197	2.747		3.528		0.000		3.528	0.000	6.472	

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
USMC CREW	Various/ Various	VAR VAR	0.082	0.646	Jan 2010	0.692	Oct 2010	0.000		0.692	0.000	1.420	Continuing
GBOSS	Various/ Various	NSWC CRANE, IN	0.000	0.652	Feb 2011	3.083	Jan 2012	0.000		3.083	0.000	3.735	Continuing
		Subtotal	0.082	1.298		3.775		0.000		3.775	0.000	5.155	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2274: *Command & Control Warfare Sys*

Management Services ($ in Millions)

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

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6.313	11.801		19.633		0.000		19.633	0.000	37.747	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2274: *Command & Control Warfare Sys*

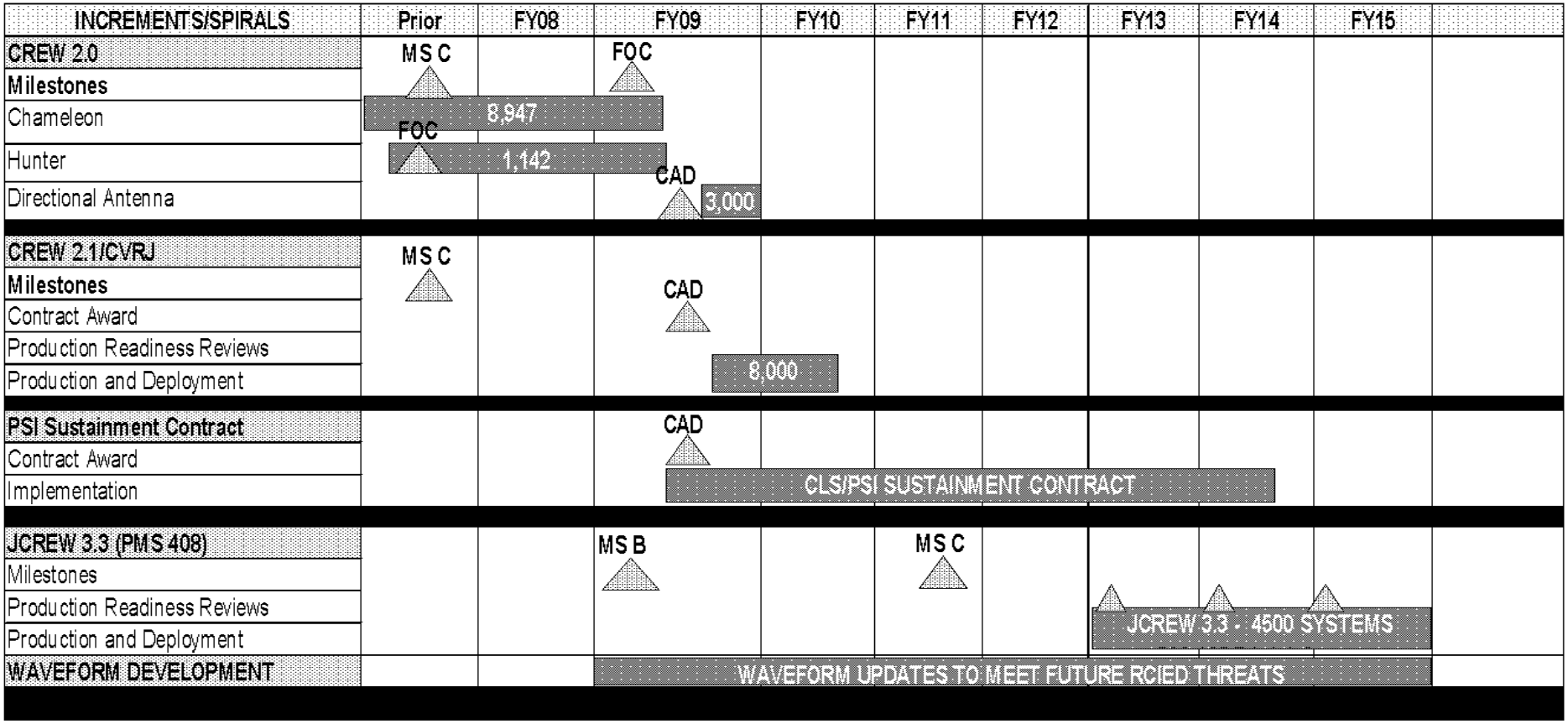

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2274: *Command & Control Warfare Sys*

GBOSS

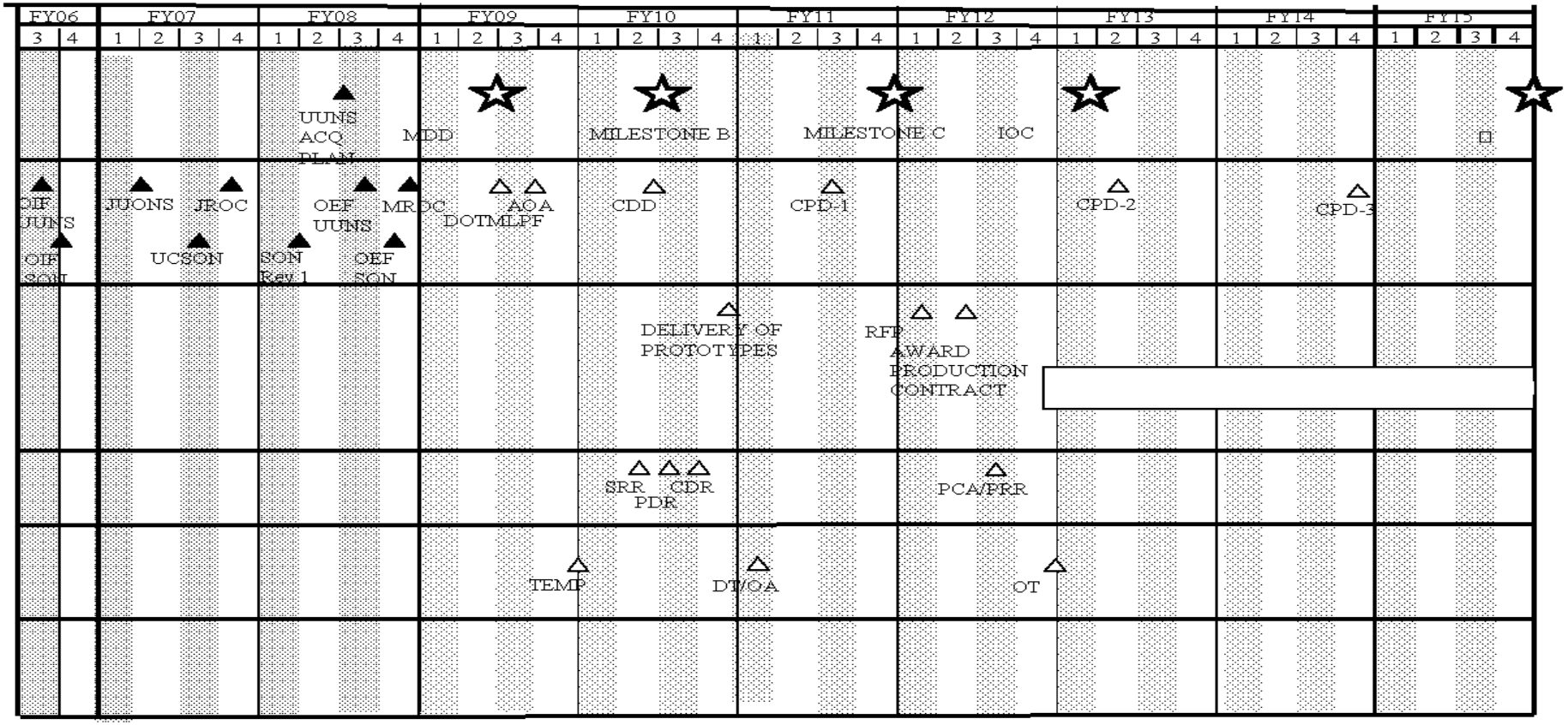

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206313M: *Marine Corps Comms Systems*	**PROJECT** 2274: *Command & Control Warfare Sys*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
USMC CREW 2.0 WAVEFORM DEVELOPME NT	1	2009	4	2009
CREW 2.1-3.3 WAVEFORM DEVELOPMENT	1	2009	4	2013
USMC CREW JCREW 3.3 MILESTONE B	4	2009	4	2009
USMC CREW JCREW MILESTONE C	3	2011	3	2011
GBOSS MILESTONE B	3	2010	3	2010
GBOSS MILESTON C	1	2012	1	2012
GBOSS IOC	1	2013	1	2013
GBOSS PRODUCTION	4	2012	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2275: *Joint Tactical Radio System*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2275: *Joint Tactical Radio System*	10.954	8.713	2.038	0.000	2.038	2.030	4.371	1.546	1.579	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:
(U) Tactical Satellite Comm Terminal (TSCT) - LIGHTWEIGHT MULTIBAND SATELLITE TERMINAL (LMST)/PHOENIX are quad-band Super High Frequency (SHF) satellite terminals mounted in transit cases and High Mobility Multipurpose Wheeled Vehicle (HMMWVs). The LMST and Phoenix terminals will be the primary provider of SHF connectivity to Marine Air-Ground Task Forces (MAGTF) operations. Existing Ground Mobile Force (GMF) satellite terminals will continue to augment SHF requirements.

(U) High Capacity Communications Capability (HC3): replaces Super High Frequency (SHF) wideband. HC3 will be the Marine Air Ground Task Force (MAGTF) commanders' primary Satellite Communication (SATCOM) method of transmitting and receiving wideband voice, video, and data. The HC3 will be used at all levels of the MAGTF to support the commanders' critical communication requirements. At the Regiment and below, the focus will be on Comm-on-the-Move (COTM) and Comm-on-the Pause (COTP) communications, while at the Division/FSSG/Wing and above, the transportable version will be incorporated as well. HC3 will be embedded in tactical vehicles such as the Expeditionary Fighting Vehicle (EFV) and the Light Armored Vehicle (LAV). As a result, it will play a vital role in command and control in all phases of an operation.

(U) Legacy Communications/Electronics Modifications and Sustainment (LEGACY): encompass post production sustainment of fielded tactical communication and networking systems and Service Life Extension Programs (SLEP) of aging communications equipment reaching the end of their life cycle. The post production sustainment provides necessary engineering and logistic support to maintain the existing operational capability above threshold operational readiness. The support provides equipment specialists, configuration management, supply support coordination and control, depot maintenance control and warranty administration. The AN/TSQ-227 Digital Technical Control (DTC) in udergoing a major refresh driven by Department of Defense (DoD) / Joint Interoperability Test Command (JITC) mandated interoperability and security requirements, which includes technology insertion and evolutionary equipment improvements as part of the SLEP effort.

(U) Command & Control On-the-move Network, Digital Over-the-horizon Relay (CONDOR): CONDOR Capabilities material solution will be a coordinated effort with the Army's WIN-T program. We are currently developing a Marine Corps Spiral called WIN-X. The CONDOR funding line is funding the capability to allow tactical forces extended Beyond Line-of-Sight (BLOS) to maintain situational awareness by extending data network connectivity regardless of distance while on-the-move (OTM).

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2275: *Joint Tactical Radio System*

WIN-X will integrate commercially available routers, encryption devices, and an OTM satellite terminal to provide high-bandwidth line-of-sight and SATCOM connectivity across the battlefield. By interfacing with fielded tactical data radios, the CONDOR Gateway extends existing tactical data radio networks to maintain connectivity for United States Marine Corps (USMC) Command and Control (C2) and fires applications. Production variants will be integrated as a kit into existing armored tactical wheeled vehicles without degrading their inherent protection.

(U) Very Small Apperture Terminal (VSAT) - VSAT provides beyond line-of-sight (BLOS), low-cost satellite communications up to speeds of 4 Megabytes per second (Mbps) full duplex. VSAT fills a void of BLOS, high bandwidth capability throughout the Marine Air-Ground Task Force (MAGTF). The VSATs are currently Ku-band only which requires commercial satellite connectivity. Future upgrades will utilize the military's Wideband Global Satellites to save on long term O&M costs. R&D work will need to be done to ensure that VSAT can transition from Ku to Ka-band. Additional R&D dollars will be used to further develop the current Linkway modem to provide higher capacity throughout and TRANSEC (Transition Security).

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*CONDOR: Warfighter Information Network - Expeditionary (WIN-X) Development *FY 2009 Accomplishments:* Warfighter Information Network - Expeditionary (WIN-X) Development efforts *FY 2010 Plans:* Continued Warfighter Information Network - Expeditionary (WIN-X) Development efforts	0.339	2.136	0.000	0.000	0.000
*CONDOR: Technical, Engineering Support and Contract Advisory, Assistance Services *FY 2009 Accomplishments:* Technical, Engineering Support and Contract Advisory, Assistance Services *FY 2010 Plans:* Continued Technical, Engineering Support and Contract Advisory, Assistance Services *FY 2011 Base Plans:* Technical, Engineering Support and Contract Advisory, Assistance Services	4.330	1.055	0.224	0.000	0.224
*CONDOR: Legacy Interoperability Development	1.145	0.500	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2275: *Joint Tactical Radio System*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Interoperability Development of on-the-move capabilities and at-the-halt network and legacy communications equipment. *FY 2010 Plans:* Continued Interoperability Development of on-the-move capabilities and at-the-halt network and legacy communications equipment.					
*Very Small Apperture Terminal (VSAT): Development and integration *FY 2009 Accomplishments:* VSAT Development and integration efforts toward the successful transition from Ku to Ka-band. *FY 2010 Plans:* Continued development and integration efforts. *FY 2011 Base Plans:* Continued Development and integration efforts.	1.619	0.424	0.043	0.000	0.043
*Very Small Apperture Terminal (VSAT): D-KET Study *FY 2009 Accomplishments:* VSAT Deployable KU-Band Earth Terminal (D-KET) study to ensure successful transition from Ku to Ka-band. *FY 2010 Plans:* Continued efforts, VSAT Deployable KU-Band Earth Terminal (D-KET) study.	1.879	0.190	0.000	0.000	0.000
*High Capacity Communications Capability (HC3): Navy/MC Crypto Development	0.000	0.500	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2275: *Joint Tactical Radio System*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Navy/Marine Corps Crypto Development efforts					
*High Capacity Communications Capability (HC3): Support *FY 2009 Accomplishments:* Program and management support of HC3 efforts. *FY 2010 Plans:* Continued program, management, and engineering support.	0.129	0.930	0.000	0.000	0.000
*High Capacity Communications Capability (HC3): USMC Integration efforts. *FY 2010 Plans:* USMC Integration efforts for the HC3 Satellite Communication (SATCOM) primary method of transmitting and receiving wideband voice, video, and data.	0.000	1.184	0.000	0.000	0.000
*TSCT (LMST): Contract Support Cost *FY 2009 Accomplishments:* LMST Contract Support. *FY 2010 Plans:* Continued Contract Support. *FY 2011 Base Plans:* Continued Contract Support.	0.011	0.045	0.030	0.000	0.030
*TSCT (LMST): CATQH research and test	0.000	0.250	0.235	0.000	0.235

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2275: *Joint Tactical Radio System*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: LMST Comm At-The-Quick-Halt (CATQH) research and test. *FY 2011 Base Plans:* Continued Comm At-The-Quick-Halt (CATQH) research and test.					
*Legacy Comm/Elec (Networks): Engineering Support for DTC *FY 2009 Accomplishments:* Engineering Support for Digital Technical Control. *FY 2010 Plans:* Continued Engineering Support for Digital Technical Control. *FY 2011 Base Plans:* Continued Engineering Support for Digital Technical Control.	1.172	0.474	0.460	0.000	0.460
*Legacy Comm/Elec (Networks): Operational Support Test/Support for DTC *FY 2009 Accomplishments:* Operational Support Test/Support for DTC. *FY 2010 Plans:* Continued Operational Support Test/Support for DTC. *FY 2011 Base Plans:* Continued Operational Support Test/Support for DTC.	0.200	0.285	0.296	0.000	0.296
*Legacy Comm/Elec (Wireless): Development	0.130	0.740	0.750	0.000	0.750

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Legacy Comm/Elec Wireless Development. *FY 2010 Plans:* Continued Legacy Comm/Elec Wireless Development. *FY 2011 Base Plans:* Continued Legacy Comm/Elec Wireless Development.					
Accomplishments/Planned Programs Subtotals	10.954	8.713	2.038	0.000	2.038

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PMC/46331: *Command-Control On-the-move Network*	8.348	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.748
• PMC/46332: *Tactical Satellite LMST*	1.413	1.350	1.464	3.167	4.631	1.389	1.423	1.448	1.476	0.000	13.130
• PMC/46333: *Legacy Communications Electronics (LEGACY)*	4.036	4.006	3.703	27.505	31.208	0.269	0.275	0.283	0.291	0.000	40.368
• PMC/46334: *Very Small Apperture Terminal (VSAT)*	0.000	9.507	0.000	24.778	24.778	0.000	0.000	0.000	0.000	0.000	34.285

D. Acquisition Strategy

(U) D. ACQUISITION STRATEGY:

(U) Tactical Satellite Comm Terminal (TSCT) - LIGHTWEIGHT MULTIBAND SATELLITE TERMINAL (LMST)/PHOENIX: The acquisition strategy for the Lightweight Multiband Satellite Terminal (LMST) and Phoenix program is to procure the necessary amount of quad-band Super High Frequency (SHF) terminals for the Fleet

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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Marine Force (FMF). These terminals will satisfy the requirement for a quad-band SHF satellite terminal. The LMST upgrade program leverages off the current efforts and integrates emerging technologies into existing terminals to allow continued SHF operations.
(U) Legacy Communications/Electronics Modifications and Sustainment (LEGACY): Provide continuous sustainment support to fielded equipment and implemented Service Life Extension Programs for equipment reaching its end of life/supportability.
(U) Command & Control On-the-move Network, Digital Over-the-horizon Relay (CONDOR): Evaluate prototype hardware. Develop on-the-move capabilities and integrate with at-the-halt network and legacy communications equipment.

(U) Very Small Apperture Terminal (VSAT): provides beyond line-of-sight (BLOS) satellite communications throughout the MAGTF. Multiple VSAT configurations provide the capability to tailor satellite communications to the lowest echelon. The VSATs are currently Ku-band only which requires commercial satellite connectivity. Future upgrades will utilize the military's Wideband Global Satellites Ka-band capability to reduce long term O&M costs associated with commercial bandwidth. R&D work is necessary to ensure the successful transition from Ku to Ka-band. Additional R&D funding will allow for further development of more capable modems which will provide higher capacity throughput and TRANSEC.

E. Performance Metrics

N/A

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LMST DISA/IA Certification	MIPR	CECOM Ft. Monmouth, NJ	0.661	0.000		0.000		0.000		0.000	0.000	0.661	Continuing
HC3 USMC Integration Efforts	MIPR	CECOM Ft. Monmouth, NJ	3.035	1.184	Mar 2010	0.000		0.000		0.000	0.000	4.219	Continuing
HC3 Navy/MC Crypto Development	MIPR	CECOM Ft. Monmouth, NJ	2.785	0.500	Mar 2010	0.000		0.000		0.000	0.000	3.285	Continuing
LCE (Networks) Development	Various/ FFP	MITRE CECOM Ft. Monmouth, NJ	5.672	0.740	Mar 2010	0.750	Jan 2011	0.000		0.750	0.000	7.162	Continuing
CONDOR Legacy Interoperability Development	Various/ FFP	MCTSSA Camp Pendleton, CA	1.344	0.500	Feb 2010	0.000		0.000		0.000	0.000	1.844	Continuing
CONDOR Development	Various/ FFP	CECOM Ft. Monmouth, NJ	6.246	2.136	Mar 2010	0.000		0.000		0.000	0.000	8.382	Continuing
VSAT D-Ket Study	MIPR	CECOM Ft. Monmouth, NJ	2.060	0.190	Mar 2010	0.000		0.000		0.000	0.000	2.250	Continuing
VSAT Development and Integration	MIPR	CECOM Ft. Monmouth, NJ	3.919	0.424	Mar 2010	0.043	Mar 2011	0.000		0.043	0.000	4.386	Continuing
		Subtotal	25.722	5.674		0.793		0.000		0.793	0.000	32.189	

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2275: *Joint Tactical Radio System*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LMST Contractor Support	Various/ FFP	NGIT Stafford, VA	0.638	0.045	Feb 2010	0.030	Feb 2011	0.000		0.030	0.000	0.713	Continuing
HC3 Contractor Support	Various/ FFP	Titan Stafford, VA	0.129	0.930	Feb 2010	0.000		0.000		0.000	0.000	1.059	Continuing
LCE (Networks) Support	Various/ FFP	Titan Stafford, VA	1.442	0.474	Feb 2010	0.296	Feb 2011	0.000		0.296	0.000	2.212	Continuing
CONDOR Contract Support	Various/ FFP	Titan Stafford, VA	5.278	1.055	Feb 2010	0.224	Feb 2011	0.000		0.224	0.000	6.557	Continuing
		Subtotal	7.487	2.504		0.550		0.000		0.550	0.000	10.541	

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LMST CATQH Testing	Various/ Various	Harris Corp Florida	0.000	0.250	Mar 2010	0.235	Mar 2011	0.000		0.235	0.000	0.485	Continuing
LCE (Networks) OA	WR	MCOTEA Quantico, VA	0.400	0.285	Jan 2010	0.460	Jan 2011	0.000		0.460	0.000	1.145	Continuing
LCE Interoperbilty	MIPR	JTC FT Huachuca, AZ	0.590	0.000		0.000		0.000		0.000	0.000	0.590	Continuing

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

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CONDOR IOT&E	WR	MCOTEA Quantico, VA	0.740	0.000		0.000		0.000		0.000	0.000	0.740	Continuing
CONDOR DT	WR	MCOTEA Quantico, VA	0.500	0.000		0.000		0.000		0.000	0.000	0.500	Continuing
		Subtotal	2.230	0.535		0.695		0.000		0.695	0.000	3.460	

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	35.439	8.713		2.038		0.000		2.038	0.000	46.190	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206313M: *Marine Corps Comms Systems*	**PROJECT** 2275: *Joint Tactical Radio System*

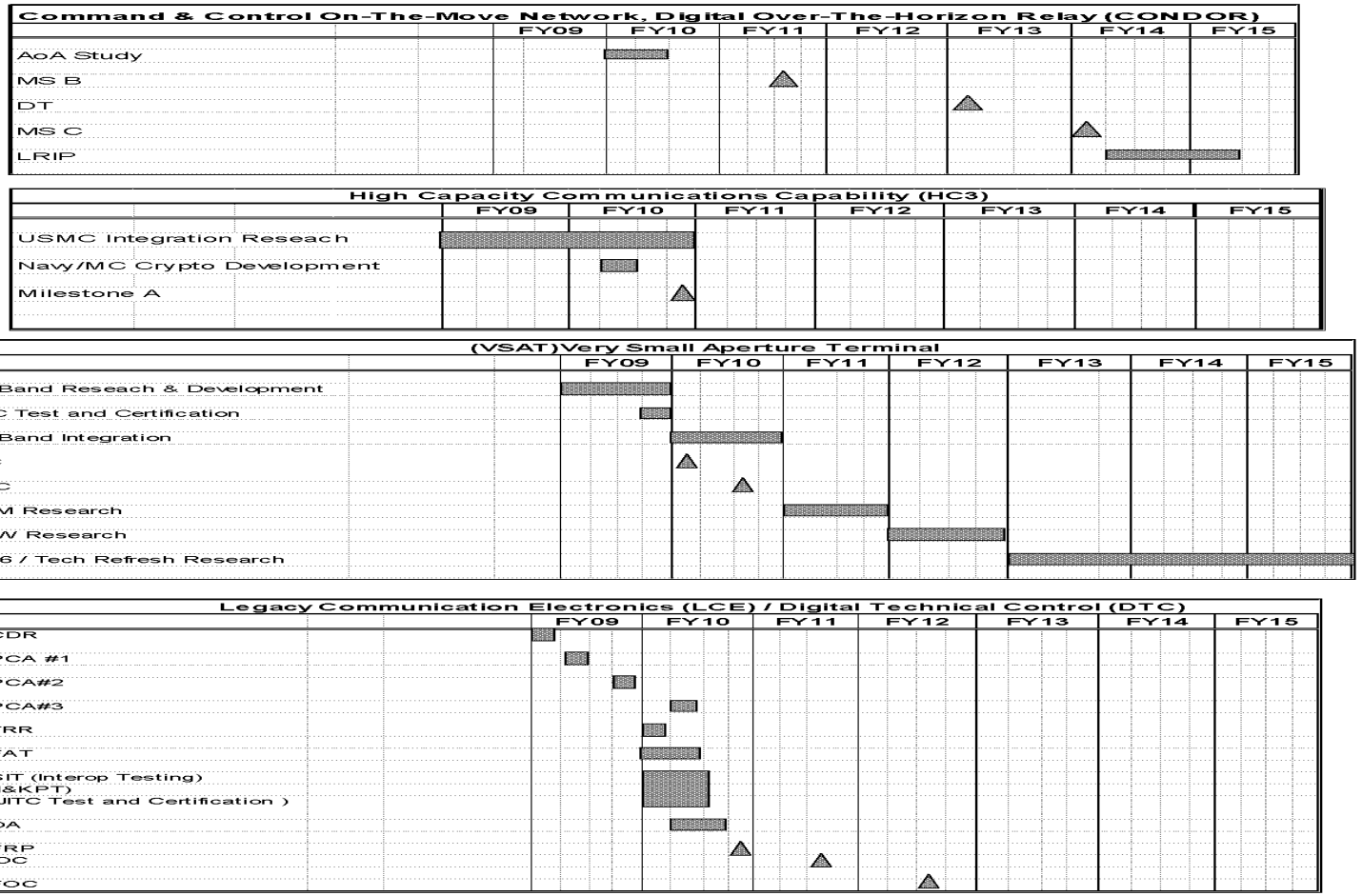

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206313M: *Marine Corps Comms Systems*	**PROJECT** 2275: *Joint Tactical Radio System*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
HC3 USMC Integration Research	1	2009	4	2010
HC3 Navy/MC Crypto Development	2	2010	2	2010
HC3 Milestone A	4	2010	4	2010
VSAT Ka-band Research & Develop	1	2009	4	2009
VSAT JITC Test and Certification	4	2009	4	2009
VSAT Ka-band Integration	1	2010	4	2010
VSAT IOC	1	2010	1	2010
VSAT FOC	3	2010	3	2010
VSAT JIPM Research	1	2011	4	2011
VSAT NCW Research	1	2012	4	2012
VSAT IPV6 / Tech Refresh Research	1	2013	4	2015
LCE/DTC CDR	1	2009	1	2009
LCE/DTC PCA #1	2	2009	2	2009
LCE/DTC PCA #2	4	2009	4	2009
LCE/DTC PCA#3	2	2010	2	2010
LCE/DTC TRR	1	2010	1	2010
LCE/DTC FAT	1	2010	2	2010
LCE/DTC SIT	1	2010	2	2010

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
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	Start		End	
Event	Quarter	Year	Quarter	Year
LCE/DTC JITC Test & Certification (MCTSSA SIT & JITC DICE)	1	2010	2	2010
LCE/DTC SIT- I&KP	1	2010	2	2010
LCE/DTC OA	2	2010	3	2010
LCE/DTC FRP	4	2010	4	2010
LCE/DTC IOC	3	2011	3	2011
LCE/DTC FOC	3	2012	3	2012
CONDOR AoA Study	1	2010	2	2010
CONDOR MS B	3	2011	3	2011
CONDOR MS C	1	2014	1	2014
CONDOR LRIP	2	2014	2	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
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COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2276: *Comms Switching and Control Sys*	2.385	2.927	4.293	0.000	4.293	4.118	4.405	3.733	2.687	Continuing	Continuing
Quantity of RDT&E Articles	6	4	4	0	4	0	0	0	0		

A. Mission Description and Budget Item Justification

(U) Joint Network Management Systems (JNMS) or Network Planning & Mangement (NPM) is a portfolio of communications planning and Network Management applications for use throughout the Marine Air Ground Task Force (MAGTF). JNMS includes Systems Planning Engineering and Evaluation Device (SPEED). JNMS provides the MARFOR (Marine Forces) component planners with the ability to conduct high-level planning; detailed planning and engineering; monitoring; control and reconfiguration; and spectrum planning and management in support of Combatant Commander (COCOM) and Commander, Joint Task Force (CJTF) operations. SPEED provides High Frequency (HF) predictions, Line of Site (LOS) propogation, Radio Coverage Analysis (RCA), Satellite planning, C2PC track interface, interference and de-confliction analysis, spectrum management, Radio Guard Charts, Comm-On-The-Move (COTM), and T/E (training & education) and force structure management.

(U) Transition Switch Module (TSM): consists of three systems that provide a flexible Unit Level Switch that bridges legacy Tri-Tac switches with current commercial technology, providing maneuver elements with improved voice/data switching, data transport and bandwidth management capabilities. This program maintains USMC joint interoperability as all Services transition to Commercial Off-The-Shelf (COTS) switching technologies.

(U) Expeditionary Command and Control Suite (ECCS): is a small footprint data and voice satellite communications system capable of deploying on commercial or military air-based and land-based platforms providing a multi-mission, mobile reach-back connection into existing networks until larger command and control systems are operational. It is a transit case solution that provides SIPRNET email and web access, secure video teleommunications (VTC), Command Control Personal Computer/Common Operational Picture (C2PC/COP) and collaborative planning Defense Collaborative Tool Sets (DCTS) - Defense Information Systems Agency (DISA) Standard.

(U) Tactical Data Network (TDN): augments the existing Marine Air Ground Task Force (MAGTF) communications infrastructure to provide the commander an integrated data network, forming the communications backbone for Tactical Data Systems (TDS) and the Defense Messaging System (DMS). TDN consists of Gateways (AN/TSQ-222) and Data Distribution Systems (AN/TSQ-228), interconnected with one another and their subscribers via a combination of common user long-haul transmission systems, local area networks (LAN), and switched telephone systems. The TDN Data Distribution System - Modular (DDS-M) provides a smaller and more mobile variant DDS that increases the capabilities of legacy TDN systems through major refresh.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2276: *Comms Switching and Control Sys*

(U) Warfighter Network Tactical (WFN-T): Starting in FY10, WFN-T merges existing systems into a new portfolio of tactical network programs. WFN-T merges the capabilities of the Tactical Data Network (TDN), First In Command and Control Systems (FICCS), Digital Technical Control (DTC) and other communications - switch network infrastructure which provides voice, SIPR, NIPR, coalition, data, and video services. WFN-T will provide a standard data and voice architecture for the deployed warfighter that is interoperable with Joint and other Services communications systems.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*TSM: Engineering and Program Support *FY 2009 Accomplishments:* Provide for engineering and program support to ensure successful integration of proven commercial switching technologies and seek commercial solutions compatible and interoperable across all Communications and Networking programs. *FY 2010 Plans:* Continue FY09 effort of engineering and program support. *FY 2011 Base Plans:* Continue FY10 effort of engineering and program support.	0.137	0.093	0.100	0.000	0.100
*TSM: Development VoIP & Promina 800 (P800) Transmission Resource Controller upgrade *FY 2009 Accomplishments:* Voice over Internet Protocol (VoIP) capability development and Promina 800 upgrade	0.733	0.000	0.000	0.000	0.000
*TSM: Technology Insertion *FY 2010 Plans:* Technology insertion development initial increment.	0.000	0.207	0.215	0.000	0.215

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Technology insertion continued development, increment II.					
*WFN-T: Engineering Support and Prototype Development *FY 2010 Plans:* Provide for engineering support and prototype development to modify existing programs to add emerging capabilities for interoperability, increments I and II; TDN developmental efforts continue under the WFN-T program. *FY 2011 Base Plans:* Continue FY10 efforts, increments III and IV.	0.000	2.136	2.146	0.000	2.146
*JNMS: SPEED, CEOI development and CJMTK enhancements. *FY 2009 Accomplishments:* Developmental work for SPEED Communications Electronics Operation Instructions (CEOI) function & Commercial Joint Mapping Tool Kit (CJMTK) enhancements. SPEED 10.2-10.3 development and integration testing *FY 2011 Base Plans:* Continue FY09 efforts through SPEED v11.0 release, fielding and award.	0.017	0.000	1.403	0.000	1.403
*ECCS: Prototype, Engineering Developmental Model (EDM), and Program Support *FY 2009 Accomplishments:* ECCS Program Support, Prototype Specification Development, and devlopment and test of ECCS consolidated base stations.	0.787	0.000	0.000	0.000	0.000
*ECCS: Test and Evaluation and Program Support	0.133	0.491	0.429	0.000	0.429

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: ECCS program support for Test and Evaluation (T&E) efforts. *FY 2010 Plans:* Continued program support for T&E efforts. *FY 2011 Base Plans:* Continued program support for T&E efforts.					
*TDN: Test and Evaluation and Program Support *FY 2009 Accomplishments:* TDN Data Distribution System-Modular (DDS-M) engineering and program support of refresh efforts.	0.578	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	2.385	2.927	4.293	0.000	4.293

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PMC/463421: *TSM*	18.294	33.676	1.850	0.000	1.850	0.000	0.000	0.000	0.000	0.000	321.308
• PMC/463423: *ECCS*	6.925	9.864	8.308	0.000	8.308	0.000	0.000	0.000	0.000	0.000	25.097
• PMC/463405: *TDN*	12.793	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	54.987
• PMC/4634S9: *WFN-T*	22.400	49.222	20.884	10.500	31.384	8.526	24.932	47.886	40.217	0.000	224.567

D. Acquisition Strategy

(U) Transition Switch Module (TSM) : calls for the use and integration of proven commercial switching technologies of sufficient maturity for production with level of effort RDT&E at this stage of the program for developmental efforts related to option year engineering. Seeks commercial solutions that are fully compatible and interoperable with other Communication Networking Systems (CNS) programs that are fielded and/or being fielded e.g., DTC, TDN, Joint Enhanced Core Communication System (JECCS) etc.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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(U) Joint Network Management Systems (JNMS) or Network Planning and Management (NPM): uses the Joint Army-led acquisition strategy for JNMS. The JNMS contract method is competitive with a Cost Plus contract for development that is centrally funded by the Army, except for any unique Service requirements. Services are responsible for procurement, fielding and support costs. The production contract is Fixed Price and the fielding and support is Time and Material (T&M) based. The JNMS acquisition strategy emphasizes the use of Commercial Off-The-Shelf (COTS) and Government-Off-The-Shelf (GOTS) products. The USMC GOTS SPEED acquisition strategy is for spiral development. Five EDMs will be procured in FY11 in support of new software releases and utilized for acceptance testing. The SPEED contract method is through a sole source Basic Purchase Agreement (BPA) using Fixed Price Task Orders based on the developers GSA schedule for manhours.

(U) Expeditionary Command and Control Suite (ECCS): will use the evolutionary acquisition strategy and pursue a competitive firm fixed price contract. Major concerns will be interoperability and compatibility with existing systems and components. R&D effort will focus on developing and integrating "miniaturized" versions of existing components. Emerging technologies such as VoIP and Secure Wireless will also be addressed in the out year R&D effort. R&D funding drops as system goes into production.

(U) Tactical Data Network (TDN): is an evolutionary acquisition strategy. As new products and industry standards are produced, they are to be tested and integrated into TDN equipment. RDTE funding in FY09 is to be used to test and evaluate Commercial Off-The-Shelf (COTS) items which will be integrated into TDN Gateways and Data Distribution Systems (DDS) to fulfill Operational Requirments Documents (ORD) requirements. In FY10 the funding for TDN rolls under the WFN-T line.

(U) Warfighter Network Tactical (WFN-T): is an evolutionary acquisition strategy that will modify existing and legacy programs to add emerging capabilities for interoperability. The tenets of the WFN-T acquisition strategy are Commercial Off-The-Shelf (COTS) and Government Off-The-Shelf (GOTS), firm fixed-price competitive contracts for material solutions to meet emerging requirements. Capability related EDMs will be procured in FY10. WFN-T may reuse other Services development and ride external contracts that satisfy requirements and analysis of alternatives.

(U) E. Major Performers:
FY11 (JNMS SPEED) - Northrop Grumman, Winter Park FL. New SPEED releases
FY09 - (TSM) EDO/Darlington, Wando, SC. Develop training documentation and test package
FY11 (WFN-T) Development efforts continue under WFN-T line for the TDN program. TDN performer is General Dynamics, Taunton MA

E. Performance Metrics

N/A

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JNMS/NPM (SPEED)	Various/ FFP	MCSC, Northrup Grumman VA, FL	5.926	0.000		1.403	Jan 2011	0.000		1.403	0.000	7.329	Continuing
TSM	Various/ FFP	MCSC, EDO VA, SC	0.733	0.205	Jun 2010	0.215	Jan 2011	0.000		0.215	0.000	1.153	Continuing
ECCS	Various/ FFP	MCSC, Dataline VA, FL	0.244	0.000		0.000		0.000		0.000	0.000	0.244	Continuing
ECCS EDM	Various/ FFP	MCSC VA	787.000	0.000		0.000		0.000		0.000	0.000	787.000	Continuing
WFN-T	Various/ FFP	MCSC VA	0.000	1.500	Mar 2010	2.146	Jan 2011	0.000		2.146	0.000	3.646	Continuing
		Subtotal	793.903	1.705		3.764		0.000		3.764	0.000	799.372	

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
TSM Support	Various/ FFP	MCSC VA	0.035	0.000		0.000		0.000		0.000	0.000	0.035	Continuing
TSM Engineering Support	Various/ FFP	MCSC, MITRE VA	0.331	0.095	Jan 2010	0.100	Jan 2011	0.000		0.100	0.000	0.526	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2276: *Comms Switching and Control Sys*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ECCS Support	Various/ FFP	MCSC, QinetiQ VA	0.200	0.491	Jan 2010	0.429	Jan 2011	0.000		0.429	0.000	1.120	Continuing
TDN Engineering Support	Various/ FFP	US Army, MITRE VA, MA	0.500	0.000		0.000		0.000		0.000	0.000	0.500	Continuing
WFN-T Engineering Support	Various/ FFP	US Army, MITRE VA, MA	0.000	0.636	Jan 2010	0.000		0.000		0.000	0.000	0.636	Continuing
		Subtotal	1.066	1.222		0.529		0.000		0.529	0.000	2.817	

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
TSM T&E	MIPR	JITC VA	0.780	0.000		0.000		0.000		0.000	0.000	0.780	Continuing
ECCS T&E	WR	MCOTEA VA	0.434	0.000		0.000		0.000		0.000	0.000	0.434	Continuing
TDN T&E	WR	MCOTEA VA	0.108	0.000		0.000		0.000		0.000	0.000	0.108	Continuing
		Subtotal	1.322	0.000		0.000		0.000		0.000	0.000	1.322	

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2276: *Comms Switching and Control Sys*

Management Services ($ in Millions)

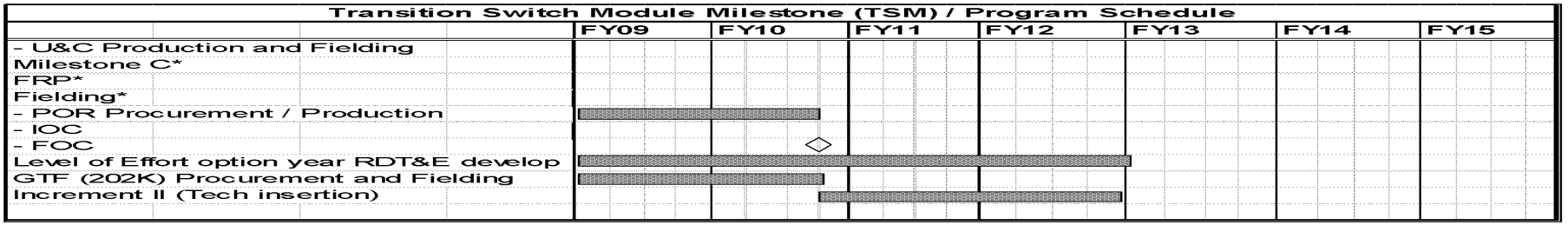
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TSM Program Support	Various/ FFP	MCSC VA	0.063	0.000		0.000		0.000		0.000	0.000	0.063	Continuing
ECCS Program Support	Various/ FFP	MCSC VA	0.075	0.000		0.000		0.000		0.000	0.000	0.075	Continuing
TDN Program Support	Various/ FFP	MCSC VA	0.130	0.000		0.000		0.000		0.000	0.000	0.130	Continuing
		Subtotal	0.268	0.000		0.000		0.000		0.000	0.000	0.268	

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	796.559	2.927		4.293		0.000		4.293	0.000	803.779	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2276: *Comms Switching and Control Sys*



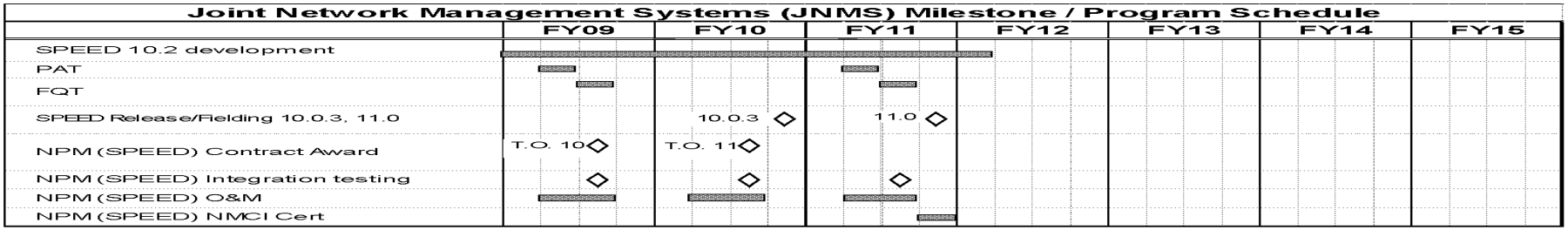
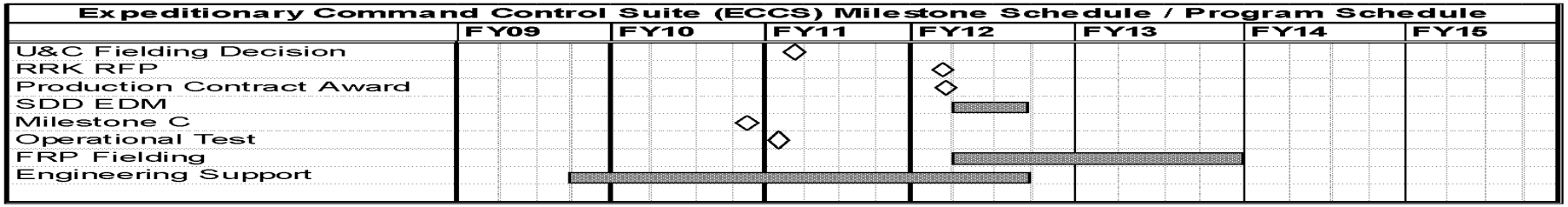


Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2276: *Comms Switching and Control Sys*



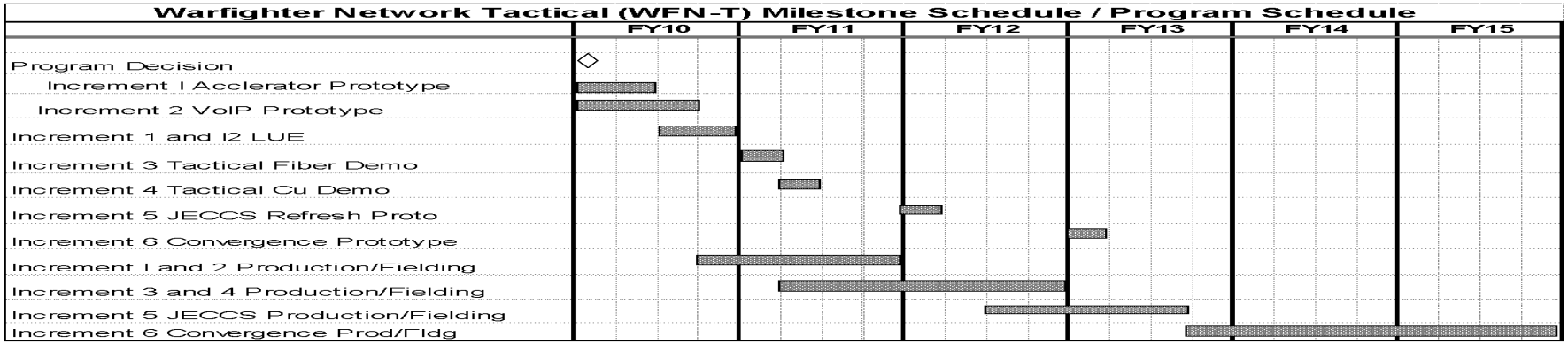


Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2276: *Comms Switching and Control Sys*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
TSM POR Procurement/Production	1	2009	3	2010
TSM Level of Effort option year RDTE development	1	2009	4	2012
TSM GTF Procurement and fielding	1	2009	3	2010
TSM Technology Insertion (increment II)	4	2010	4	2012
TSM FOC	3	2010	4	2010
SPEED 10.2 Development	1	2009	1	2012
SPEED PAT	2	2009	2	2011
SPEED FQT	3	2009	3	2011
SPEED 10.0.3 Release/Fielding	4	2010	4	2010
SPEED 11.0 Release/Fielding	4	2011	4	2011
SPEED TO 10 Award	3	2009	3	2009
SPEED TO 11 Award	3	2010	3	2010
SPEED Integration testing	3	2009	3	2011
SPEED O&M	2	2009	3	2011
ECCS U&C Fielding Decision	1	2011	1	2011
ECCS RRK RFP	1	2012	1	2012
ECCS Production Contract Award	1	2012	1	2012
ECCS SDD EDM	2	2012	3	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
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	Start		End	
Event	Quarter	Year	Quarter	Year
ECCS Milestone C	4	2010	4	2010
ECCS Operational test	1	2011	1	2011
ECCS FRP Fielding	2	2012	4	2013
ECCS Engineering Support	4	2009	3	2012
WFN-T Program Decision	1	2010	1	2010
WFN-T Incr I, Accelerator Prototype	1	2010	2	2010
WFN-T Incr 2, VoIP Prototype	1	2010	3	2010
WFN-T Incr 1 & 2 LUE	3	2010	4	2010
WFN-T Increment 3 Tactical Fiber Demo	1	2011	1	2011
WFN-T Increment 4 Tactical Cu Demo	2	2011	2	2011
WFN-T Increment 5 JECCS Refresh Prototype	1	2012	1	2012
WFN-T Increment 6 Convergence Prototype	1	2013	1	2013
WFN-T Increment 1 & 2 Production Fielding	4	2010	4	2011
WFN-T Increment 3 & 4 Production Fielding	2	2011	4	2012
WFN-T Increment 5 JECCS Production/Fielding	2	2012	3	2013
WFN-T Increment 6 Convergence Fielding	4	2013	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
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COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2277: *System Engineering and Integration*	7.184	6.887	5.580	0.000	5.580	8.640	8.817	8.979	9.205	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project provides funds for engineering, test, and evaluation activity, which ensures that the systems being developed within the Program Element (PE) employ consistent standards for interoperability and, to the maximum extent feasible, use hardware and software which is uniform and standard across programs. Marine Air-Ground Task Force Command, Control, Communications, Computers, and Intelligence Systems Engineering and Integration, and Coordination. (MAGTF C4I SEI&C) provides for the centralized planning and execution of Marine Corps Enterprise Information Technology and National Security Systems. It develops, certifies, and manages the configurations of the Marine Corps Enterprise
Systems and Technical Architecture products and uses these to support enterprise-level systems engineering. It supports unified technical representation to joint and coalition communities for Marine Corps Systems and provides top-tier system engineering support to address system of systems technical issues. It is used to conduct direct Marine Expeditionary Unit/Marine Expeditionary Force (MEU/MEF) support in system integration testing with USN. This is part of Deploying Group Systems Integration Testing (DGSIT)) and workups supporting Marine Expeditionary Force (MEF) deployments. It is also used to support Marine Corps systems coordination and involvement in DoD initiatives to include ForceNet, Global Information Grid Enterprise Services (GIGES), and other Deployable Information Systems Architecture DISA/NETWARCOM efforts.

Joint Distributed Engineering Plant (JDEP) directly supports DoD mandated directive CJCSI 6212.01F, to evaluate the interoperability of the holistic Marine Air Ground Task Force (MAGTF) Command Control Communications Intelligence (C4I) Capability produced by Marine Corps Systems Command (MARCORSYSCOM). This evaluation will be accomplished via the MAGTF C4I Capability Certification (MC3) process. Using MC3, composite capabilities are evaluated for their collective interoperability with joint forces; support integration of emmergent systems with systems aleady fielded, and to conduct
critical engineering analysis capable of isolating and correcting capability deficiencies and optimize system of systems performance.

Joint Interoperability of Tactical Command and Control Systems (JINTACCS) is a Joint Chiefs-of-Staff (JCS)/DoD-mandated program for joint development, implementation, and testing of tactical datalinks and US Message Text Format (MTF) under the direction of the Defense Information Systems Agency (DISA) and Office of the Secretary of Defense/Networks and Information Integration (OASD/NII) per the Commander Joint Chiefs of Staff (CJCSI) 6610.01C and CJCS16241.04 for US Military Tactical Forces (USMTF).

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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Coalition Warrior Interoperability Demonstration (CWID) (a.k.a. Joint Warrior InterOperability Demonstration (JWID)) is a Joint Chiefs-of-Staff (JCS) and a Chairman of the Joint Chiefs annual event. CWID remains the premier event to investigate interagency and coalition interoperability problems. CWID defines solutions that can be applied in the operational community. CWID's mission is to conduct military operations to deter, prevent, and defeat threats and aggressions aimed at the US its territories and assigned areas of responsibilities as directed by the President or Secretary of Defense.

Marine Air-Ground Task Force Command, Control, Communications, Computers, and Intelligence Systems Engineering and Integration, and Coordination. (MAGTF C4I SEI&C) provides for the centralized planning and execution of Marine Corps Enterprise Information Technology and National Security Systems. It develops, certifies, and manages the configurations of the Marine Corps Enterprise Systems and Technical Architecture products and uses these to support enterprise-level systems engineering. It supports unified technical representation to joint and coalition communities for Marine Corps
Systems and provides top-tier system engineering support to address system of systems technical issues. It is used to conduct direct Marine Expeditionary Unit/Marine Expeditionary Force (MEU/MEF) support in system integration testing with USN. This is part of Deploying Group Systems Integration Testing (DGSIT)) and workups supporting Marine Expeditionary Force (MEF) deployments. It is also used to support Marine Corps systems coordination and involvement in DoD initiatives to include ForceNet, Global Information Grid Enterprise Services (GIGES), and other Deployable Information Systems Architecture DISA/NETWARCOM efforts.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*JWID: Deter, prevent, and defeat threats and aggressions aimed at the US.	1.268	1.303	0.000	0.000	0.000
Coalition Warrior Interoperability Demonstration (CWID) (a.k.a. Joint Warrior InterOperability Demonstration (JWID)) is a Joint Chiefs-of-Staff (JCS) and a Chairman of the Joint Chiefs annual event. CWID remains the premier event to investigate interagency and coalition interoperability problems. CWID defines solutions that can be applied in the operational community. CWID's mission is to conduct military operations to deter, prevent, and defeat threats and aggressions aimed at the US its territories and assigned areas of responsibilities as directed by the President or Secretary of Defense. *FY 2009 Accomplishments:* JWID: Deter, prevent, and defeat threats and aggressions aimed at the US. *FY 2010 Plans:* JWID: Deter, prevent, and defeat threats and aggressions aimed at the US.					

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*JINTACCS: JCS and OASD/NII Data Links Testing. Joint Interoperability of Tactical Command and Control Systems (JINTACCS) is a Joint Chiefs-of-Staff (JCS)/DoD-mandated program for joint development, implementation, and testing of tactical data links and US Message Text Format (MTF) under the direction of the Defense Information Systems Agency (DISA) and Office of the Secretary of Defense/Networks and Information Integration (OASD/NII) per the Commander Joint Chiefs of Staff (CJCSI) 6610.01C and CJCS16241.04 for US Military Tactical Forces (USMTF). *FY 2009 Accomplishments:* JINTACCS: Joint development, implementation, and testing of data links under the direction of the JCS and OASD/NII. *FY 2010 Plans:* JINTACCS: Joint development, implementation, and testing of data links under the direction of the JCS and OASD/NII. *FY 2011 Base Plans:* JINTACCS: Joint development, implementation, and testing of data links under the direction of the JCS and OASD/NII.	1.926	1.604	1.611	0.000	1.611
*SEIC: Engineering and Technical Support Marine Air-Ground Task Force Command, Control, Communications, Computers, and Intelligence Systems Engineering and Integration, and Coordination. (MAGTF C4I SEI&C) provides for the centralized planning and execution of Marine Corps Enterprise Information Technology and National Security Systems. It develops, certifies, and manages the configurations of the Marine Corps Enterprise Systems and Technical Architecture products and uses these to support enterprise-level systems engineering. It supports unified technical representation to joint and coalition communities for Marine Corps Systems and provides top-tier system engineering support to address system of systems	2.521	2.423	2.492	0.000	2.492

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2277: *System Engineering and Integration*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
technical issues. It is used to conduct direct Marine Expeditionary Unit/Marine Expeditionary Force (MEU/MEF) support in system integration testing with USN. This is part of Deploying Group Systems Integration Testing (DGSIT)) and workups supporting Marine Expeditionary Force (MEF) deployments. It is also used to support Marine Corps systems coordination and involvement in DoD initiatives to include ForceNet, Global Information Grid Enterprise Services (GIGES), and other Deployable Information Systems Architecture DISA/NETWARCOM efforts. *FY 2009 Accomplishments:* MAGTF SEI&C: Engineering and technical support for configuration management of MAGTF C4I systems. Review and submittal of multiple Integration Support Plans (ISPs) and Tactical ISPs (TISPs). Pre-deployment assistance to I MEF and multiple MEUs. Participation in ForceNet, NCES, GIGES and other Joint DoD initiatives. Plans are for continued activities to support the interoperability and jointness of the USMC Enterprise IT/NSS systems. *FY 2010 Plans:* MAGTF SEI&C: Engineering and technical support for configuration management of MAGTF C4I systems. Review and submittal of multiple Integration Support Plans (ISPs) and Tactical ISPs (TISPs). Pre-deployment assistance to I MEF and multiple MEUs. Participation in ForceNet, NCES, GIGES and other Joint DoD initiatives. Plans are for continued activities to support the interoperability and jointness of the USMC Enterprise IT/NSS systems. *FY 2011 Base Plans:* MAGTF SEI&C: Engineering and technical support for configuration management of MAGTF C4I systems. Review and submittal of multiple Integration Support Plans (ISPs) and Tactical ISPs (TISPs). Pre-deployment assistance to I MEF and multiple MEUs. Participation in ForceNet, NCES, GIGES and other Joint DoD initiatives. Plans are for continued activities to support the interoperability and jointness of the USMC Enterprise IT/NSS systems.					
*JDEP: Develop Certifications and Conduct MAGTF C4I Capability	1.469	1.557	1.477	0.000	1.477

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2277: *System Engineering and Integration*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Joint Distributed Engineering Plant (JDEP) directly supports DoD mandated directive CJCSI 6212.01F, to evaluate the interoperability of the holistic Marine Air Ground Task Force (MAGTF) Command Control Communications Intelligence (C4I) Capability produced by Marine Corps Systems Command (MARCORSYSCOM). This evaluation will be accomplished via the MAGTF C4I Capability Certification (MC3) process. Using MC3, composite capabilities are evaluated for their collective interoperability with joint forces; support integration of emmergent systems with systems aleady fielded, and to conduct critical engineering analysis capable of isolating and correcting capability deficiencies and optimize system of systems performance. *FY 2009 Accomplishments:* JDEP: Conduct development of the MAGTF C4I Capability Certification process which involved the creation of capability based test threads. Additionally create Joint Test Threads and participate in a JFCOM sponsored joint distributed test event. *FY 2010 Plans:* JDEP: Conduct development of the MAGTF C4I Capability Certification process which involved the creation of capability based test threads. Additionally create Joint Test Threads and participate in a JFCOM sponsored joint distributed test event. *FY 2011 Base Plans:* JDEP: Conduct development of the MAGTF C4I Capability Certification process which involved the creation of capability based test threads. Additionally create Joint Test Threads and participate in a JFCOM sponsored joint distributed test event.					
Accomplishments/Planned Programs Subtotals	7.184	6.887	5.580	0.000	5.580

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2277: *System Engineering and Integration*

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2277: *System Engineering and Integration*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CWID1	C/FP	NSWC Dahlgren, VA	0.716	0.730	Jan 2010	0.730	Dec 2010	0.000		0.730	0.000	2.176	Continuing
CWID2	WR	NSWC Dahlgren, VA	0.100	0.100	Nov 2009	0.100	Dec 2010	0.000		0.100	0.000	0.300	Continuing
CWID	C/FP	MCSC Quantico, VA	0.000	0.130	Jan 2010	0.130	Dec 2010	0.000		0.130	0.000	0.260	Continuing
CWID	C/FP	JTIC Indian Head, MD	0.038	0.038	Jan 2010	0.038	Dec 2010	0.000		0.038	0.000	0.114	Continuing
JINTACCS	C/FP	NSWC Dahlgren, VA	0.070	0.000		0.000		0.000		0.000	0.000	0.070	Continuing
		Subtotal	0.924	0.998		0.998		0.000		0.998	0.000	2.920	

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CWID	C/FP	OSEC Stafford, VA	0.362	0.362	Apr 2010	0.360	Apr 2011	0.000		0.360	0.000	1.084	Continuing
MAGTF SEI&C	C/FP	OSEC Stafford, VA	2.210	0.900	Apr 2010	0.461	Apr 2011	0.000		0.461	0.000	3.571	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2277: *System Engineering and Integration*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF SEI&C	C/FP	MCSC Quantico, VA	0.145	0.000		0.000		0.000		0.000	0.000	0.145	Continuing
MAGTF SEI&C	WR	NSWC Dahlgren, VA	0.008	0.445	Nov 2009	0.445	Nov 2010	0.000		0.445	0.000	0.898	Continuing
JDEP	C/FP	NSWC Dahlgren, VA	0.560	0.560	Jan 2010	0.540	Dec 2010	0.000		0.540	0.000	1.660	Continuing
JDEP	C/FP	OSEC Carlsbad, CA	0.472	0.472	Jan 2010	0.460	Oct 2011	0.000		0.460	0.000	1.404	Continuing
JINTACCS	C/FP	OSEC Stafford, VA	0.581	0.581	Apr 2010	0.582	Apr 2011	0.000		0.582	0.000	1.744	Continuing
JINTACCS	C/FP	MCTSSA Cmp Pendlton CA	1.000	1.000	Jan 2010	1.000	Jan 2011	0.000		1.000	0.000	3.000	Continuing
		Subtotal	5.338	4.320		3.848		0.000		3.848	0.000	13.506	

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JDEP	WR	SSCC Charleston, SC	0.444	0.575	Mar 2010	0.575	Nov 2010	0.000		0.575	0.000	1.594	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2277: *System Engineering and Integration*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF SEI&C	MIPR	MITRE Ft Monmouth NJ	0.085	0.994	Dec 2009	0.159	Dec 2010	0.000		0.159	0.000	1.238	Continuing
		Subtotal	0.529	1.569		0.734		0.000		0.734	0.000	2.832	

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6.791	6.887		5.580		0.000		5.580	0.000	19.258	

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2278: *Air Defense Weapons System*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2278: *Air Defense Weapons System*	5.700	7.715	5.938	0.000	5.938	8.212	8.432	3.443	3.558	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project encompasses two sub-element programs which are part of the Integrated Air Defense System for the Marine Corps.

Ground Based Air Defense Transformation (GBAD-T) - Based upon the deployment of the Low Altitude Air Defense (LAAD) Battalions and their employment of the Stinger Missile, GBAD-T transforms Air Defense equipment through technology insertion and equipment repackaging to address capability gaps as the result of equipment obsolescence and the emergent and evolving threats to the Marine Air Ground Task Force (MAGTF). GBAD-T consist of three efforts: 1) sustainment of currently fielded LAAD equipment/assets; 2) fielding and support of the Advanced Man-Portable Air Defense System (A-MANPADS) that replaces the Avenger Weapon System and existing MANPADS vehicles; 3) replacing the Remote Terminal Unit (RTU), an effort that replaces an 18 pound laptop computer that provides Situational Awareness and Command and Control to the Stinger and A-MANPAD teams. The RTU replacement will interface with and be capable of receiving a Common Aviation Command and Control Systems (CAC2S) broadcasted link. It will also be capable of interfacing with legacy MACCS.

The Joint Fires Integration and Interoperability Team (JFIIT), formerly known as Joint Combat Identification Evaluation Team (JCIET) - is an opportunity to conduct quality assurance testing of services' systems operating in a joint environment. It conducts assessments in a number of venues including: Military Operations in Urban Terrain (MOUT) exercises, Advanced Concept Technology Demos (ACTD), Joint Training exercises, Combined Armed Training Exercises (CAXs), and Weapons Tactics Instruction (WTI) events. Its mission is to improve Tactics, Techniques and Procedures (TTP) across all Combat Identification mission areas. (It is not an acquisition program; therefore, it does not have specific milestone dates.)

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*GBAD TRANSFORMATION: Test and Evaluation (Remote Terminal Unit Replacement)	1.026	0.357	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2278: *Air Defense Weapons System*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Initiated and successfully completed A-MANPADS Increment I developmental Testing. This testing was conducted with one Section Leader Vehicle and 10 Fire unit Vehicles. *FY 2010 Plans:* GBAD-T will continue to support Stinger live-fire exercises at the LAAD Battalions and the Stinger School house, ensuring LAAD gunners obtain and retain military occupational specialty proficiency. Conduct field user evaluation of A-MANPADS Increment I C4 Suite enhancements.					
*GBAD TRANSFORMATION: Program Management Services	0.122	0.122	0.107	0.000	0.107
FY 2009 Accomplishments: Initiated and successfully completed A-MANPADS Increment I developmental Testing. This testing was conducted with one Section Leader Vehicle and 10 Fire unit Vehicles. *FY 2010 Plans:* GBAD-T will continue to support Stinger live-fire exercises at the LAAD Battalions and the Stinger School house, ensuring LAAD gunners obtain and retain military occupational specialty proficiency. *FY 2011 Base Plans:* GBAD-T will continue to support Stinger live-fire exercises at the LAAD Battalions and the Stinger School house, ensuring LAAD gunners obtain and retain military occupational specialty proficiency.					
*GBAD TRANSFORMATION: Product Development (CAC2S Integration)	1.526	0.282	0.473	0.000	0.473
FY 2009 Accomplishments: Developmental testing to include Transportability Qualification Testing, Electromagnetic Interface Testing, and Environmental Qualification Testing. Integration of hardware and software for a C2 interface solution.					

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Developmental Testing to include field user evaluation. Integration of hardware and software for a C2 interface Solution. *FY 2011 Base Plans:* Testing to include hardware and software certification and information assurance certification.					
*GBAD TRANSFORMATION: Product Development (Remote Terminal Unit Replacement) *FY 2009 Accomplishments:* Initiated and successfully completed A-MANPADS Increment I developmental Testing. This testing was conducted with one Section Leader Vehicle and 10 Fire unit Vehicles. *FY 2010 Plans:* Integration of Commerical-off-the-shelf and Nondevelopmental Item Remote Terminal Unit replacement components into A-MANPADS Increment I.	0.242	0.352	0.000	0.000	0.000
*GBAD TRANSFORMATION: Integration Development (Missile Integration) *FY 2009 Accomplishments:* Single participation in a Government sponsored GBAD capabilities demonstration. *FY 2010 Plans:* Multiple vendor and Government participation in a Governement sponsored GBAD capabilities demonstration. *FY 2011 Base Plans:* Multiple vendor and Government participation in a Governement sponsored GBAD capabilities demonstration.	1.036	6.070	4.991	0.000	4.991

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2278: *Air Defense Weapons System*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*GBAD TRANSFORMATION: Support Costs (MCTSSA/MCCDC/Crane support) *FY 2009 Accomplishments:* Initiated and successfully completed A-MANPADS Increment I developmental Testing. This testing was conducted with one Section Leader Vehicle and 10 Fire unit Vehicles. *FY 2010 Plans:* GBAD-T will continue to support Stinger live-fire exercises at the LAAD Battalions and the Stinger School house, ensuring LAAD gunners obtain and retain military occupational specialty proficiency. *FY 2011 Base Plans:* GBAD-T will continue to support Stinger live-fire exercises at the LAAD Battalions and the Stinger School house, ensuring LAAD gunners obtain and retain military occupational specialty proficiency.	0.561	0.532	0.367	0.000	0.367
*JFIIT: Program Management. *FY 2009 Accomplishments:* Logistics/Maintenance for ARORA and MSIT assets at MACS-24 and YUMA Az. Technical and Analysis support from R&B Technology. Participation in the Southern Fury Test event and Bold Quest Test event. Begin Certification Process for ARORA. Supported Joint Army/Marine Corp JTCW/CPOF JTIC Test.	0.291	0.000	0.000	0.000	0.000
*JFIIT: Data and analysis for exercise. *FY 2009 Accomplishments:* Logistics/Maintenance for ARORA and MSIT assets at MACS-24 and YUMA Az. Technical and Analysis support from R&B Technology. Participation in the Southern Fury Test event and Bold Quest Test event. Begin Certification Process for ARORA.	0.765	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2278: *Air Defense Weapons System*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Supported Joint Army/Marine Corp JTCW/CPOF JTIC Test.					
*JFIIT: Logistical Support for exercises. *FY 2009 Accomplishments:* Logistics/Maintenance for ARORA and MSIT assets at MACS-24 and YUMA Az. Technical and Analysis support from R&B Technology. Participation in the Southern Fury Test event and Bold Quest Test event. Begin Certification Process for ARORA. Supported Joint Army/Marine Corp JTCW/CPOF JTIC Test.	0.131	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	5.700	7.715	5.938	0.000	5.938

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PMC/300600: *GBAD-T*	8.780	11.352	5.175	0.000	5.175	6.370	9.738	5.586	5.860	Continuing	Continuing

D. Acquisition Strategy

GBAD- TRANSFORMATION: Designated an Abbreviated Acquisition Program (AAP), GBAD-T effects the rapid transition from the Avenger/MANPADS weapon system to the more mobile, flexible, and maintainable Advanced MANPADS. The AAP is principally comprised of integrating Government Off The Shelf (GOTS) equipment and Non-developmental Items (NDI).

E. Performance Metrics

Milestone Reviews

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GBAD-T	WR	NSWC Crane.IN	2.583	0.321	Jan 2010	0.520	Jan 2011	0.000		0.520	0.000	3.424	Continuing
GBAD-T	MIPR	Army Not Specified	1.414	1.461	Mar 2010	1.591	Mar 2010	0.000		1.591	0.000	4.466	Continuing
GBAD-T	WR	NSWC Crane,IN (PAS-13 HW)	1.469	0.000		0.000		0.000		0.000	0.000	1.469	Continuing
GBAD-T	C/FP	EG&G Stafford, VA	0.489	0.000		0.000		0.000		0.000	0.000	0.489	Continuing
GBAD-T	C/FP	DRS Tech Palm Bay, FL	0.215	0.000		0.000		0.000		0.000	0.000	0.215	Continuing
GBAD-T	C/FP	Raytheon San Diego, CA	3.700	0.000		0.000		0.000		0.000	0.000	3.700	Continuing
GBAD-T	C/FP	MCSC Quantico, VA	0.464	0.000		0.000		0.000		0.000	0.000	0.464	Continuing
GBAD-T	C/FP	L3 San Diego, CA	1.121	0.352	Feb 2010	0.000		0.000		0.000	0.000	1.473	Continuing
GBAD-T	MIPR	PMA-259 China Lake	0.000	1.500	Feb 2010	0.875	Feb 2011	0.000		0.875	0.000	2.375	Continuing
GBAD-T	Various/ Various	TBD Not Specified	0.000	3.070	Apr 2010	2.478	Feb 2011	0.000		2.478	0.000	5.548	Continuing
		Subtotal	11.455	6.704		5.464		0.000		5.464	0.000	23.623	

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2278: *Air Defense Weapons System*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GBAD-T	WR	NSWC Crane, IN	0.526	0.000		0.000		0.000		0.000	0.000	0.526	Continuing
GBAD-T	C/FP	MCCDC Quantico, VA	1.435	0.225	Feb 2010	0.250	Feb 2011	0.000		0.250	0.000	1.910	Continuing
GBAD-T	WR	MCTSSA Camp Pendleton, CA	0.120	0.050	Feb 2010	0.050	Feb 2011	0.000		0.050	0.000	0.220	Continuing
GBAD-T	WR	MCSC Quantico, VA	0.061	0.000		0.067	Jan 2011	0.000		0.067	0.000	0.128	Continuing
GBAD-T	C/FP	MCOTEA Quantico, VA	0.000	0.257	Feb 2010	0.000		0.000		0.000	0.000	0.257	Continuing
JFIIT	SS/FP	RNB Stafford, VA	1.425	0.000		0.000		0.000		0.000	0.000	1.425	Continuing
JFIIT	WR	MCSC Quantico, VA	0.130	0.000		0.000		0.000		0.000	0.000	0.130	Continuing
		Subtotal	3.697	0.532		0.367		0.000		0.367	0.000	4.596	

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2278: *Air Defense Weapons System*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GBAD-T	MIPR	WSMR NM	0.872	0.000		0.000		0.000		0.000	0.000	0.872	Continuing
GBAD-T	MIPR	Not Specified Aberdeen, MD	0.047	0.000		0.000		0.000		0.000	0.000	0.047	Continuing
GBAD-T	C/FP	MCOTEA Quantico, VA	0.315	0.357	Feb 2010	0.000		0.000		0.000	0.000	0.672	Continuing
GBAD-T	MIPR	NATC NM	0.710	0.000		0.000		0.000		0.000	0.000	0.710	Continuing
JFIIT1	Reqn	MCSC Quantico, VA	0.318	0.000		0.000		0.000		0.000	0.000	0.318	Continuing
JFIIT2	WR	4th MAW Not Specified	0.085	0.000		0.000		0.000		0.000	0.000	0.085	Continuing
JFIIT3	WR	MCTSSA Camp Pendelton, CA	0.127	0.000		0.000		0.000		0.000	0.000	0.127	Continuing
JFIIT4	WR	MCSC Quantico, VA	0.047	0.000		0.000		0.000		0.000	0.000	0.047	Continuing
		Subtotal	2.521	0.357		0.000		0.000		0.000	0.000	2.878	

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2278: *Air Defense Weapons System*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GBAD-T	C/FP	MCSC Quantico, VA	0.295	0.122	Feb 2010	0.107	Feb 2010	0.000		0.107	0.000	0.524	Continuing
JFIIT	Reqn	MCSC Quantico, VA	0.194	0.000		0.000		0.000		0.000	0.000	0.194	Continuing
		Subtotal	0.489	0.122		0.107		0.000		0.107	0.000	0.718	

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	18.162	7.715		5.938		0.000		5.938	0.000	31.815	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2278: *Air Defense Weapons System*

Ground Based Air Defense Transformation (GBAD-T) Program Schedule

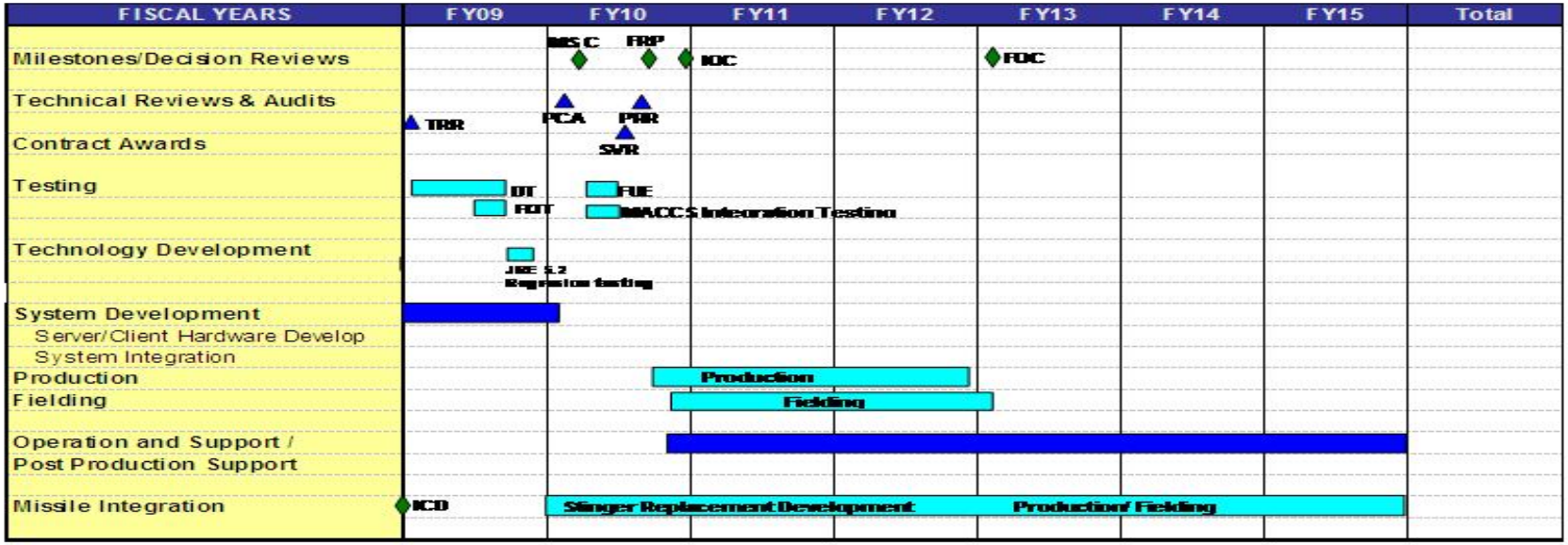

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206313M: *Marine Corps Comms Systems*	**PROJECT** 2278: *Air Defense Weapons System*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
GBAD-T Milestone C	2	2010	2	2010
GBAD-T Full Rate Production	4	2010	4	2010
GBAD-T Fielding Decision	4	2010	4	2010
GBAD_T IOC	4	2010	4	2010

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2510: *MAGTF CSSE & SE*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2510: *MAGTF CSSE & SE*	48.221	61.806	33.538	0.000	33.538	26.696	21.368	21.657	22.230	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

(U) The Marine Air Ground Task Force (MAGTF) Combat Service Support Element & Supporting Establishment (CSSE & SE) consists of mutually supporting Logistics Information Technology (IT) programs that support force deployment, planning, and execution; sustainment and distribution; and contributes to the Combatant Commander's Common Operating Picture to support rapid accurate decision making.

MARINE CORPS COMMON HARDWARE SUITE (MCHS) provides Commercial-Off-The-Shelf (COTS) workstations (desktop/laptop), servers and other IT hardware to support the Operating Force and other non-Navy Marine Corps Intranet (NMCI) Marine Corps customers. MCHS provides support for two principal groups: 1) Approximately 50 United States Marine Corps (USMC) Tactical and Functional Programs of Record that use COTS IT hardware as part of their fielded systems; and 2) Tactical and other Marine Corps customers not supported by NMCI such as Marine Corps Forces, Europe/Marine Corps Forces, Korea and stand-alone Marine Corps units and schoolhouses. The goal of the program is to enhance overall IT system interoperability and lower the total cost of ownership by centralizing procurement of COTS IT hardware, reducing the number of different configurations of computers, and providing worldwide integrated logistics support for all fielded MCHS hardware. Rapid Technology Insertion provides ability to develop, test, and evaluate COTS hardware and software configurations for rapid fielding purposes.

GLOBAL COMBAT SUPPORT SYSTEM-MARINE CORPS (GCSS-MC) is pursuing an Evolutionary Acquisition (EA) strategy in order to field operationally suitable and supportable capabilities in the shortest time possible that meets the Logistics Advocate goals. EA offers the fastest method to field this highest of advocate priorities and allows for requirements to be time-phased as the users become more familiar with the strengths and weaknesses of the fielded system. In addition to quicker fielding, an EA approach is particularly well suitable for software intensive programs and offers these benefits: rapid delivery of an initial capability with the explicit intent of delivering continuously improving capabilities in the future and a reduction in the "cycle time" from identification of emergent user requirements, priorities and fielding. The GCSS-MC acquisition strategy will deliver capabilities in block increments. Each "Block" capability will follow a complete acquisition process in accordance with the DOD 5000 publications and OSD's Enterprise Integration roadmap. Blocks will include emergent user priorities, advanced technology improvements and expanded functionality. Each Block will repeat the complete acquisition program cycle going through a milestone (MS) C Full Rate Production Decision Review for each Block. Block 1 is divided into two major independent releases: Enterprise Release 1.1 and Deployed Access Release 1.2. Each release will have Initial Operational Capability (IOC) and Full Operational Capability (FOC) and is divided into two main phases: Planning/Blueprinting and Realization/Transition. More substantial software improvement/system upgrades will be fielded with each Block as required and prioritized by the user community. This approach differs from the original plan of delivering one release due to the technical complexities related to the overall scope of the solution. GCSS-MC was designated an Acquisition Category (ACAT) IAM program in March 2004 and successfully completed a MS B review on June 8, 2007. MS C review is slated for the 1st Quarter FY10 with fielding beginning in 2nd Quarter FY12.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2510: *MAGTF CSSE & SE*

In June 2008, Headquarters Marine Corps Command, Control, Communications and Computers was briefed on the Block 1 architectural approach and validated the approach as technically sound and essential to support deployed forces. FOC is validated when all Marine Corps ground components are using capabilities provided by GCSS-MC to include formal schools, and selected Marine Reserve Components and the following systems are no longer used operationally: Supported Activities Supply System, Marine Corps Integrated Maintenance Management System (MIMMS), PC MIMMS, and Asset Tracking Logistics Automated Support System I.

TRANSPORTATION SYSTEMS PORTFOLIO (TSP) RDT&E funding supports the various ongoing and continuing efforts to modernize legacy USMC logistics systems including joint interoperability testing and certification, information assurance testing and certification, and updating old hardware in need of replacement. Legacy systems include joint programs supporting deployment and sustainment of theater assets as well as existing USMC legacy systems. Joint interoperability testing and certification is an ongoing and continuous requirement that is critical to ensuring all TSP applications are interoperable with other Department of Defense and Joint Services systems. There are also ongoing and continuing efforts to ensure that the legacy TSP applications comply with the latest information assurance requirements. TSP applications are continually updating their security posture through software enhancements based upon the latest cyber threats. Also, mandatory DOD compliance with software patches ensure TSP systems are in compliance with new information assurance vulnerability assessments and ensure data integrity, confidentiality and availability.
JOINT FORCE REQUIREMENTS GENERATOR II (JFRG II) is a Global Command and Control System (GCCS) segmented software application designed to provide DOD with a Joint Services, state-of-the-art, integrated, and deployable Automated Information System that supports strategic force movements. The JFRG II software application is based on the Marine Corps' MAGTF II software application. MAGTF II has been in existence since 1991 and is used for task planning, Time Phased Force Deployment Data (TPFDD) editing, and Joint Operational Planning and Execution System (JOPES) interfacing. JFRG II assists in the notional planning process, permits the assignment of actual units to fill notional slots, and generates TPFDD for use in executing Joint Operation Plans. JFRG II provides rapid force list creation and interfaces with the Transportation Coordinators' Automated Information for Movement System (TC-AIMS II) and JOPES. It includes a Joint Deployment Data Library containing reference data required to produce a JOPES-compatible TPFDD extract file. JFRG II also contains modules that include the Unit Line Number (ULN) summary for rapid force list creation and the Force Module Summary for rapid ULN grouping. JFRG II can generate standard, executive, and ad hoc reports, perform database queries, and export or import data from TC-AIMS II, MDSS II and JOPES. JFRG II operates and functions in either a classified or unclassified environment.
PUBLIC KEY INFRASTRUCTURE (PKI) provides security objects and mechanisms used by (PK)-enabled systems and applications. The primary products of PKI are PK certificates and other certified objects used in conjunction with PK certificates. In addition to PK certificates, PKI provides on-line services (e.g. on-line certificate status checking), and supplies authenticated attributes in PK certificates and/or attribute certificates. PKI is one of a number of security solutions used to protect information and provide attributes to enable critical resources in the Global Information Grid, and is used concurrently with other solutions (e.g. in-line network encryptors to implement the defense-in-depth concept.) In conjunction with PK-enabled applications, PKI is used for identification, authentication, data confidentiality and integrity, and non-repudiation security services. Additionally, PKI functionally will be expanded to the Secret Internet Protocol Router Network (SIPRNET).
AUTOMATED IDENTIFICATION TECHNOLOGY (AIT) conducts research and development of new technologies and assists in technology insertion into applications. RDT&E enhances the Marine Corps' capability to quickly assimilate emerging technologies and leverage them to support more efficient, accurate business processes and data capture. AIT supports Active Radio Frequency Identification (RFID), passive RFID (pRFID), Unique Identification (UID) and the Operating Forces in the implementation of AIT solutions. AIT evaluates emerging technologies, new equipment, and performs integration analysis and testing.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2510: *MAGTF CSSE & SE*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*MARINE CORPS COMMON HARDWARE SUITE (MCHS)	1.453	1.558	1.508	0.000	1.508
FY 2009 Accomplishments: FY09 funding is being used to track vendor performance in providing COTS hardware to Marine Corps users as well as conducting environmental and stress testing on new COTS products proposed for use by MCHS customers. Tracking vendor performance includes verifying vendor compliance with Marine Corps specifications and conducting root cause analysis on failures reported from the Operating Forces in order to prevent future failures. *FY 2010 Plans:* In FY10, in addition to root cause analysis of failures of fielded gear, MCHS is using RDT&E funding to verify vendor specs for new products and to evaluate the applicability of both current and new products for procurement under the revised MCHS Indefinite Delivery, Indefinite Quantity contract with selected vendors. Environmental and stress testing includes rigorous environmental testing IAW applicable MILSPECs to evaluate performance of COTS hardware under field conditions. Software loading is also performed by MCHS to verify compatibility with various hardware configurations. *FY 2011 Base Plans:* In FY11, RDT&E will continue to be used to conduct trend analysis on reported failures of fielded COTS hardware and to evaluate the ability of new products to meet Marine Corps needs.					
*GCSS-MC LOGISTICS CHAIN MANAGEMENT (GCSS-MC)	40.063	55.244	27.759	0.000	27.759
FY 2009 Accomplishments: FY09 activities include systems integration testing, the preparation for government testing, and the actual conducting of Government, Development, Test & Evaluation (GDT&E).					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2510: *MAGTF CSSE & SE*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY10 will include Field User Evaluations, Operational Testing and initial fielding of Block 1, For release 1.1 and the initial design, build and test activities for Release 1.2. *FY 2011 Base Plans:* FY11 completes the Block I, Release 1.1 rollout fielding and training to III Marine Expeditionary Force (MEF), and begins the I & II MEF rollout fielding and training. Release 1.2 activities include the preparation and execution of GDT&E, Follow-on Operational Test & Evaluation and the procurement of hardware for the MEFs					
*TRANSPORTATION SYSTEMS PORTFOLIO (TSP) *FY 2009 Accomplishments:* FY09 TSP will conduct Active RFID upgrades and Joint Interoperability Testing & Certification (JITC) for all application upgrades and releases for all the programs within the portfolio. *FY 2010 Plans:* FY10 TSP will conduct Active RFID upgrades and Joint Interoperability Testing & Certification (JITC) for all application upgrades and releases for all the programs within the portfolio. *FY 2011 Base Plans:* FY11 TSP will conduct Active RFID upgrades and Joint Interoperability Testing & Certification (JITC) for all application upgrades and releases for all the programs within the portfolio.	0.552	0.617	0.558	0.000	0.558
*JOINT FORCES REQUIREMENT GENERATION II (JFRG II) *FY 2009 Accomplishments:* FY09 funding is being utilized to develop the enhanced version of JFRG II, and funding for FY10 and FY11 will decrease as focus shifts from program development to program maintenance.	1.577	0.555	0.360	0.000	0.360

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY10 funding is being utilized to continue development of the enhanced version of JFRG II, and funding for FY10 and FY11 will decrease as focus shifts from program development to program maintenance. *FY 2011 Base Plans:* FY11 funds will continue to fund software development and integration into GCCS 4.X and legacy systems from all services to pass deployment data to GCCS.					
*PUBLIC KEY INFRASTRUCTURE (PKI) *FY 2009 Accomplishments:* FY09 accomplishments include program, integration, planning and coordination efforts. Continuing FY09 efforts include DOD mandated Increment II implementation which encompasses SIPRNET PKI enablement, testing and continued program planning and coordination. *FY 2010 Plans:* FY10 funding will support continued testing, correction of deficiencies, and implementation of PKI requirements for tactical applications and SIPRNET capabilities. *FY 2011 Base Plans:* FY11 funding will support continued testing, correction of deficiencies, and implementation of PKI requirements for tactical applications and SIPRNET capabilities.	1.723	1.743	1.312	0.000	1.312
*AUTOMATED IDENTIFICATION TECHNOLOGY (AIT) *FY 2009 Accomplishments:* AIT will upgrade the pRFID infrastructure and continue to modify and develop pRFID capabilities as well as bring the active and pRFID together during FY09 - FY11.	2.853	2.089	2.041	0.000	2.041

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2510: *MAGTF CSSE & SE*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: AIT will upgrade the pRFID infrastructure and continue to modify and develop pRFID capabilities as well as bring the active and pRFID together during FY09 - FY11. *FY 2011 Base Plans:* AIT will upgrade the pRFID infrastructure and continue to modify and develop pRFID capabilities as well as bring the active and pRFID together during FY09 - FY11.					
Accomplishments/Planned Programs Subtotals	48.221	61.806	33.538	0.000	33.538

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• BLI 463000 2: *CCR: MCHS Svrs/ Wkstns*	39.996	17.574	0.548	17.850	18.398	1.889	1.831	1.640	1.666	Continuing	Continuing
• BLI 461700 1: *Combat Spt Sys: GCSS-MC*	0.000	4.570	27.158	0.000	27.158	11.267	0.000	9.996	9.335	Continuing	Continuing
• BLI 463500: *Comm & Elec Infra Spt: PKI*	0.799	0.930	0.998	0.000	0.998	1.184	1.450	1.489	1.529	Continuing	Continuing
• BLI 461700 2: *Combat Spt Sys: AIT*	5.777	5.496	4.753	0.000	4.753	7.490	7.131	4.127	3.998	Continuing	Continuing
• BLI 463000 1: *CCR:GCSS-MC*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.800	5.656	0.000	15.456

D. Acquisition Strategy

MARINE CORPS HARDWARE SUITE (MCHS) ensures computer hardware in the Operating Forces keeps pace with industry computer hardware technical improvements. Analyses of technical alternatives are periodically required in order to determine how to best meet emerging customer requirements.
GLOBAL COMBAT SUPPORT SYSTEM-MARINE CORPS (GCSS-MC) is pursuing an Evolutionary Acquisition (EA) strategy in order to field operationally suitable and supportable capabilities in the shortest time possible that meets the Logistics Advocate goals. EA offers the fastest method to field this highest of advocate priorities

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2510: *MAGTF CSSE & SE*

and allows for requirements to be time-phased as the users become more familiar with the strengths and weaknesses of the fielded system. In addition to quicker fielding, an EA approach is particularly well suitable for software intensive programs and offers these benefits: rapid delivery of an initial capability with the explicit intent of delivering continuously improving capabilities in the future and a reduction in the "cycle time" from identification of emergent user requirements, priorities and fielding. The GCSS-MC acquisition strategy will deliver capabilities in block increments. Each "Block" capability will follow a complete acquisition process in accordance with the DOD 5000 publications and OSD's Enterprise Integration roadmap. Blocks will include emergent user priorities, advanced technology improvements and expanded functionality. Each Block will repeat the complete acquisition program cycle going through a milestone (MS) C Full Rate Production Decision Review for each Block. Block 1 is divided into two major independent releases: Enterprise Release 1.1 and Deployed Access Release 1.2. Each release will have Initial Operational Capability (IOC) and Full Operational Capability (FOC) and is divided into two main phases: Planning/Blueprinting and Realization/Transition. More substantial software improvement/system upgrades will be fielded with each Block as required and prioritized by the user community. This approach differs from the original plan of delivering one release due to the technical complexities related to the overall scope of the solution. GCSS-MC was designated an Acquisition Category (ACAT) IAM program in March 2004 and successfully completed a MS B review on June 8, 2007. MS C review is slated for the 2nd Quarter FY10 with fielding beginning in 4th Quarter FY12.

In June 2008, Headquarters Marine Corps Command, Control, Communications and Computers was briefed on the Block 1 architectural approach and validated the approach as technically sound and essential to support deployed forces. FOC is validated when all Marine Corps ground components are using capabilities provided by GCSS-MC to include formal schools, and selected Marine Reserve Components and the following systems are no longer used operationally: Supported Activities Supply System, Marine Corps Integrated Maintenance Management System (MIMMS), PC MIMMS, and Asset Tracking Logistics Automated Support System I.
TRANSPORTATION SYSTEMS PORTFOLIO (TSP) conducts research and development currently executed under multiple contracts ending at various times across the FYDP. These contracts support the testing of the joint deployment and sustainment systems along with the USMC legacy systems.
JOINT FORCES REQUIREMENT GENERATOR II (JFRG II) conducts research and development currently executed under a five-year contract ending Dec 2011. This contract supports the testing of software for functionality with service users then passed on to Defense Information Systems Agency (DISA) for security & interoperability testing and released as a Global Command and Control Systems (GCCS) mission application. This is conducted based on a six-month release schedule of GCCS, with a six-month lead time for each JFRG II version release.
PUBLIC KEY INFRASTRUCTURE (PKI) is a DOD ACAT IAM Program. At the service level, the USMC PKI program is being managed as an Abbreviated Acquisition Program. Based on an Assistant Secretary of Defense Acquisition Decision Memorandum, DOD PKI development will be conducted through a series of block upgrades. The functional enhancement, changes will result in increased capability and functionality for PKI and increase the levels of security and assurance which affects mitigation of identified risks. There are thirteen functional and five assurance enhancements. Additionally, PKI functionality will be expanded to the SIPRNET.
AUTOMATED IDENTIFICATION TECHNOLOGY (AIT) hardware in the Operating Forces keeps pace with industry computer hardware technical improvements. AIT will support all aspects of Active RFID, pRFID, and UID. AIT evaluates emerging technologies, new equipment, and performs integration analysis and testing.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2510: *MAGTF CSSE & SE*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GCSS Logistics Chain Man-Block 1	Various/FP	Oracle USA Reston, VA	122.241	34.344	Jan 2010	18.500	Jan 2011	0.000		18.500	Continuing	Continuing	Continuing
GCSS LCM Block 1 Release 1.2	C/FP	OSEC Stafford, VA	0.000	4.000	Sep 2010	0.000		0.000		0.000	0.000	4.000	Continuing
GCSS LCM Block 1 Release 1.1	C/FP	EDO Stafford, VA	0.000	2.500	Mar 2010	0.000		0.000		0.000	0.000	2.500	Continuing
PKI	C/FFP	Various Various	3.760	1.743	May 2010	1.312	May 2011	0.000		1.312	Continuing	Continuing	Continuing
AIT	C/FFP	Stanley Dumfries, VA	2.853	2.089	Dec 2009	2.041	Dec 2010	0.000		2.041	Continuing	Continuing	Continuing
VAR	Various/ Various	Various Various	17.201	0.400		0.262		0.000		0.262	Continuing	Continuing	Continuing
		Subtotal	146.055	45.076		22.115		0.000		22.115			

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
VAR	Various/ Various	Various Various	1.213	0.000		0.000		0.000		0.000	0.000	1.213	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2510: *MAGTF CSSE & SE*	

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	1.213	0.000		0.000		0.000		0.000	0.000	1.213	

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MCHS	WR	SPAWAR Charleston, SC	8.075	1.558	Jan 2010	1.508	Jan 2011	0.000		1.508	Continuing	Continuing	Continuing
GCSS Logistics Chain Man	WR	Various Various	2.549	4.700		1.000	Dec 2011	0.000		1.000	Continuing	Continuing	Continuing
Various	Various/ Various	Various Various	11.754	1.127		0.921		0.000		0.921	Continuing	Continuing	Continuing
		Subtotal	22.378	7.385		3.429		0.000		3.429			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2510: *MAGTF CSSE & SE*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GCSS Log C2 Systems	C/FFP	Northrop Grumman Stafford, VA	8.000	6.745	Jan 2010	6.735	Jan 2011	0.000		6.735	Continuing	Continuing	Continuing
GCSS Log C2 Systems	C/FFP	Various Various	7.784	2.600	Mar 2010	1.259	Dec 2010	0.000		1.259	Continuing	Continuing	Continuing
Various	Various/ Various	Various Various	3.980	0.000		0.000		0.000		0.000	0.000	3.980	Continuing
		Subtotal	19.764	9.345		7.994		0.000		7.994			

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	189.410	61.806		33.538		0.000		33.538			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 2510: *MAGTF CSSE & SE*

GCSS-MC Program Schedule

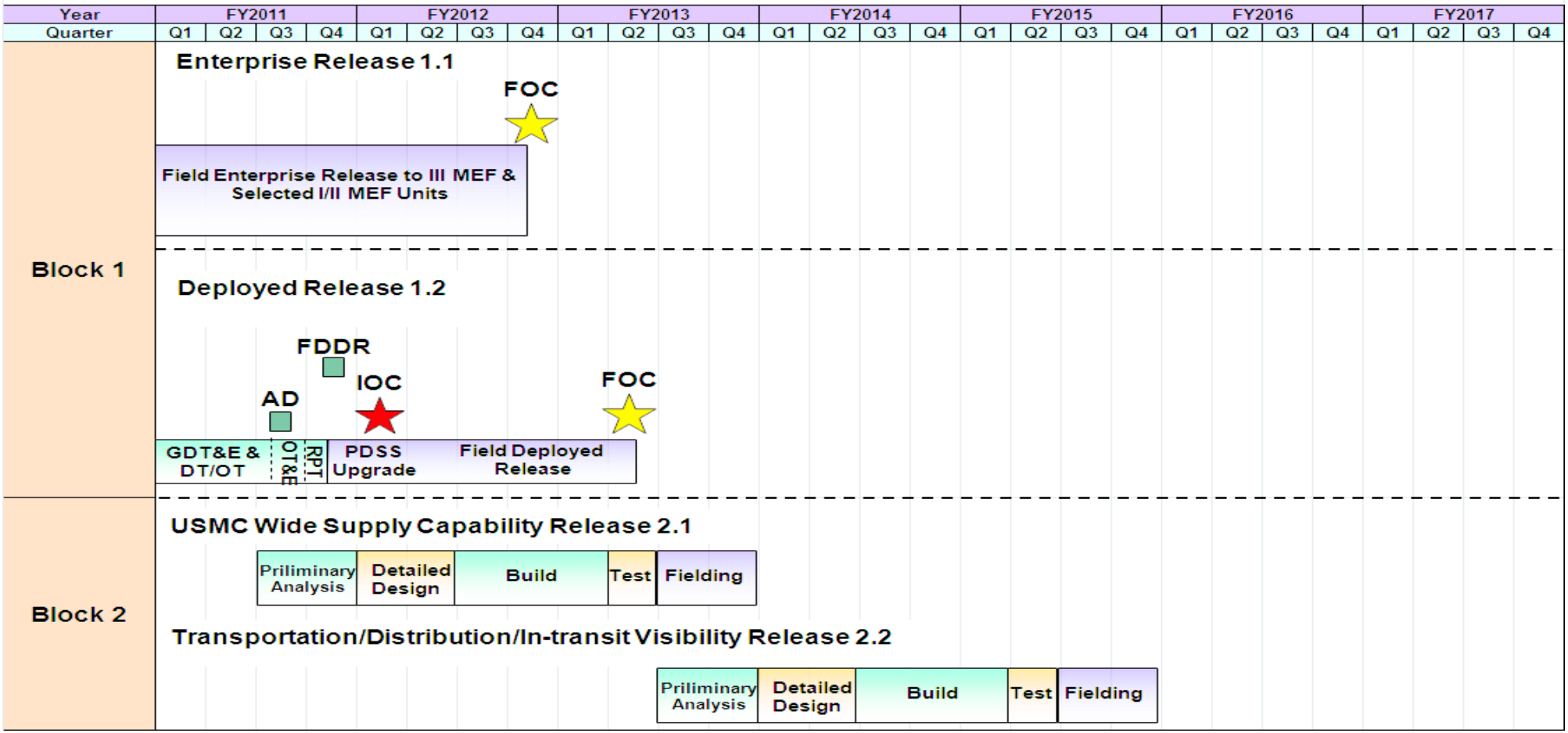

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206313M: *Marine Corps Comms Systems*	**PROJECT** 2510: *MAGTF CSSE & SE*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
GCSS-MC Logistics Chain Mgt Block 1 Release 1.1 FOC	4	2012	4	2012
GCSS-MC Logistics Chain Mgt Block 1 Release 1.2 IOC	1	2012	1	2012
GCSS-MC Logistics Chain Mgt Block 1 Release 1.2 AD	3	2011	3	2011
GCSS-MC Logistics Chain Mgt Block 1 Release 1.2 FOC	2	2013	2	2013

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 3099: *Radar System*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3099: *Radar System*	108.928	17.566	24.893	0.000	24.893	34.317	34.344	8.216	8.834	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

G/ATOR FY2009 funding is resides in two (2) seperate Project Codes, FY2009 C3009D and C9C89B. All current and future funding from FY2010 through out the FYDP will reside in C9C89B.

A. Mission Description and Budget Item Justification

Ground/Air Task Oriented Radar (G/ATOR) (formerly known as the Multi-Role Radar System (MRRS)) is an expeditionary, 3-dimensional, high-mobility, multi-purpose wheeled vehicle, short/medium range multi-role radar designed to detect cruise missiles, air breathing targets, rockets, mortars, and artillery. MRRS and GWLR (Ground Weapons Locating Radar) merged into a single requirement/capability (G/ATOR) and will replace an aging fleet of single mission legacy radar systems. G/ATOR will support air defense, air surveillance, counter-battery/target acquisition, aviation radar tactical enhancements and the final evolution will also support the Air Traffic Control mission. (This project was funded under project C3099 prior to FY2010)

Long Range Radar (AN/TPS-59(V)3) - is a three dimensional ground-based sensor that can detect and track long range Air Breathing Targets (ABT) at ranges of 300 nautical miles and Tactical Ballistic Missiles (TBM) at ranges of 400 nautical miles. The system is beset with increasing obsolescence and Diminishing Manufacturing Sources (DMS) issues. The program will use a Post Production Support (PPS) contract to develop engineering changes to resolve DMS. A Product Improvement Program (PIP) will upgrade the system to enhance system capabilities and ensure continued viability against emerging threats.

Family of Target Acquistion Systems (FTAS) - The FTAS provides the MAGTF the capability to locate, identify and attack enemy indirect fire weapons systems and observe and direct friendly artillery fire. The FTAS consists of the AN/TPQ-46 Firefinder radar, the AN/TPQ-48 Lightweight Counter Mortar Radar and the Target Processing Set. The FTAS is critical in the execution of counterfire and the integration of target acquisition information enabling attack by MAGTF assets. The FTAS also provides artillery firing units the ability to conduct artillery registration and other firendly fire missions. The FTAS encompasses the equipment required to support target acquisition within the target acquisition platoon and is resident in the headquarters battery of each artillery regiment. FY09-FY15 funds will be used to address engineering issues that arise due to DMS items within the Family of Target Acquisition Systems.

Short/Medium Range Air Defense Radar (SHORAD) - The Short/Medium Range Air Defense Radar AN/TPS-63B is a two-dimensional, medium-range, medium altitude, transportable radar system which is doctrinally employed as a tactical gap-filler or as an early warning system for early deployment into the operational area. It

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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has a 360-degree air surveillance capability at a range of 160 miles and complements the co-employed AN/TPS-59(V)3 three-dimensional, long-range, air surveillance radar system. The Short/Medium Range Air Defense Radar will develop engineering change proposals related to improved system performance with the specific purpose of meeting increased fleet operational requirements. AN/TPS-63 modifications and system improvements will be researched and analyzed to determine which complement existing components to preclude an expensive USMC investment in solid-state radar technology.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*GWLR/FTAS: Program office management/travel. GWLR is a sustainment and upgrade program for the current AN/TPQ-46A radar. The upgrade will be accomplished through a series of engineering change proposals (antenna transceiver group re-cap, Radar Processor re-host, and the lightweight computer unit replacement). Engineering Change Proposals (ECPs) will be conducted by the equipment Primary Inventory Control Agent (PICA) (Army PM Firefinder) with USMC participation. Joint procurement of hardware will realize economy of scale savings and ensure common configuration. Army and Marine Corps Depot facilities will be utilized to perform hardware installation. Purpose of the upgrade is to enhance performance and availability. *FY 2009 Accomplishments:* MCSC ALBANY - Supported the Tech Manual validation, pre-audit on the AN/TPQ-46B preparing for the Physical Configuratoin Audit. *FY 2010 Plans:* Travel funding for the ALBANY MARCORSYSCOM support for conferences and site visits.	0.080	0.050	0.000	0.000	0.000
*GWLR/FTAS: Contractor GWLR is a sustainment and upgrade program for the current AN/TPQ-46A radar. The upgrade will be accomplished through a series of engineering change proposals (antenna transceiver group re-cap, Radar Processor re-host, and the lightweight computer unit replacement). Engineering Change Proposals (ECPs) will be conducted by the equipment Primary Inventory Control Agent (PICA) (Army PM Firefinder) with USMC participation. Joint procurement of hardware will realize economy of scale	0.718	0.582	0.637	0.000	0.637

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
savings and ensure common configuration. Army and Marine Corps Depot facilities will be utilized to perform hardware installation. Purpose of the upgrade is to enhance performance and availability. *FY 2009 Accomplishments:* Dahlgren - Engineering Support for the Family of Target Acquisition systems support the Correlation and Fusion to include market studies (RFI's). *FY 2010 Plans:* NSWC CRANE - Government Engineering Support to include Correlation and Fusion, Dahlgren - Engineering Support for the Family of Target Acquisition systems to support the Correlation and Fusion as well as market studies (RFI's). *FY 2011 Base Plans:* CECOM - supporting the SW/HW Engineering Chancge Proposal's and Diminishing Manufacturing Systems.					
*GWLR/FTAS: Software/Hardware ECP's GWLR is a sustainment and upgrade program for the current AN/TPQ-46A radar. The upgrade will be accomplished through a series of engineering change proposals (antenna transceiver group re-cap, Radar Processor re-host, and the lightweight computer unit replacement). Engineering Change Proposals (ECPs) will be conducted by the equipment Primary Inventory Control Agent (PICA) (Army PM Firefinder) with USMC participation. Joint procurement of hardware will realize economy of scale savings and ensure common configuration. Army and Marine Corps Depot facilities will be utilized to perform hardware installation. Purpose of the upgrade is to enhance performance and availability. *FY 2010 Plans:* Dahlgren - continuation of services from FY09 and ongoing. Crane - Correlation and Fusion.	0.000	0.165	0.175	0.000	0.175

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Dahlgren - continuation of services from FY09 and ongoing. CECOM - supporting the SW/HW Engineering Change Proposal's and Diminishing Manufacturing Systems efforts.					
*GWLR/FTAS: System Diminishing Manufacturing Sources (DMS) GWLR is a sustainment and upgrade program for the current AN/TPQ-46A radar. The upgrade will be accomplished through a series of engineering change proposals (antenna transceiver group re-cap, Radar Processor re-host, and the lightweight computer unit replacement). Engineering Change Proposals (ECPs) will be conducted by the equipment Primary Inventory Control Agent (PICA) (Army PM Firefinder) with USMC participation. Joint procurement of hardware will realize economy of scale savings and ensure common configuration. Army and Marine Corps Depot facilities will be utilized to perform hardware installation. Purpose of the upgrade is to enhance performance and availability. *FY 2010 Plans:* Dahlgren - continuation of services from FY09 and ongoing. Crane - Correlation and Fusion. *FY 2011 Base Plans:* Dahlgren - continuation of services from FY09 and ongoing. CECOM - supporting the SW/HW Engineering Change Proposal's and Diminishing Manufacturing Systems efforts.	0.000	1.006	1.040	0.000	1.040
*G/ATOR: Contractor Technical, Development Engineering/EDM *FY 2009 Accomplishments:* Engineering Development Model (EDM) design effort continuation. Critical Design Review, software development, and Partial Array (prototype) delivery and near field range testing.	80.158	0.000	0.000	0.000	0.000
*G/ATOR: Program Office Management & Travel Costs	1.198	0.000	0.000	0.000	0.000

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Government personnel/travel and contractor engineering design support was completed.					
*G/ATOR: Government Tech Support *FY 2009 Accomplishments:* MITRE and NSWC Dahlgren Software Engineerng Support (management, requirements mapping, code walk through) and Radar Engineering Support.	6.920	0.000	0.000	0.000	0.000
*G/ATOR: Engineering, Management, & Logistics Support *FY 2009 Accomplishments:* Critical Design Review completed.	4.400	0.000	0.000	0.000	0.000
*SHORT/MEDIUM RANGE AIR DEFENSE RADAR: Life Extension Study The Short/Medium Range Air Defense Radar AN/TPS-63B is a two-dimensional, medium-range, medium altitude, transportable radar system which is doctrinally employed as a tactical gap-filler or as an early warning system for early deployment into the operational area. It has a 360-degree air surveillance capability at a range of 160 miles and complements the co-employed AN/TPS-59(V)3 three-dimensional, long-range, air surveillance radar system. *FY 2009 Accomplishments:* Continued to assess the TORA reports for future ECPs to maintain readiness of radar systems. *FY 2010 Plans:* To provide better configuration management to the current systems by on site visits and field configuration survey. AN/TPS-63 modifications and system improvements will be researched and analyzed to determine which complement existing components.	0.115	0.220	0.197	0.000	0.197

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: To provide better configuration management to the current systems by on site visits and field configuration survey. Continuing developing effort to resolve ongoing DMSMS issues and ensure current sustainment efforts.					
*SHORT/MEDUIM RANGE AIR DEFENSE RADAR: Engineering and Technical Support (IFF)	0.133	0.000	1.027	0.000	1.027
The Short/Medium Range Air Defense Radar AN/TPS-63B is a two-dimensional, medium-range, medium altitude, transportable radar system which is doctrinally employed as a tactical gap-filler or as an early warning system for early deployment into the operational area. It has a 360-degree air surveillance capability at a range of 160 miles and complements the co-employed AN/TPS-59(V)3 three-dimensional, long-range, air surveillance radar system. The radar also provides a time-shared display of radar and Identification Friend or Foe (IFF) data. The Short/Medium Range Air Defense Radar will develop engineering change proposals related to improved system performance with the specific purpose of meeting increased fleet operational requirements. AN/TPS-63 modifications and system improvements will be researched and analyzed to determine which complement existing components to preclude an expensive USMC investment in solid-state radar technology. *FY 2009 Accomplishments:* On going effort to develop engineering change proposals related to improved system performance with the specific purpose of meeting increased fleet operational requirements. *FY 2011 Base Plans:* Research and development efforts are needed to be Mode 5 Identification Friend or Foe (IFF) compliant and provide the communication link to pass critical IFF data to the TAOC.					
*AN/TPS-59 : Develop Engineering Change Proposals	14.493	14.293	19.568	0.000	19.568

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
The program will address Diminishing Manufacturing Sources (DMS) issues by continuing use of a Post Production Support (PPS) contract. The AN/TPS-59 Incremental Sustainment is a two-phased acquisition approach to address Diminishing Manufacturing Systems for the AN/TPS-59(V)3 Radar System. *FY 2009 Accomplishments:* Data Processor Group, Tech Refresh continued started in FY08 and to continue in FY10 and FY11. *FY 2010 Plans:* Lockheed Martin and Sensis - Engineering Change Proposal support, Lockheed Martin - Diminishing Manufacturing Systems reports, Lockheed Martin - software integration, Mode 5 trade study, DO54 Processor Tech Refresh and S/W Radar Environmental Simulator. *FY 2011 Base Plans:* Lockheed Martin and Sensis - Engineering Change Proposal support, Lockheed Martin - Diminishing Manufacturing Systems reports, Lockheed Martin - software integration, Mode 5 trade study, DO54 Processor Tech Refresh and S/W Radar Environmental Simulator.					
*AN/TPS-59 : Contractor service support. The program will address Diminishing Manufacturing Sources (DMS) issues by continuing use of a Post Production Support (PPS) contract. The AN/TPS-59 Incremental Sustainment is a two-phased acquisition approach to address Diminishing Manufacturing Systems for the AN/TPS-59(V)3 Radar System. *FY 2009 Accomplishments:* Over Seas Contingency Operations with contractor oversight support. Technical refresh and provide procurement of the Government furnished properties in support of the Digital Processor Group Technology Refresh effort with Lockheed Martin Corporation. Modeling and Simulation effort support.	0.713	1.250	2.249	0.000	2.249

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Provided programmatic and technical support for the Air Force for the 3 Dimensional Expeditionary Long Range Radar program. *FY 2010 Plans:* MCOTEA/MCTSSA - Testing events, MITRE - Engineering support, Lockheed Martin - PMO/IPT, MDIOC - Modeling and Simulation, MCSC - Program Management Support. *FY 2011 Base Plans:* MCOTEA/MCTSSA - Testing events, MITRE - Engineering support, Lockheed Martin - PMO/IPT, MDIOC - Modeling and Simulation, MCSC - Program Management Support.					
Accomplishments/Planned Programs Subtotals	108.928	17.566	24.893	0.000	24.893

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PMC/46501: *Short/Medium Range Radar Mods*	0.419	0.700	0.694	0.000	0.694	0.720	6.690	0.743	0.755	Continuing	Continuing
• PMC/46502: *AN/TPS-59*	24.230	4.285	0.000	0.000	0.000	7.594	40.316	28.349	29.283	Continuing	Continuing
• PMC/46503: *FAMILY OF TARGET ACQUISITION SYSTEMS*	17.663	5.837	0.166	0.000	0.166	3.671	3.134	2.143	2.202	Continuing	Continuing
• PMC/46504: *G/ATOR*	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.056

D. Acquisition Strategy

Ground/Air Task Oriented Radar (G/ATOR), formerly known as Multi-Role Radar System (MRRS) will fill the MRRS and GWLR requirements. Five legacy systems (AN/TPS-63, AN/UPS-3, AN/MPQ-62, AN/TPS-73 and AN/TPQ-46A) will be replaced by a single material design that offers an opportunity to reduce development cost and combine training & logistics assets. MRRS Aviation Authorized Acquisition Objective (AAO) is 43 systems replacing the AN/TPS-63, AN/MPQ-62 and AN/TPS-73 systems as well as additional systems in support of the SHORAD mission (CLAWS weapon cue); MRRS Ground AAO is 38 systems, a one for one replacement of the

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 3099: *Radar System*

AN/TPQ-46A. The System Development & Demonstration (SDD) phase designed to allow for technology insertion due to obsolescence and technology growth issues. Initial builds will be back fitted to current then year technology as required. As they become available Tactical Enhancements will parallel field to then year initial builds and back fitted to earlier builds. Two Engineering Development Models (EDM) -- one Contractor, one Government -- will be developed during the SDD phase and flowed down to support builds.

Long Range Radar (AN/TPS-59(V)3) - The program will address Diminishing Manufacturing Sources (DMS) issues by continuing use of a Post Production Support (PPS) contract. The AN/TPS-59 Incremental Sustainment is a two-phased acquisition approach to address Diminishing Manufacturing Systems for the AN/TPS-59(V)3 Radar System.

Family of Target Acquisition Systems (FTAS) - is a sustainment and upgrade program for the current AN/TPQ-46A radar. The upgrade will be accomplished through a series of engineering change proposals (antenna transceiver group re-cap, Radar Processor re-host, and the lightweight computer unit replacement). Engineering Change Proposals (ECPs) will be conducted by the equipment Primary Inventory Control Agent (PICA) (Army PM Firefinder) with USMC participation. Joint procurement of hardware will realize economy of scale savings and ensure common configuration. Army and Marine Corps Depot facilities will be utilized to perform hardware installation. Purpose of the upgrade is to enhance performance and availability.

Short/Medium Range Air Defense Radar (SHORAD) - The program will identify, address and support resolution of emergent Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues in order to keep the radar operational, prevent mission failure, and ensure safety to fleet. The AN/TPS-63B must remain in operation until replaced by the Ground/Air Task Oriented Radar (G/ATOR).

E. Performance Metrics

Milestone Reviews

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/TPS-59	C/CPFF	LOCKHEED MARTIN SYRACUSE, NY	39.707	12.868	Jan 2010	19.568	Jan 2011	0.000		19.568	0.000	72.143	Continuing
AN/TPS-59	C/CPFF	SENSIS SYRACUSE, NY	0.800	0.300	Jul 2010	0.000		0.000		0.000	0.000	1.100	Continuing
SHORT/MEDIUM RANGE	C/CPFF	NORTHROP GRUMMAN Not Specified	0.000	0.220	Mar 2010	1.224	Jan 2011	0.000		1.224	0.000	1.444	Continuing
		Subtotal	40.507	13.388		20.792		0.000		20.792	0.000	74.687	

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
FTAS	WR	NSWC, DAHLGREN DAHLGREN	5.105	0.493	Nov 2009	0.000		0.000		0.000	0.000	5.598	Continuing
FTAS	MIPR	CECOM FT MONMOUTH	1.932	0.000		1.040	Jan 2011	0.000		1.040	0.000	2.972	Continuing
FTAS	WR	MCLB BARSTOW	1.200	0.000		0.000		0.000		0.000	0.000	1.200	Continuing

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

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
FTAS	WR	NSWC, CRANE CRANE, IN	1.180	0.670	Nov 2009	0.175	Nov 2010	0.000		0.175	0.000	2.025	Continuing
FTAS	C/FFP	MCSC QUANTICO	0.253	0.640	Jun 2010	0.637	Jan 2011	0.000		0.637	0.000	1.530	Continuing
		Subtotal	9.670	1.803		1.852		0.000		1.852	0.000	13.325	

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/TPS-59	C/CPFF	MCSC QUANTICO	6.867	1.750	Dec 2009	1.349	Dec 2010	0.000		1.349	0.000	9.966	Continuing
AN/TPS-59	C/CPFF	MITRE Not Specified	0.400	0.625	Oct 2009	0.900	Oct 2010	0.000		0.900	0.000	1.925	Continuing
FTAS	WR	MCSC QUANTICO	0.504	0.000		0.000		0.000		0.000	0.000	0.504	Continuing
		Subtotal	7.771	2.375		2.249		0.000		2.249	0.000	12.395	

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
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	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	57.948	17.566		24.893		0.000		24.893	0.000	100.407	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
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Family of Target Acquisition Systems (FTAS/GWLR) Program Schedule

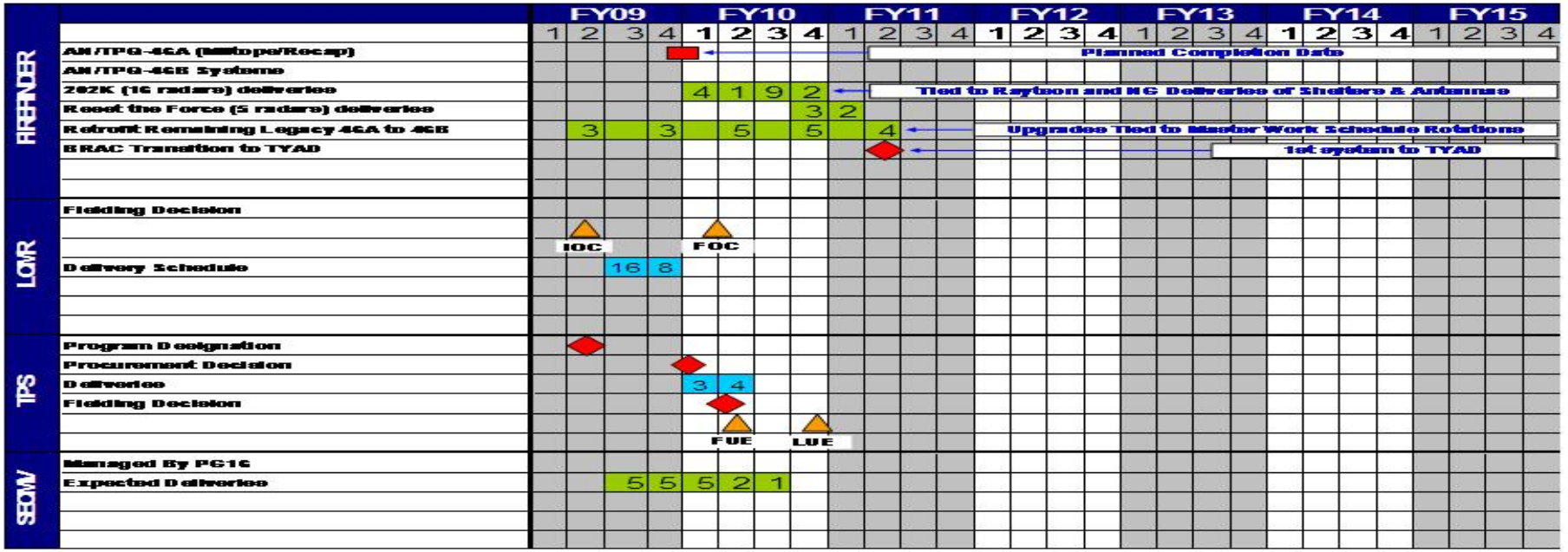

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 3099: *Radar System*

AN/TPS-59 Product Improvement Program (PIP) Program Schedule

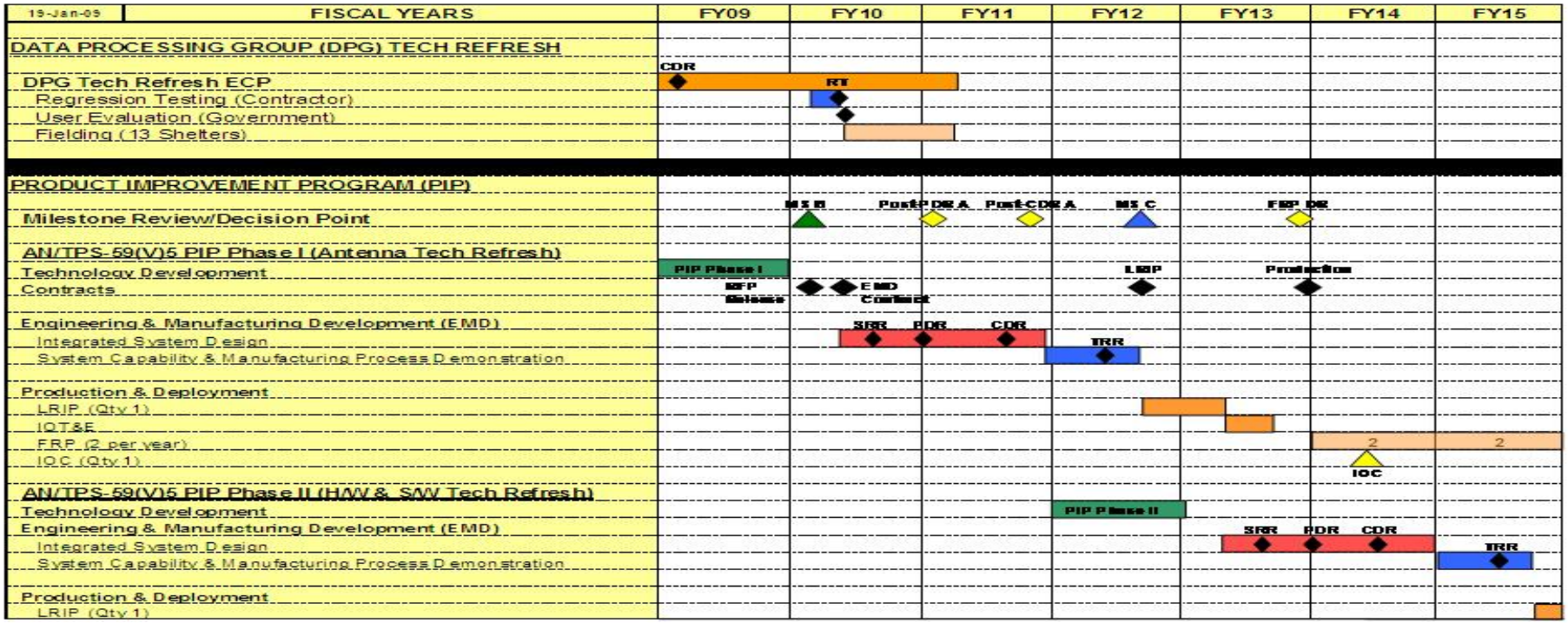

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 3099: *Radar System*

GROUND AIR TASK ORIENTED RADAR
G/ATOR SCHEDULE C3099

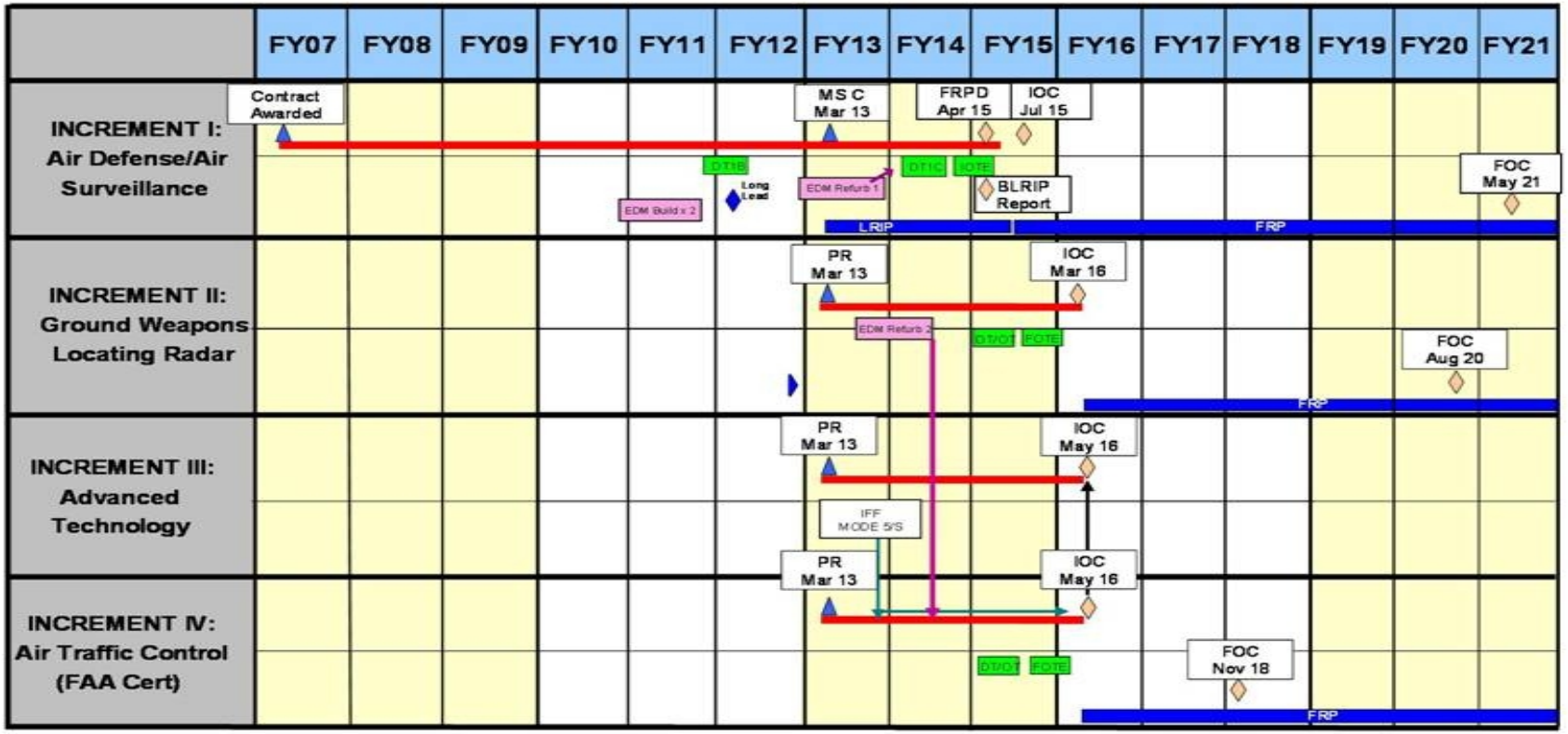

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 3099: *Radar System*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
G/ATOR System Development and Demonstration Phase	1	2009	2	2013
G/ATOR System Demonstration (DT)(1B)	4	2012	2	2013
G/ATOR System Demonstration (DT/OT)(1C)	1	2014	3	2014
G/ATOR Operational Assessment (OA)	3	2012	3	2012
G/ATOR Long Lead Items (EDM, LRIP & Production)	2	2013	1	2015
G/ATOR Milestone C	2	2013	2	2013
G/ATOR Full Rate Production Decision	3	2014	3	2014
G/ATOR IOT&E	4	2014	1	2015
G/ATOR IOC	4	2015	4	2015
G/ATOR Full Rate Production	4	2015	4	2015
GWLR IOC	2	2009	2	2009
GWLR FOC	1	2010	1	2010
G/ATOR Advance Technology Program Reviews (PR)	3	2012	3	2012
G/ATOR Air Traffic Control Capability Not Currently Funded Program Reviews (PR)	4	2015	4	2015
G/ATOR Air Traffic Control Capability Not Currently Funded IOC	2	2014	2	2014
AN/TPS-59 Sustainment IFF Mode 5 Upgrade	1	2009	4	2009
AN/TPS-59 Sustainment Post Fielding Software Updates	1	2009	4	2009
AN/TPS-59 PIP Concept and Technology MS-B Documentation	1	2010	1	2010

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 3099: *Radar System*

	Start		End	
Event	Quarter	Year	Quarter	Year
AN/TPS-59 PIP Concept and Technology System Design	2	2010	3	2012
AN/TPS-59 PIP Concept and Technology System Integration (EDM)	3	2011	1	2012
AN/TPS-59 PIP Concept and Technology System Demo/Op Change (DT/OT)	1	2012	2	2012
AN/TPS-59 PIP Concept and Technology Milestone C	3	2012	3	2012
AN/TPS-59 Production Phase LRIP	3	2012	2	2013
AN/TPS-59 Production Phase IOT&E	3	2013	4	2013
AN/TPS-59 Production Phase IOC	2	2014	2	2014

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9999: *Congressional Adds*	15.380	6.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	73.641
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Battlefield Sensor Netting System - This is a system using several sensors in a battlefield area, with groups of sense in communication with sensor netting stations. Each sensor netting station broadcasts air traffic data to terminal users in its area. The sensors may be radars, infrared detectors, etc. The sensor netting station includes communications to each sensor, processing facilities for handling aircraft I.D. and eliminating redundant targets, and communications to terminal users. The terminal users may include missile or gun batteries, tank or infantry columns, etc. This funds the development of increasing timeliness and accuracy to better engage aircraft and missiles earlier.

Mobile Modular Command and Control (M2C2) - The development of Mobile Modular Command and Control (M2C2) technology provides the Marine Operating Forces with an on-the-move command and control (OTM C2) capability with over the horizon (OTH) communication links. The Congressional funding will help to baseline the M2C2 capability and prepare it for transition into an acquistion program of record, the Command Operations Center (COC).

Performance Enhancements for IA/IS - Add will enable the USMC the ability to provide the development, maintenance, and the technical support for advanced software configurations of Wide Area Network (WAN) Connection Assurance and Acceleration (WCAA).

Marine Corps Intelligence Analysis System - IAS Family of Systems (FOS) uses a three tiered approach for receiving, parsing, analyzing and disseminating fused all-source intelligence data that will be employed cross disciplinary approach in order to build a more powerful investigative and analytic toll that will provide semi-automatic means to predict insurgent's point of origin/bases.

Media Explotation Tool Integration with Intelligence C2 Systems- Digital media exploitation rapidly extracts data from enemy devices and media captured on the battlefield. Development of this tool will allow for collection/conversion of raw data into actionable intelligence for timely analysis/dissemination.

B. Accomplishments/Planned Program ($ in Millions)

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9999: *Congressional Adds*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
Congressional Add: Media Exploitation Tool Integration with Intelligence C2 Systems *FY 2010 Plans:* (C10C187) Digital media exploitation rapidly extracts data from enemy devices and media captured on the battlefield. Development of this tool will allow for collection/conversion of raw data into actionable intelligence for timely analysis/dissemination.	0.000	1.195
Congressional Add: BATTLEFIELD SENSOR NETTING *FY 2009 Accomplishments:* (C9C68A) Initiated the development of increasing timeliness and accuracy in order to better engage enemy aircraft and missiles earlier. *FY 2010 Plans:* Continuation of FY2009 effort.	2.394	2.390
Congressional Add: PERFORMANCE ENHANCEMENTS FOR IA & IS *FY 2009 Accomplishments:* (C9C69A) Add will enable the USMC the ability to provide the development, maintenance, and the technical support for advanced software configurations of Wide Area Network (WAN) Connection Assurance and Acceleration (WCAA). WCAA improves network performance with in existing connectivity as well as harden, test, certify and improve tactical configurations of the existing underlying technology. Additonal configurations and evaluations will identify selected information systems and virtual appliances, including replication and configuration services and measure anticipated performance improvements across wide-area networks with high latency and noise characteristics.	6.381	0.000
	1.516	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9999: *Congressional Adds*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
Congressional Add: Center for geospatial intelligence and investigati *FY 2009 Accomplishments:* (C9E20A) Planned Geospatial Research at Texas State University.		
Congressional Add: M2C2 *FY 2009 Accomplishments:* (C9E21A) M2C2 Transition Engineering Services - Engineering services contract to fund the M2C2 project engineering management team. Since M2C2 is a technology initiative and not an acquisition program of record, the project started from scratch in terms of basic staff members, acquisition documentation and establishment of processes. All these areas are now substantially mature. The M2C2 Transition project is now positioned for successful competition in POM-12 and the foundation has been laid for transition of the M2C2 technology into the Combat Operations Center program during the next two years. M2C2 Transition Prime Contract - Development of Mobile Modular Command and Control (M2C2) technology. M2C2 Urgent Universal Need Statement (U-UNS) Satellite Communications/Command and Control Development and Testing - Supported M2C2 U-UNS and the development of on-the-move wide-band satellite communications technology, command and control system optimization, and laboratory testing of the integrated systems/sub-systems. *FY 2010 Plans:* Mobile Modular Command and Control (M2C2) - Continues the development of Mobile Modular Command and Control (M2C2) technology and prepares it for transition into an acquisition program of record.	5.089	2.788
Congressional Adds Subtotals	15.380	6.373

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9999: *Congressional Adds*

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Congressional Add

E. Performance Metrics

Congressional Add

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9C89: *Marine Ground-Air Radar*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9C89: *Marine Ground-Air Radar*	38.000	63.660	55.173	0.000	55.173	14.449	7.137	5.984	6.112	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Ground/Air Task Oriented Radar (G/ATOR) (formerly known as the Multi-Role Radar System (MRRS)) is an expeditionary, 3-dimensional, high-mobility, multi-purpose wheeled vehicle, short/medium range multi-role radar designed to detect cruise missiles, air breathing targets, rockets, mortars, and artillery. MRRS and GWLR (Ground Weapons Locating Radar) merged into a single requirement/capability (G/ATOR) and will replace an aging fleet of single mission legacy radar systems. G/ATOR will support air defense, air surveillance, counter-battery/target acquisition, aviation radar tactical enhancements and the final evolution will also support the Air Traffic Control mission. (This project was funded under project C3099 prior to FY2010)

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*G/ATOR: Contractor Technical, Development Engineering/EDM	35.417	45.983	39.110	0.000	39.110
FY 2009 Accomplishments: Engineering Development Model (EDM) design effort continuation. Critical Design Review, software development, and Partial Array (prototype) delivery and near field range testing. *FY 2010 Plans:* EDM material procurement and fabrication. Contractor software integration and test, and contractor system integration and test. *FY 2011 Base Plans:* Environmental testing, Performance Qualification Testing, Factory Acceptance Testing, and begin Developmental Testing.					
*G/ATOR: Test and Evaluation	0.649	2.015	2.822	0.000	2.822

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9C89: *Marine Ground-Air Radar*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: MITER and Redstone Arsenal TEMP development. *FY 2010 Plans:* MCOTEA, General Dynamics, NSWC Corona, and Aberdeen Test Facility TEMP development. *FY 2011 Base Plans:* Environmental testin, Performance Qualification Testing, and being Developmental Testing.					
*G/ATOR: Program Office Management & Travel Costs *FY 2010 Plans:* Travel support for testing events scheduled in FY10. *FY 2011 Base Plans:* Continue travel efforts in support of program test events.	0.000	0.361	0.150	0.000	0.150
*G/ATOR: Government Technical Support *FY 2009 Accomplishments:* MITRE and NSWC Dahlgren Software Engineerng Support (management, requirements mapping, code walk through) and Radar Engineering Support. *FY 2010 Plans:* MITRE, NSWC Dahlgren, NSWC Crane, MARCORSYSCOM, MCOTEA Quantico Software Engineering (management, requirements mapping, code walk through) and Radar Engineering Support *FY 2011 Base Plans:* MITRE, NSWC Dahlgren, NSWC Crane, MARCORSYSTEM, MCOTEA.	0.908	8.534	7.491	0.000	7.491

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9C89: *Marine Ground-Air Radar*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*G/ATOR: Engineering, Management, & Logistics Support	1.026	6.767	5.600	0.000	5.600
FY 2009 Accomplishments: Critical Design Review completed and Supportability Analysis (Trade Study). *FY 2010 Plans:* Supportability Analysis update (Maintenance Plan), M-Demonstration, and training. *FY 2011 Base Plans:* Engineering Management & Logistics Support.					
Accomplishments/Planned Programs Subtotals	38.000	63.660	55.173	0.000	55.173

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PMC/465000: *GRND/AIR TASK ORIENTED RADAR*	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.445
• RDTE&N/C3099: *GRND/AIR TASK ORIENTED RADAR*	92.676	0.000	0.000	0.000	0.000	0.018	0.012	0.000	0.000	0.000	179.621

D. Acquisition Strategy

The Ground/Air Task Oriented Radar (G/ATOR), formerly known as Multi-Role Radar System (MRRS) will fill the MRRS and GWLR requirements. Five legacy systems (AN/TPS-63, AN/UPS-3, AN/MPQ-62, AN/TPS-73 and AN/TPQ-46A) will be replaced by a single material design that offers an opportunity to reduce development cost and combine training & logistics assets. MRRS Aviation systems replace the AN/TPS-63, AN/MPQ-62 and AN/TPS-73 systems as well as additional systems in support of the SHORAD mission (CLAWS weapon cue); MRRS Ground system is a one for one replacement of the AN/TPQ-46A. The System Development & Demonstration (SDD) phase designed to allow for technology insertion due to obsolescence and technology growth issues. Initial builds will be back fitted to current then year technology as required. As they become available, Tactical Enhancements will parallel field to then year initial builds and back fitted to earlier builds. Two Engineering Development Models (EDM) -- one Contractor, one Government -- will be developed during the SDD phase and flowed down to support builds.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9C89: *Marine Ground-Air Radar*

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9C89: *Marine Ground-Air Radar*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
G/ATOR	C/CPIF	NORTHRUP GRUMMAN LINTHICUM HEIGHTS, MD	35.147	45.983	Nov 2009	39.110	Nov 2010	0.000		39.110	Continuing	Continuing	Continuing
		Subtotal	35.147	45.983		39.110		0.000		39.110			

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
G/ATOR	MIPR	MITRE BOSTON, MA	0.338	0.480	Nov 2009	0.504	Nov 2010	0.000		0.504	Continuing	Continuing	Continuing
G/ATOR	WR	NSWC-DAHLGREN DAHLGREN, VA	0.570	6.965	Nov 2009	6.010	Nov 2010	0.000		6.010	Continuing	Continuing	Continuing
G/ATOR	WR	NSWC-CRANS CRANE, ID	0.000	0.660	Nov 2009	0.530	Nov 2010	0.000		0.530	Continuing	Continuing	Continuing
G/ATOR	C/FP	MCSC QUANTICO, VA	0.000	0.107	Nov 2009	0.107	Nov 2010	0.000		0.107	Continuing	Continuing	Continuing
G/ATOR	WR	MCOTEA QUANTICO, VA	0.000	0.322	Nov 2009	0.340	Nov 2010	0.000		0.340	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9C89: *Marine Ground-Air Radar*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.908	8.534		7.491		0.000		7.491			

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
G/ATOR	WR	MCOTEA QUANTICO, VA	0.000	0.322	Nov 2009	0.350	Nov 2010	0.000		0.350	Continuing	Continuing	Continuing
G/ATOR	C/FP	GENERAL DYNAMICS STAFFORD, VA	0.000	0.450	Nov 2009	0.500	Nov 2010	0.000		0.500	Continuing	Continuing	Continuing
G/ATOR	MIPR	MITRE BOSTON, MA	0.539	0.640	Nov 2009	0.672	Nov 2010	0.000		0.672	Continuing	Continuing	Continuing
G/ATOR	WR	MCSC QUANTICO, VA	0.000	0.385	Nov 2009	0.300	Nov 2010	0.000		0.300	Continuing	Continuing	Continuing
G/ATOR	WR	NSWC-CORONA CORONA, CA	0.000	0.118	Dec 2009	0.300	Nov 2010	0.000		0.300	Continuing	Continuing	Continuing
G/ATOR	MIPR	US ARMY ABEREEND PROVING GROUND, MD	0.000	0.100	Dec 2009	0.350	Nov 2010	0.000		0.350	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9C89: *Marine Ground-Air Radar*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
G/ATOR	MIPR	MARINE CORP AIR STATION YUMA, AZ	0.000	0.000		0.350	Nov 2010	0.000		0.350	Continuing	Continuing	Continuing
G/ATOR	MIPR	REDSTONE ARSENAL ALABAMA	0.110	0.000		0.000		0.000		0.000	0.000	0.110	Continuing
		Subtotal	0.649	2.015		2.822		0.000		2.822			

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
G/ATOR1	C/FP	GENERAL DYNAMICS STAFFORD, VA	1.026	6.767	Nov 2009	5.400	Nov 2010	0.000		5.400	Continuing	Continuing	Continuing
G/ATOR2	WR	MCSC QUANTICO, VA	0.000	0.150	Oct 2009	0.150	Oct 2010	0.000		0.150	Continuing	Continuing	Continuing
G/ATOR3	C/FP	MCSC QUANTICO, VA	0.000	0.211	Oct 2009	0.200	Oct 2010	0.000		0.200	Continuing	Continuing	Continuing
		Subtotal	1.026	7.128		5.750		0.000		5.750			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9C89: *Marine Ground-Air Radar*	

Management Services ($ in Millions)

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

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	37.730	63.660		55.173		0.000		55.173			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9C89: *Marine Ground-Air Radar*

GROUND AIR TASK ORIENTED RADAR
G/ATOR SCHEDULE C9C89B

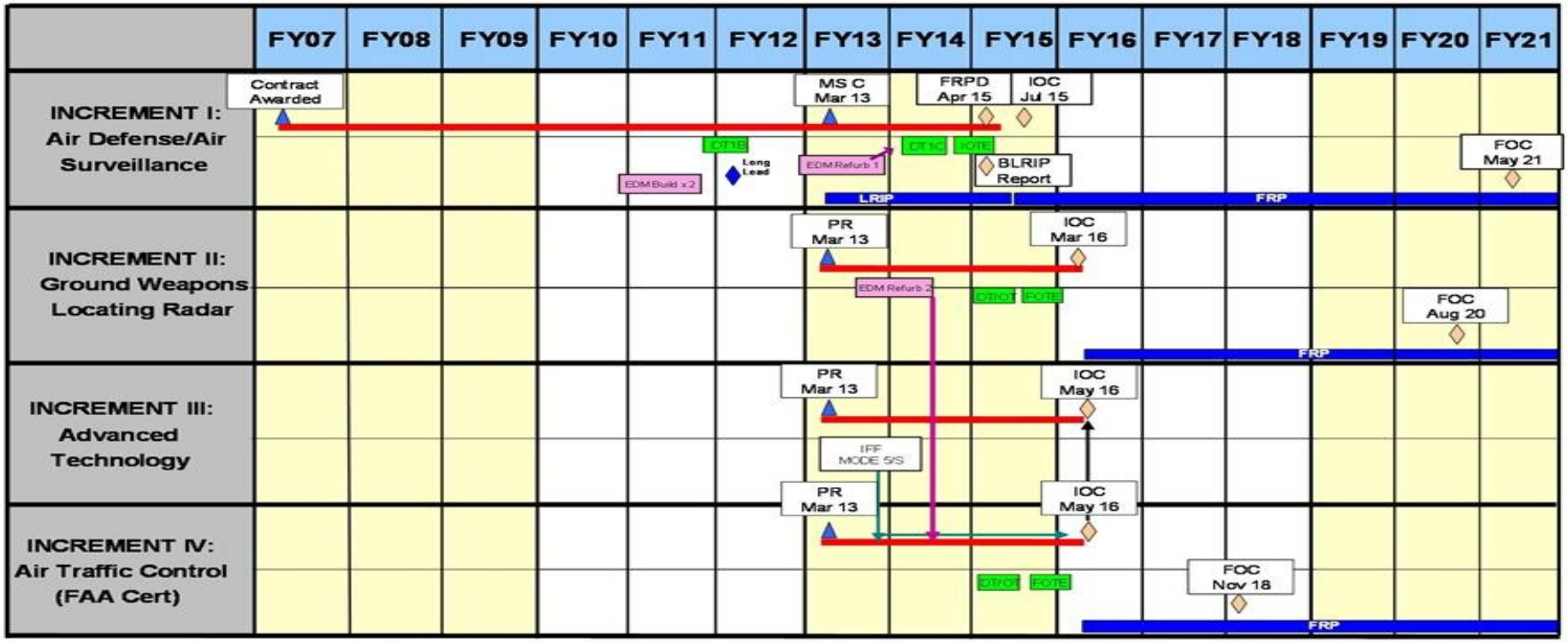

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206313M: *Marine Corps Comms Systems*	PROJECT 9C89: *Marine Ground-Air Radar*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
Defense/Air Surveillance Capability System Development and Demonstration Phase	1	2009	3	2013
Defense/Air Surveillance Capability System Demonstration (DT)(iB)	4	2011	2	2012
Defense/Air Surveillance Capability System Demonstration (DT/OT)(1C)	1	2014	3	2014
Defense/Air Surveillance Capability Operational Assessment (OA)	3	2012	3	2012
Defense/Air Surveillance Capability Long Lead Items (EDM, LRIP and Production)	2	2013	1	2015
Defense/Air Surveillance Capability Milestone C	2	2013	2	2013
Defense/Air Surveillance Capability Full Rate Production Decision	3	2015	3	2015
Defense/Air Surveillance Capability IOT&E	4	2014	1	2015
Defense/Air Surveillance Capability IOC	4	2015	4	2015
Defense/Air Surveillance Capability Full Rate Production	2	2015	4	2015
GWLR Program Reviews (PR)	2	2013	2	2013
GWLR System Demonstration (DT)	1	2015	2	2015
GWLR FOT&E	3	2015	4	2015
Advance Technology Program Review (PR)	2	2013	2	2013
Advance Technology IFF MODE 5/S Capabilities	2	2013	1	2014
Air Traffic Control Capability Not Currently Funded Program Review (PR)	2	2013	2	2013
Air Traffic Control Capability Not Currently Funded FOT&E	3	2015	4	2015
Air Traffic Control Capability Not Currently Funded System Demonstration (DT/OT)(1C)	1	2015	2	2015