Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force											Date: February 2015	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0303140F / *Information Systems Security Program*							
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	-	61.687	69.727	46.599	-	46.599	50.352	36.830	33.715	36.729	Continuing	Continuing
674861: *EKMS (Electronic Key Management System)*	-	1.993	0.592	0.633	-	0.633	0.931	0.948	0.964	0.980	-	7.041
675100: *Cryptographic Modernization*	-	53.930	59.773	29.068	-	29.068	46.425	34.136	30.984	33.951	Continuing	Continuing
675231: *AF Key Management Infrastructure (AF KMI)*	-	5.764	9.362	16.898	-	16.898	2.996	1.746	1.767	1.798	Continuing	Continuing

Note

In FY 2014, Project 677820, Computer Security Firestarter efforts were transferred to PE 0208088F, Air Force Defensive Cyberspace Operations to better align efforts.

A. Mission Description and Budget Item Justification

The Information Systems Security Program (ISSP) Element provides cradle-to-grave research, development, acquisitions, supply, sustainment, depot maintenance, and demilitarization of the Air Force (AF) cryptographic and key distribution/management systems. Additionally, ISSP funds the AF operation of one of two Department of Defense (DoD) Tier 1 key distribution centers. The AF and the DoD require the capability to secure, collect, process, store, and disseminate an uninterrupted flow of information, while denying an adversary the ability to intercept, collect, destroy, interpret, or manipulate our information flows. Secure communication allows the DoD to achieve and maintain decision superiority; the key to successful application of the military instrument of national power. AF COMSEC equipment protects information such as, warfighter positions, mission planning, target strikes, commanders' orders, intelligence, force strength, and force readiness. This COMSEC program ensures adversaries cannot interpret, manipulate, or destroy information. When an adversary is capable of interpretation, manipulation, or destruction of the information used by the warfighter, DoD military forces will suffer significant and/or devastating mission degradation that can result in loss of life and resources and/or cede information that could be used against the United States in a public forum.

The overall focus of the Research, Development, Test, and Evaluation (RDT&E) efforts within this program is to transform electronic key delivery and cryptographic devices to meet the next generation warfighting requirements. These efforts are driven by the National Security Agency's (NSA) tenets calling for (1) a totally "man-out-of-the-loop" electronic crypto key distribution system from the actual generation of the key in the key processor all the way into the using End Crypto Unit (ECU) (eliminates the current key vulnerability to compromise/interruption by individuals transporting or loading the key); and (2) an inventory of cryptographic devices that are more robust, modular, scalable, capable, net-centric, and durable (allows more effective and efficient performance including reduced inventory, expanded data rates, simplified upgrades, and ensured global information grid-compatibility).

This program is in Budget Activity 7, Operational System Development, as these budget activities include development efforts to upgrade systems currently fielded or have approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force					Date: February 2015
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*		R-1 Program Element (Number/Name) PE 0303140F / *Information Systems Security Program*			
B. Program Change Summary ($ in Millions)	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**
Previous President's Budget	74.530	70.497	86.005	-	86.005
Current President's Budget	61.687	69.727	46.599	-	46.599
Total Adjustments	-12.843	-0.770	-39.406	-	-39.406
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-10.500	-0.770			
• SBIR/STTR Transfer	-2.091	-			
• Other Adjustments	-0.252	-	-39.406	-	-39.406

Change Summary Explanation

Reductions in FY14 funding due to higher Air Force priorities.
Reductions in FY15 funding due to higher Air Force priorities.
Reductions in FY16 funding due to higher Air Force priorities.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303140F / *Information Systems Security Program*	Project (Number/Name) 674861 / *EKMS (Electronic Key Management System)*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
674861: *EKMS (Electronic Key Management System)*	-	1.993	0.592	0.633	-	0.633	0.931	0.948	0.964	0.980	-	7.041
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Air Force Electronic Key Management System (AFEKMS) consists of multiple developments supporting the Air Force requirements portion of the DoD EKMS Program. The National Security Agency (NSA) acts as the Executive Agency for the DoD EKMS Program. AFEKMS, in concert with the overarching DoD EKMS program, provides a secure and flexible capability for the electronic generation, distribution, accounting, and management of key material, with users across DoD Command, Control, Communications, Computers, and Intelligence (C4I) and all current AF weapon systems. Bases and units, in garrison and deployed DoD EKMS replaced the previous manual distribution and management system providing cryptographic keying material for U.S. DoD Information Assurance. Information Assurance emphasizes confidentiality, access control, multi-level secure databases, trusted computing, and information integrity. DoD EKMS has a three-tier hierarchical structure. This tiered structure provides capability to distribute, manage, and account for COMSEC keying material. Tier 1 installations comprise the key material generation and control capability. Tier 2 installations comprise the local distribution network (COMSEC accounts) and Tier 3 is where keying material is transferred from the EKMS infrastructure to the consumers End Cryptographic Units (ECUs). Additionally, AFEKMS resources provide maintenance/distribution of AF Communications Security (COMSEC) publications for all AF users.

EKMS improved protection of national security-related information by substantially enhancing confidentiality, integrity, and non-repudiation characteristics over the legacy manual key management systems. EKMS has and continues to greatly accelerate availability of crypto key materials through electronic transmission through Public Switched Telephone Network (PSTN) versus the manual handling and shipping of materials. While the current EKMS level-of-effort is directed at enhancing current and developing systems, the ultimate goal is for it to seamlessly transition to the net-centric DoD Key Management Infrastructure (KMI). The AFEKMS Program continues to provide software development to support emerging requirements during the KMI transition period. Activities include studies and analysis to support both current program planning and execution as well as development activities to extend life of the Simple Key Loader to bridge the gap between EKMS and the KMI implementation.

NOTE: Software development (e.g., Data Management Device - DMD, Common User Application Software - CUAS, and Simple Key Loader - SKL) is rolled up into Tier 2/Tier 3 Development. Software upgrades can be bundled and tracked as a unit, thereby allowing less management overhead and more focus on configuration management and control.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: AFEKMS Tier 2/3 SW Modification and Updates	1.993	-	-
Description: Data Management Device (DMD) software upgrade/update to mitigate existing IA vulnerabilities.			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 674861 / *EKMS (Electronic Key Management System)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Data Management Device (DMD) software upgrade/update to mitigate existing IA vulnerabilities. ***FY 2015 Plans:*** N/A ***FY 2016 Plans:*** N/A			
Title: Fill /Load Device Post Production SW Development ***Description:*** Post Production software development focuses on extending life of EKMS through transition to Key Management Infrastructure (KMI) capabilities. This will be accomplished via the Intermediary Application (iApp) software and Tri-Service development of KOV-21 replacement chip through Communications-Electronics Research, Development and Engineering Center (CERDEC) by U.S. Army. The iApp is designed to include all major Data Management Device (DMD) capabilities. The iApp is designed to meet certification and accreditation requirements and iApp user interface is designed for ease of adoption and minimal user training for EKMS DMD, Consolidated Tier 3 Testing Infrastructure (CETTI) User Application Software (UAS), and Simple Key Loader (SKL). The CERDEC effort develops a replacement KOV-21 Card for current Simple Key Loader (SKL) to extend life of SKL until KMI compatible key loader is available. ***FY 2015 Plans:*** Post Production software development focuses on extending life of EKMS through transition to Key Management Infrastructure (KMI) capabilities. This will be accomplished via the Intermediary Application (iApp) software and Tri-Service development of KOV-21 replacement chip through Communications-Electronics Research, Development and Engineering Center (CERDEC) by U.S. Army. The iApp is designed to include all major Data Management Device (DMD) capabilities. The iApp is designed to meet certification and accreditation requirements and iApp user interface is designed for ease of adoption and minimal user training for EKMS DMD, Consolidated Tier 3 Testing Infrastructure (CETTI) User Application Software (UAS), and Simple Key Loader (SKL). The CERDEC effort develops a replacement KOV-21 Card for current Simple Key Loader (SKL) to extend life of SKL until KMI compatible key loader is available. ***FY 2016 Plans:*** Continue Post Production software development on extending life of EKMS through transition to Key Management Infrastructure (KMI) capabilities.	-	0.592	0.633
Accomplishments/Planned Programs Subtotals	1.993	0.592	0.633

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 674861 / *EKMS (Electronic Key Management System)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPAF:BA03: 831010: *COMSEC Equipment*	2.015	2.150	3.000	-	3.000	2.641	1.247	1.252	1.041	Continuing	Continuing

Remarks

Other Program Funding reflects Air Force Electronic Key Management System (AFEKMS) portion of Information Systems Security Program (ISSP) OPAF total.

D. Acquisition Strategy

All major contracts within this Project are open to full and open competition with technology knowledge, expertise, and prior experience on similar projects weighted heavily in the evaluation process.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 674861 / *EKMS (Electronic Key Management System)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Tier 2/3 software modifications and updates	TBD	Various : ,	-	1.077	Sep 2014	-		-		-		-	Continuing	Continuing	-
Fill/Load Device Post Production Software Development	C/T&M	Mantech Sensor Technologies, Inc. : Red Bank, NY	-	-		-		-		-		-	Continuing	Continuing	-
Tri-Service CERDEC Chip	TBD	Various : ,	-	0.491	Apr 2015	0.464	Apr 2016	0.502	Apr 2017	-		0.502	Continuing	Continuing	-
		Subtotal	-	1.568		0.464		0.502		-		0.502	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SKL CETTI UAS Testing Spt DMS	MIPR	SPAWAR : San Diego, CA	-	0.125	May 2014	0.128	May 2015	0.131	May 2016	-		0.131	Continuing	Continuing	-
		Subtotal	-	0.125		0.128		0.131		-		0.131	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration (PMA)	C/CPFF	Various : ,	-	0.300	Jul 2014	-		-		-		-	Continuing	Continuing	-
		Subtotal	-	0.300		-		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 674861 / *EKMS (Electronic Key Management System)*	

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	1.993		0.592		0.633		-		0.633	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 674861 / *EKMS (Electronic Key Management System)*

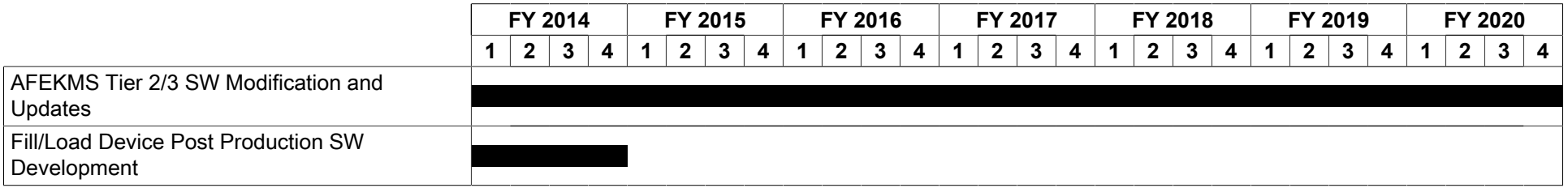

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 674861 / *EKMS (Electronic Key Management System)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
AFEKMS Tier 2/3 SW Modification and Updates	1	2014	4	2020
Fill/Load Device Post Production SW Development	1	2014	4	2014

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303140F / *Information Systems Security Program*	Project (Number/Name) 675100 / *Cryptographic Modernization*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
675100: *Cryptographic Modernization*	-	53.930	59.773	29.068	-	29.068	46.425	34.136	30.984	33.951	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The AF Cryptographic Modernization Effort modernizes cryptographic devices protecting critical national security information across cyber domain operations. In September 2000, the Defense Review Board (DRB) tasked National Security Agency (NSA) to evaluate the security posture of the cryptographic inventory. Systems with aging algorithms, those approaching non-sustainability, and those generally incompatible with modern key management systems were also identified and have been replaced or are being fielded. Priority systems that required immediate replacement were also identified. In addition, NSA documented the need to modernize the cryptographic inventory with capabilities designed to enable network-centric operations. Replacements/Modernization of the near term vulnerable systems must occur within the timeframe specified by device and algorithm in Chairman Joint Chiefs of Staff Notice (CJCSN) 6510. The DoD Cryptographic Modernization Program was established to develop a modern cryptographic base that provides this assured security robustness, interoperability, advanced algorithms, releasability, programmability, and compatibility with the future Key Management Infrastructure (KMI-See PE 0303140F, BPAC 67523, AF KMI for a full description). This AF effort supports an integrated effort across the cyber domain to transform to next generation cryptographic capabilities providing U.S. forces and multinational and interagency partners the security needed to protect the flow and exchange of operational decision making information in accordance with national and international policy/standards, the validated operational requirements of the warfighters, and the intelligence communities.

The AF Cryptographic Modernization Effort is a collection of projects accomplished in three phases: replacement, modernization, and transformation. The replacement phase of the program focused on updating and/or replacing out-of-date algorithms along with unsustainable cryptographic products. The modernization phase provides crypto devices with common solutions that are more robust, modular, scalable, and provide the durability to existing cryptographic end items, as well as updating mid-term aging/unsupportable crypto equipment. Manpower and logistics requirements will be reduced and manpower efficiencies gained, while incremental capability enhancements and footprint reduction are provided. The third phase of the Cryptographic Modernization Program, transformation, provides common joint solutions which enable secure transparent network-centric capabilities across the cyber domain. Activities also include studies and analysis to support both current program planning and execution and future program planning. FY14 funding increased to address pending crypto key/algorithm decertifications due to increased threats identified by NSA.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: VINSON/ANDVT Cryptographic Modernization (VACM)	26.238	0.940	-
Description: VINSON (VHF(Very High Frequency)/UHF(Ultra High Frequency) Wideband Tactical Secure Voice System Cryptographic Equipment)-ANDVT (Advanced Narrowband Digital Voice Terminal) Cryptographic Modernization (VACM) will develop and acquire cryptographic capability to replace the legacy capability on VINSON/ANDVT secure voice communications			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675100 / *Cryptographic Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
on aircraft, ships, and ground fixed and mobile platforms (Devices: KY-57/58, KY-99/100, KYV-5 and ARC-234 with Embedded Crypto). ***FY 2014 Accomplishments:*** VINSON (VHF(Very High Frequency)/UHF(Ultra High Frequency) Wideband Tactical Secure Voice System Cryptographic Equipment)-ANDVT (Advanced Narrowband Digital Voice Terminal) Cryptographic Modernization (VACM) completed engineering manufacturing and development phase. VACM received NSA Type 1 certification and MS C approval to initiate Low Rate Initial Production (LRIP) of 100 test units. ARC 234 continued modification development using VACM technology. ***FY 2015 Plans:*** Complete production of 100 Low Rate Initial Production (LRIP) VINSON (VHF(Very High Frequency)/UHF(Ultra High Frequency) Wideband Tactical Secure Voice System Cryptographic Equipment)-ANDVT (Advanced Narrowband Digital Voice Terminal) Cryptographic Modernization (VACM) test units (to be delivered in FY15). Will complete Force Development Evaluation to test and evaluate the VACM devices. ARC 234 will complete the modification development using VACM technology. ***FY 2016 Plans:*** N/A			
Title: Space Telemetry Tracking & Commanding (TT&C) Aerospace Vehicle Equipment Increment 1 (AVE Inc1) ***Description:*** Space Telemetry Tracking & Commanding (TT&C) Aerospace Vehicle Equipment Increment 1 (AVE Inc 1) develops and delivers space qualified cryptographic products to satellite platforms for securing the TT&C link. ***FY 2014 Accomplishments:*** Continued development activities on Space Telemetry Tracking & Commanding (TT&C) Aerospace Vehicle Equipment Increment 1 (AVE Inc1) CAROUSEL Cryptographic Engine (CCE) contract. ***FY 2015 Plans:*** Continue development activities on Space TT&C AVE Inc 1 CAROUSEL Cryptographic Engine (CCE) contract. ***FY 2016 Plans:*** Will complete development activities on Space Telemetry Tracking & Commanding (TT&C) Aerospace Vehicle Equipment Increment 1 (AVE Inc1) CAROUSEL Cryptographic Engine (CCE) contract.	4.083	7.340	5.321
Title: Technology Development (TD) ***Description:*** Technology Development (TD) conducts concept development and early systems engineering activities to analyze evolving threats and Communications Security (COMSEC) capability gaps across AF mission areas. Develops, plans and executes foundational technology maturation efforts to inform COMSEC requirements, build capability roadmaps and support cost	7.057	18.613	0.179

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675100 / *Cryptographic Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
estimates prior to Materiel Development Decision (MDD). Mitigates risk for thousands of AF users affected by algorithm security issues and ensures required security upgrades can be integrated into the AF enterprise. Works with NSA and other services to develop standards that increase security of communication and information products and facilitate efficient crypto and COMSEC enterprise management. Includes but is not limited to: Secure Micro-digital Data Link (SMDDL), Classified Data at Rest (CDAR), Common Encryption Management (CEMENT), Distributed Common Ground System (DCGS) Crypto, Transmission Security (TRANSEC) modernization, and Enhanced Firefly (EFF) replacement development. ***FY 2014 Accomplishments:*** Accomplished pre-MS B activities and continued development of common miniaturized cryptographic solution(s) for use in protecting Classified information on Size, Weight, and Power (SWaP) constrained platforms. Led adoption of baseline Common Crypto Management Information Base (CCMIB) identifying the framework for future common management of cryptographic devices amongst Army, Navy and Air Force. Analyzed Classified Data at Rest (CDAR) capability gaps across multiple AF weapon systems. Developed DCGS sustainment plan and initiated analysis to support cryptographic devices that allow AF Distributed Common Ground System (DCGS) to continue operating during and after a Communications Modernization from Asynchronous Transfer Mode (ATM) to the Next Generation Deterministic Protocol (NGDP). Began analysis of feasibility of common modular cryptographic solutions for the air and ground environment. ***FY 2015 Plans:*** Complete SMDDL certification. Continue investigating classified Data At Rest solutions for tactical environments and complete capability gap and concept characterization analysis in preparation for MDD. Continue analyzing replacement of aging KG-75/75A legacy crypto in Air Force Distributed Common Ground System (DCGS AF). Continue planning replacement or upgrade of 150,000 Air Force devices that incorporate Enhanced Firefly (EFF) keying material. Continue development of Common Encryption Management (CEMENT) software for disparate families of Internet Protocol (IP) encryptors. Continue analysis of Transmission Security (TRANSEC) capability gaps and initiate concept characterization study to inform requirements refinement. Continue the analysis of common modular cryptographic solutions for the air and ground environment. ***FY 2016 Plans:*** Will continue planning replacement or upgrade of 150,000 Air Force devices that incorporate EFF-based keying material. Will complete DCGS AF analysis in preparation for development and procurement effort to replace KG-75/75A. Will complete development of Common Encryption Management (CEMENT) software to manage Internet Protocol (IP) encryptors and develop standards for management of future devices. Will complete Transmission Security (TRANSEC) capability gap and concept characterization analysis in preparation for MDD.			
Title: Distributed Common Ground System (DCGS) Crypto	-	-	1.000

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675100 / *Cryptographic Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Provides cryptography to support the rigorous speed and quality of service requirements of the AF DCGS global Intelligence, Surveillance, and Reconnaissance (ISR) Wide Area Network (WAN) Weapon System (AN/GSQ-272). AF DCGS is based on legacy Asynchronous Transfer Mode (ATM) technologies that are no longer available from manufacturers. DCGS crypto will develop and procure cryptographic devices that allow AF DCGS to continue operating during and after an AF DCGS Communications Modernization from ATM to the Next Generation Deterministic Protocol (NGDP). ***FY 2014 Accomplishments:*** N/A ***FY 2015 Plans:*** N/A ***FY 2016 Plans:*** Will begin development of cryptographic devices that allow AF DCGS to continue operating during and after a Communications Modernization from ATM to the NGDP.			
Title: Mini Crypto (MC) ***Description:*** Mini Crypto (MC) plans to develop common miniaturized cryptographic solution(s) for use in protecting Secret and Below information on Size, Weight, and Power (SWaP) constrained platforms. ***FY 2014 Accomplishments:*** Released Request for Proposal (RFP) for the Engineering & Manufacturing Development (EMD) phase contract with options for Production. Began a Full and Open Competitive Source Selection. ***FY 2015 Plans:*** Will achieve MS B and will award/manage the EMD contract. ***FY 2016 Plans:*** Will continue to execute the EMD contract. Contractor will host both a Preliminary Design and Critical Design Review (PDR & CDR). Prototypes will be delievered for various Developmental Testing/Operational Testing activities in support of integrated testing.	1.055	2.045	7.316
Title: Space Modular Common Crypto (SMCC) ***Description:*** Space Modular Common Crypto (SMCC) provides Information Assurance (IA) services for new satellite architectures via a family of common crypto solutions that integrate Tracking, Telemetry, & Commanding (TT&C), Mission Data	13.316	25.296	5.328

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675100 / *Cryptographic Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
(MD), and/or Transmission Security (TRANSEC) key stream functions for the Air Force and Intelligence Community space systems. ***FY 2014 Accomplishments:*** Continued pre-Milestone B and Technology Maturation/Risk Reduction (TMRR) activities for SMCC solutions. ***FY 2015 Plans:*** Continue TMRR activities. Will achieve MS B and begin the process to award EMD contract. ***FY 2016 Plans:*** Will complete TMRR activities. Award SMCC development contract.			
Title: Algorithm Transition, Compliance and Support ***Description:*** Algorithm Transition, Compliance and Support provides Information Assurance (IA) Support that performs transition and governance efforts to be able to effectively analyze 30 classified algorithms, thousands of associated COMSEC keying material short titles, and hundreds of equipment types, and track and report algorithm/device integration across the AF. Based on analysis, determines and monitors mitigation strategies; develops and plans technology maturation efforts to ensure new algorithms can be integrated into the AF enterprise. Assesses current state of AF crypto across the enterprise. Develops and maintains a classified CM database system that tracks status of AF crypto device types that is accessible by the Crypto Modernization (CM) community via SIPRNET. Efforts support Nuclear Command, Control and Communications (NC3), ISR, all AF platforms, and most ground networks. ***FY 2014 Accomplishments:*** Started a program to develop a method and/or process to accurately transition, track, and manage crypto assets and COMSEC across the AF. Supported algorithm transition and governance efforts to effectively track, analyze, and report on AF use of 30 classified algorithms in over 270,000 devices across the AF enterprise comprised of over 300 equipment types/families and requiring thousands of associated COMSEC keying material short titles. Provided initial Crypto-Mod analysis database to AF community to assist in annual assessments during long term effort to develop enterprise capabilities based assessment (CBA) to identify management capability gaps. Conducted annual assessment of the state of the AF cryptographic enterprise. Evaluated impacts of the emerging NSA Commercial Solutions for Classified (CSfC) cryptographic development model and its impacts on AF acquisition and sustainment. ***FY 2015 Plans:*** Continue to support algorithm transition and governance efforts to effectively track, analyze, and report on AF use of 30 classified algorithms in over 270,000 devices across the AF enterprise comprised of over 300 equipment types/families and requiring thousands of associated COMSEC keying material short titles. Continues analysis and development of a method and/or process	1.881	3.250	3.109

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675100 / *Cryptographic Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
to accurately transition, track, and manage crypto assets and COMSEC across the AF. Maintain Crypto-Mod analysis database to AF community to assist in annual assessments during long term effort to develop enterprise Capabilities Based Assessment (CBA) to identify management capability gaps. Conducts annual assessment of the state of the AF cryptographic enterprise. Evaluate National Security Agency (NSA) recommendations for Quantum Resistant (QR) computing encryption. ***FY 2016 Plans:*** Will continue to support algorithm transition and governance efforts to effectively track, analyze, and report on AF use of 30 classified algorithms in over 270,000 devices across the AF enterprise comprised of over 300 equipment types/families and requiring thousands of associated COMSEC keying material short titles. Will continue analysis and development of a method and/or process to accurately transition, track, and manage crypto assets and COMSEC across the AF. Will continue to maintain Crypto-Mod analysis database to AF community to assist in annual assessments during long term effort to develop enterprise Capabilities Based Assessment (CBA) to identify management capability gaps. Will conduct annual assessment of the state of the AF cryptographic enterprise. Will continue to evaluate National Security Agency (NSA) recommendations for Quantum Resistant(QR)computing encryption.			
Title: Missile Electronic Encryption Device (MEED) Modification ***Description:*** MEED was formerly accomplished under the Technical Development Major Thrust as a Crypto Mod activity. To increase program transparency MEED will become an acquisition effort. MEED Modification will modernize the legacy Missile Entry Control System (MECS) devices used to securely authenticate personnel attempting access to this Nation's ground-based Intercontinental Ballistic Missile (ICBM) facilities. This effort will bring the MEED equipment into compliance with current NSA information assurance (IA) security design guidance. ***FY 2014 Accomplishments:*** Continued MEED Modification development and accomplished Material Development Decision (MDD) and Acquisition Strategy Plan (ASP). Program team consists of PMA support for Subject Matter Experts (SMEs) in security, logistics, financial management, and data management. Funded travel for engineering and testing to F.E. Warren to bolster understanding of Missile Entry Control System (MECS) and process MEED performs in that system. Also garnered user and industry feedback on potential solutions. ***FY 2015 Plans:*** Initiate MEED Modification Development Decision, complete Source Selection and award contract for development of Modified MEED. ***FY 2016 Plans:***	0.300	2.289	6.815

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675100 / *Cryptographic Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Will continue MEED Modification development contract and preparation for production decision in FY17. Will complete Developmental Testing and Operational Testing of modified device and release RFP for production contract.			
Accomplishments/Planned Programs Subtotals	53.930	59.773	29.068

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPAF: BA03: 831010: *COMSEC Equipment*	14.686	37.960	28.074	-	28.074	11.426	25.660	24.905	25.353	Continuing	Continuing

Remarks

Remarks: Other Program Funding reflects Crypto Modernization (CM) portion of Information Systems Security Program (ISSP) OPAF total.

D. Acquisition Strategy

The Crypto Modernization portfolio of component acquisition projects is executing using a variety of approaches that vary from an evolutionary acquisition strategy using spiral development (for new component development) to incremental improvement leveraging leading-edge, certified non-developmental items (for modernization). Contract type is selected for each of the individual projects based upon its acquisition approach and its unique technology risks. A mixture of fixed-price and cost-reimbursement contracts have been selected which maximize the best value for the Government.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675100 / *Cryptographic Modernization*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
VINSON/ANDVT Cryptographic Modernization (VACM)	C/CPIF	Raytheon Company : Ft Wayne, IN	-	12.799	May 2014	-		-		-		-	-	12.799	47.863
VINSON/ANDVT/ Cryptographic Modernization (ARC-234)	MIPR	Defense Microelectronic Activity : Sacramento, CA	-	10.044	Jan 2015	-		-		-		-	-	10.044	32.737
Space Telemetry, Tracking & Commanding (TT&C) Aerospace Vehicle Equipment (AVE Inc 1)	C/CPFF	General Dynamics C4 Systems : Scottsdale, AZ	-	3.140	Feb 2014	6.081	Oct 2014	4.036	Oct 2015	-		4.036	Continuing	Continuing	-
Tech Development	Various	MULTIPLE : MULTIPLE,	-	5.137	Sep 2014	18.398	Jan 2015	0.179	Jan 2016	-		0.179	Continuing	Continuing	-
Mini Crypto	C/TBD	TBD : TBD,	-	-		0.831	Jul 2015	4.870	Dec 2015	-		4.870	Continuing	Continuing	-
Space Modular Common Crypto (SMCC)	C/TBD	MULTIPLE : MULTIPLE,	-	8.817	Jul 2014	19.696	Nov 2014	0.462	Sep 2016	-		0.462	Continuing	Continuing	-
Distributed Common Ground System (DCGS) Crypto	TBD	TBD : TBD,	-	-		-		1.000	Jul 2016	-		1.000	Continuing	Continuing	-
Missile Electronic Encryption Device (MEED) Modernization	Various	TBD : TBD,	-	-		1.220	May 2015	5.241	May 2016	-		5.241	Continuing	Continuing	-
		Subtotal	-	39.937		46.226		15.788		-		15.788	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
VINSON/ANDVT Cryptographic Modernization (VACM)	Various	VARIOUS : VARIOUS,	-	0.489	May 2014	0.051	Nov 2014	-		-		-	Continuing	Continuing	-
		Subtotal	-	0.489		0.051		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675100 / *Cryptographic Modernization*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
VINSON/ANDVT Crypto Mod (VACM)	MIPR	MULTIPLE : MULTIPLE,	-	0.572	Nov 2013	0.091	Dec 2014	-		-		-	-	0.663	5.001
VINSON/ANDVT Crypto Mod-Embedded (ARC-234)	MIPR	NSA : ,	-	0.198	Nov 2014	-		-		-		-	-	0.198	0.610
Space Telemetry, Tracking & Commanding (TT&C) Aerospace Vehicle Equipment Increment 1 (AVE Inc 1)	Various	MULTIPLE : MULTIPLE,	-	0.263	Mar 2014	0.519	Oct 2014	0.526	Oct 2015	-		0.526	-	1.308	-
Mini Crypto	Various	MULTIPLE : MULTIPLE,	-	0.150	Sep 2014	0.574	Jan 2015	0.700	Jan 2016	-		0.700	Continuing	Continuing	-
Space Modular Common Crypto (SMCC)	Various	MULTIPLE : MULTIPLE,	-	0.473	Mar 2014	1.767	Jan 2015	1.019	Oct 2015	-		1.019	Continuing	Continuing	-
		Subtotal	-	1.656		2.951		2.245		-		2.245	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration (PMA)	Various	Various : Various,	-	11.848	Dec 2013	10.545	Dec 2014	11.035	Dec 2015	-		11.035	Continuing	Continuing	-
		Subtotal	-	11.848		10.545		11.035		-		11.035	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	53.930		59.773		29.068		-		29.068	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675100 / *Cryptographic Modernization*

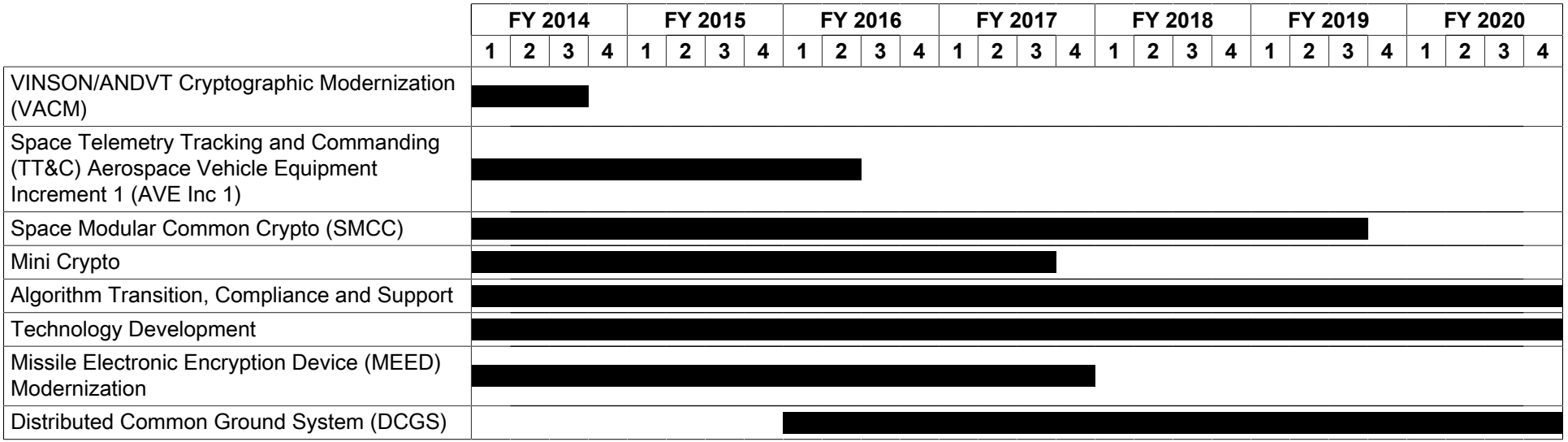

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675100 / *Cryptographic Modernization*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
VINSON/ANDVT Cryptographic Modernization (VACM)	1	2014	3	2014
Space Telemetry Tracking and Commanding (TT&C) Aerospace Vehicle Equipment Increment 1 (AVE Inc 1)	1	2014	2	2016
Space Modular Common Crypto (SMCC)	1	2014	3	2019
Mini Crypto	1	2014	3	2017
Algorithm Transition, Compliance and Support	1	2014	4	2020
Technology Development	1	2014	4	2020
Missile Electronic Encryption Device (MEED) Modernization	1	2014	4	2017
Distributed Common Ground System (DCGS)	1	2016	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303140F / *Information Systems Security Program*	Project (Number/Name) 675231 / *AF Key Management Infrastructure (AF KMI)*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
675231: *AF Key Management Infrastructure (AF KMI)*	-	5.764	9.362	16.898	-	16.898	2.996	1.746	1.767	1.798	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Air Force Key Management Infrastructure (AF KMI) Program consists of multiple developments supporting the AF requirements/portion of the DoD Key Management Infrastructure (KMI). The National Security Agency([NSA) acts as the Executive Agency for the DoD KMI Program. AF KMI, in concert with this overarching DoD KMI Program, will provide a secure and flexible capability for the electronic generation, distribution, accounting, and management of key material and other communications security (COMSEC) materials for all DoD Command, Control, Communications, Computers, and Intelligence (C4I) and for the Services' weapon systems. KMI represents a broad-scale replacement of the current Electronic Key Management System (EKMS). KMI will provide capabilities that will allow networked operation in consonance with the Global Information Grid (GIG) and other DoD, fellow Service, and AF enterprise objectives. It thereby will assure a viable support infrastructure for future weapons and C4I programs to incorporate key management into their system designs.

The DoD KMI will greatly improve protection of national, security-related information by substantially enhancing confidentiality, integrity, and non-repudiation characteristics over the legacy EKMS. KMI will greatly accelerate the availability of crypto key materials through electronic transmission versus shipping of materials, will enhance mission responsiveness and flexibility, and will eventually take the man "out-of-the-loop" in the distribution of crypto key materials.

The AF KMI Program in concert with the DoD KMI Program is transitioning the Air Force from the legacy EKMS to modern DoD KMI and building the AF KMI Last Mile architecture. This R&D effort includes system engineering, development and testing to successfully implement the AF KMI Last Mile architecture. The AF KMI Last Mile program is a holistic solution integrating the legacy and new and evolving cryptographic programs, materials, products, sources and consumers. The AF KMI Last Mile capabilities include distribution, management, and load of cryptographic materials from the KMI (COMSEC account) to the End Crypto Units (ECUs). It builds the linkage interfaces that will allow KMI systems to communicate and integrates other related developments to meet operational needs. AF KMI Last Mile is currently in the Development Phase. Activities also include studies and analysis to support both current program planning and execution and future program planning.

In parallel with AF KMI, DoD and the Services are developing a new generation of End Crypto Units (ECUs) under the Joint Crypto Modernization Initiative that will be capable of direct interaction with the DoD KMI. (PE0303140F, BPAC 675100, Cryptographic Modernization, supports this initiative). In some cases these new ECUs, although needing to be supported by KMI, will not be KMI network-connected. "Last mile" transport of black (aka benign, or encrypted) and red (unencrypted) keying material from a KMI client to a new generation ECU or current legacy ECU will need to be handled in the early years by one of two data transfer devices. Initial early systems engineering must also be addressed to accommodate future connectivity between the DoD KMI and future KMI Aware/Enabled ECUs. This enabling form factor functionally defined as a common ECU KMI aware/enabled key load module. This is targeted to be a standardized module to be provided to ECU developers and, as such, it must precede any future ECU developments.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675231 / *AF Key Management Infrastructure (AF KMI)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Air Force Key Management Infrastructure Transition Support (Tier 2) ***Description:*** Support included architectural planning, systems engineering, testing and studies and analyses for migration to the Key Management Infrastructure (KMI) (includes acquisition planning, systems integration, engineering support and System Program Office (SPO) support). Transitioned existing key management capabilities to AF KMI Tier 2. ***FY 2014 Accomplishments:*** Continued architectural planning, systems engineering, in support of KMI CI-2 Spiral 2 Spin 1. Continued support testing of DoD KMI CI-2 components as new hardware/software versions were completed. Continued the transition of existing key management capabilities to KMI. ***FY 2015 Plans:*** Continue to provide annual resources to SPAWAR to plan and execute specific UAS testing for all Air Force ECUs. ***FY 2016 Plans:*** Will continue to provide annual resources to SPAWAR to plan and execute specific UAS testing for all Air Force ECUs.	1.221	-	-
Title: Air Force KMI Last Mile (Tier 3) ***Description:*** Air Force KMI Last Mile Tier 3 early system engineering and risk reduction to include: concept development; for distribution, load and management elements of last mile; studies and analyses for technology possibilities and prototyping efforts for the last mile. ***FY 2014 Accomplishments:*** Executed the Technology Development contract, developed requirements for the Engineering and Manufacturing Development (EMD) phase and finalized the associated Milestone B (MS B) documentation. ***FY 2015 Plans:*** Achieve MS B and award/manage the EMD contract ***FY 2016 Plans:*** Will continue to manage the EMD contract and begin preparations to award/enter the production phase	4.543	9.362	16.898
Accomplishments/Planned Programs Subtotals	5.764	9.362	16.898

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675231 / *AF Key Management Infrastructure (AF KMI)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPAF: BA03: 831010: *COMSEC Equipment*	10.390	14.457	10.132	-	10.132	12.104	4.871	4.921	5.010	Continuing	Continuing

Remarks

Remarks: Other Program Funding reflects AF Key Management Infrastructure (KMI) portion of Information Systems Security Program (ISSP) OPAF total.

D. Acquisition Strategy

All major contracts within this project are open to full and open competition with technology knowledge, expertise, and prior experience on similar projects weighted heavily in the evaluation process.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675231 / *AF Key Management Infrastructure (AF KMI)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	SS/T&M	MITRE : San Antonio, TX	-	0.443	Oct 2013	0.354	Oct 2014	0.737	Oct 2015	-		0.737	Continuing	Continuing	-
AF KMI Last Mile	C/Various	Various : Various,	-	0.918	Sep 2014	6.010	Jun 2015	13.238	Jun 2016	-		13.238	Continuing	Continuing	TBD
AF KMI Transition	C/Various	Various : Various,	-	1.221	Feb 2014	-		-		-		-	Continuing	Continuing	-
		Subtotal	-	2.582		6.364		13.975		-		13.975	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering & Technical Documentation	SS/T&M	MITRE : San Antonio, TX	-	0.463	Oct 2013	1.037	Oct 2014	1.217	Oct 2015	-		1.217	Continuing	Continuing	-
Engineering & Technical Acquisition Support Service	C/CPFF	Jacobs Engineering : San Antonio, TX	-	0.828	Jan 2014	1.004	Jan 2015	0.759	Jan 2016	-		0.759	Continuing	Continuing	TBD
AF KMI Transition Support (Tier 2)	MIPR	U.S. Navy SPAWAR : San Diego, CA	-	1.000	Aug 2014	-		-		-		-	Continuing	Continuing	-
AF KMI Last Mile (Tier 3)	MIPR	U.S. Navy SPAWAR : San Diego, CA	-	-		0.100	Jan 2015	0.100	Mar 2016	-		0.100	Continuing	Continuing	-
		Subtotal	-	2.291		2.141		2.076		-		2.076	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
KMI Last Mile	PO	46 TS : Eglin AFB, FL	-	0.198	Jun 2014	0.246	Nov 2014	0.246	Nov 2015	-		0.246	Continuing	Continuing	-
		Subtotal	-	0.198		0.246		0.246		-		0.246	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675231 / *AF Key Management Infrastructure (AF KMI)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration (PMA)	Various	Various : Various,	-	0.693	Jan 2014	0.611	Dec 2014	0.601	Dec 2015	-		0.601	Continuing	Continuing	TBD
		Subtotal	-	0.693		0.611		0.601		-		0.601	-	-	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	5.764		9.362		16.898		-		16.898	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675231 / *AF Key Management Infrastructure (AF KMI)*

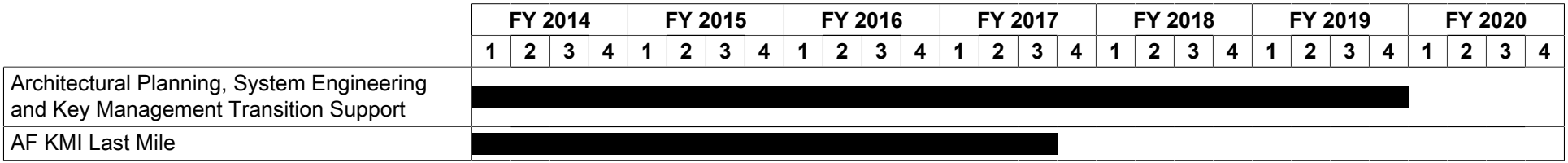

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303140F / *Information Systems Security Program*	**Project (Number/Name)** 675231 / *AF Key Management Infrastructure (AF KMI)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Architectural Planning, System Engineering and Key Management Transition Support	1	2014	4	2019
AF KMI Last Mile	1	2014	3	2017