Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force											Date: March 2014	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0208088F / *AF Defensive Cyberspace Operations*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	5.853	5.576	-	5.576	32.500	21.521	18.177	8.103	Continuing	Continuing
677820: *Computer Security RDTE: Firestarter*	-	-	5.853	5.576	-	5.576	6.110	6.227	6.350	6.471	Continuing	Continuing
ATZ000: *AFCERT*	-	-	-	-	-	-	25.137	14.012	10.514	0.289	Continuing	Continuing
BAF000: *Intrusion/Vulnerability Assessment*	-	-	-	-	-	-	1.253	1.282	1.313	1.343	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Firestarter program provides newly improved capabilities and technical transition opportunities for Cyber Defense and Information Assurance (IA) technologies and tools needed to defend Air Force Command, Control, Communications,Computer, and Intelligence (C4I) systems from Cyber-attacks, while ensuring recovery in the event of an attack. The emphasis of the program is directed toward defensive cyberspace capabilities; computer and network systems security; damage assessment and recovery; cyber threat recognition, attribution, and mitigation; and active response methodologies in response to evolving threats and changes to cyber environment. These areas of emphasis are realized through research and development, test and acquisition in the areas of: proactive defense, defensive counter cyberspace, cyberspace intelligence, surveillance and reconnaissance & situational awareness, persistent network operations, as well as decision support, recovery, and digital forensics. Current Air Force systems, such as the AFNET NIPRNet Gateways, SIPRNet Modernization program, and Host Based Security System leverage this technology to meet their information assurance and defensive cyberspace needs/requirements.

Firestarter utilizes cyber and IA technology investments by US Cyber Command, the Defense Advanced Research Projects Agency (DARPA), the National Security Agency (NSA), Director of National Intelligence (DNI), Intelligence Advanced Research Projects Activity (IARPA), and the Department of Homeland Security (DHS) to jump-start its development of solutions to existing Air Force cyber and IA requirements. This program supports AF Space Commands Cyberspace strategic direction in support of Cyber Defense which provides capabilities to 24th AF, as AF component to Cyber Command (CYBERCOM)), Defense Information Systems Agency (DISA), National Security Agency (NSA), and other services to ensure Global Information Grid (GIG) cyber and IA requirements are being met. Activities performed include those designed to identify, analyze, test, rapidly acquire, and integrate emerging IA and cyber technology and defensive cyberspace weapons systems and capabilities into all regions of the GIG - terrestrial, airborne, and space systems. . In addition, this effort will support implementation of DoD Enterprise-wide IA & CND (Computer Network Defense) Solutions Steering Group (ESSG) solutions.

AF Computer Emergency Response Team (AFCERT) supports the AF Cyberspace Defense (ACD) weapon system is designed to prevent, detect, and respond to adversarial penetration into AF unclassified and classified networks. It also provides forensic analysis if AF unclassified and classified networks are infiltrated by our adversaries. AFCERT funding for this effort will focus on development of capability, capacity, and potential modifications to increase the utility of the ACD weapon system to the warfighter

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force	Date: March 2014
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0208088F / *AF Defensive Cyberspace Operations*

Intrusion Vulnerability Assessment supports the Cyberspace Vulnerability Assessment / Hunter Team (CVA/H) weapon system and develops new capabilities to provide Air Force Cyber Command(AFCYBER) and Combatant Commanders additional mobile precision in addition to currently fielded protection capabilities to identify, pursue, and mitigate cyberspace threats. The CVA/H weapon system performs defensive sorties world-wide via remote or on-site access. CVA/H executes vulnerability, compliance, defense and non-technical assessments, best practice reviews, penetration testing and Hunter missions on AF and DoD networks & systems. Hunter operations characterize and then eliminate threats for the purpose of mission assurance. The Hunter mission focuses on the capability to find, fix, track, target, engage, and assess(F2T2EA) the advanced persistent threat (APT). This effort funds development efforts to expand the capability of the current weapon system to meet scope and scale of the USCYBERCOM directed Cyber Protection Teams.

Activities include studies and analysis to support both current program planning and execution and future program planning.

These programs are in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	5.853	5.961	-	5.961
Current President's Budget	-	5.853	5.576	-	5.576
Total Adjustments	-	-	-0.385	-	-0.385
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.385	-	-0.385

Change Summary Explanation

In FY2014, 677820, AF Defensive Cyberspace Operations efforts were transferred from 0303140F, Information Systems Security Program, 677820, Firestarter, in order to consolidate Firestarter efforts into the Air Force Defensive Cyberspace Operations program.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208088F / *AF Defensive Cyberspace Operations*	Project (Number/Name) 677820 / *Computer Security RDTE: Firestarter*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
677820: *Computer Security RDTE: Firestarter*	-	-	5.853	5.576	-	5.576	6.110	6.227	6.350	6.471	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY2014, 0208088F, 677820, AF Defensive Operations were transferred from 0303140F, Information Systems Security Program, 677820, Firestarter, in order to consolidate Firestarter efforts into the Air Force Defensive Cyberspace Operations program.

A. Mission Description and Budget Item Justification

This program is listed on the IML. The Firestarter program provides new/improved capabilities and technical transition opportunities for Cyber Defense and Information Assurance (IA) technologies and tools needed to defend Air Force Command, Control, Communications, Computer, and Intelligence (C4I) systems from Cyber-attacks, while ensuring recovery in the event of an attack. Also provides defensive Cyber Command and Control/Situational Awareness (C2/SA), which enables cyber commanders to monitor Air Force network status and execute courses of action to mitigate threats. The emphasis of the program is directed toward defensive cyberspace capabilities; computer and network systems security; damage assessment and recovery; cyber threat recognition, attribution, and mitigation; and active response methodologies in response to evolving threats and changes to cyber environment. These areas of emphasis are realized through research and development, test and acquisition in the areas of: proactive defense, defensive counter cyberspace, cyberspace intelligence, surveillance and reconnaissance & situational awareness, persistent network operations, as well as decision support, recovery, and digital forensics. Current Air Force systems, such as the Air Force Network Non-classified Internet Protocol Router (AFNET NIPRNet) Gateways, and Host Based Security System leverage this technology to meet their information assurance and defensive cyberspace needs/requirements.

This program utilizes cyber and IA technology investments by US Cyber Command, the Defense Advanced Research Projects Agency (DARPA), the National Security Agency (NSA), Director of National Intelligence (DNI), Intelligence Advanced Research Projects Activity (IARPA), and the Department of Homeland Security (DHS) to jump-start its development of solutions to existing Air Force cyber and IA requirements. This program supports AF Space Commands Cyberspace strategic direction in support of Cyber Defense which provides capabilities to 24th AF, as AF component to Cyber Command (CYBERCOM), Defense Information Systems Agency (DISA), National Security Agency (NSA), and other services to ensure Global Information Grid (GIG) cyber and IA requirements are being met. Activities performed include those designed to identify, analyze, test, rapidly acquire, and integrate emerging IA and cyber technology and defensive cyberspace weapons systems and capabilities into all regions of the GIG - terrestrial, airborne, and space systems. Activities include studies and analysis to support both current program planning and execution and future program planning.

This program is in Budget Activity 7, Operational System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0208088F / *AF Defensive Cyberspace Operations*	**Project (Number/Name)** 677820 / *Computer Security RDTE: Firestarter*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Cyber Forensic Tools & Methodologies ***Description:*** Cyber forensic tools & methodologies. Includes: Initial metrics for reliable info assurance; secure coalition cyber data management, collaboration and visualization; analysis of cyber security bots. ***FY 2013 Accomplishments:*** N/A ***FY 2014 Plans:*** Efforts continues the development of methods and technologies to enhance "real time" cyber network forensic analysis. ***FY 2015 Plans:*** Will continue the development of methods and technologies to enhance "real time" cyber network forensic analysis.	-	2.040	1.655
Title: Cyber Threat Recognition ***Description:*** Enhancing cyber platform technology to identify zero-day threats in real time. ***FY 2013 Accomplishments:*** N/A ***FY 2014 Plans:*** Effort continues development of technologies to detect and attribute distributed computer network attacks over time and distance to specific adversaries. ***FY 2015 Plans:*** Will continue development of technologies to detect and attribute distributed computer network attacks over time and distance to specific adversaries.	-	1.357	1.375
Title: Cyber Threat Attribution & Mitigation ***Description:*** Cyber Threat Attribution and Mitigation. Includes: risk mitigation techniques for wireless networks and systems; active response, dynamic policy enforcement and computer/net attack attribution efforts. ***FY 2013 Accomplishments:*** N/A ***FY 2014 Plans:***	-	1.462	1.482

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0208088F / *AF Defensive Cyberspace Operations*	**Project (Number/Name)** 677820 / *Computer Security RDTE: Firestarter*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Effort continues development of technologies to detect and attribute distributed computer network attacks, over time and distance, to specific adversaries. ***FY 2015 Plans:*** Will continue development of technologies to detect and attribute distributed computer network attacks, over time and distance, to specific adversaries.			
Title: Transition of Cyber and IA Technologies ***Description:*** Transition cyber defense technologies that support AFSPC's Defense architecture. Includes: space systems cyber solutions; terrestrial net defense technology development; airborne IP network cyber and IA tools; IA / cyber modeling & sim; secure interoperable distributed agent computing, and others that relate to defending the AF networks. ***FY 2013 Accomplishments:*** N/A ***FY 2014 Plans:*** Effort continues enhancing and transitioning customer funded cyber and IA technology to operational USAF components in accordance with rapid requirements documentation provided by AFSPC. ***FY 2015 Plans:*** Will continue enhancing and transitioning customer funded cyber and IA technology to operational USAF components in accordance with rapid requirements documentation provided by AFSPC.	-	0.994	1.064
Accomplishments/Planned Programs Subtotals	-	5.853	5.576

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

All major contracts within this project are awarded after full and open competition utilizing evolutionary capability and incremental development.

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-4, RDT&E Schedule Profile: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0208088F / *AF Defensive Cyberspace Operations*	**Project (Number/Name)** 677820 / *Computer Security RDTE: Firestarter*

U.S. AIR FORCE

AF Defensive Cyberspace Operations Schedule

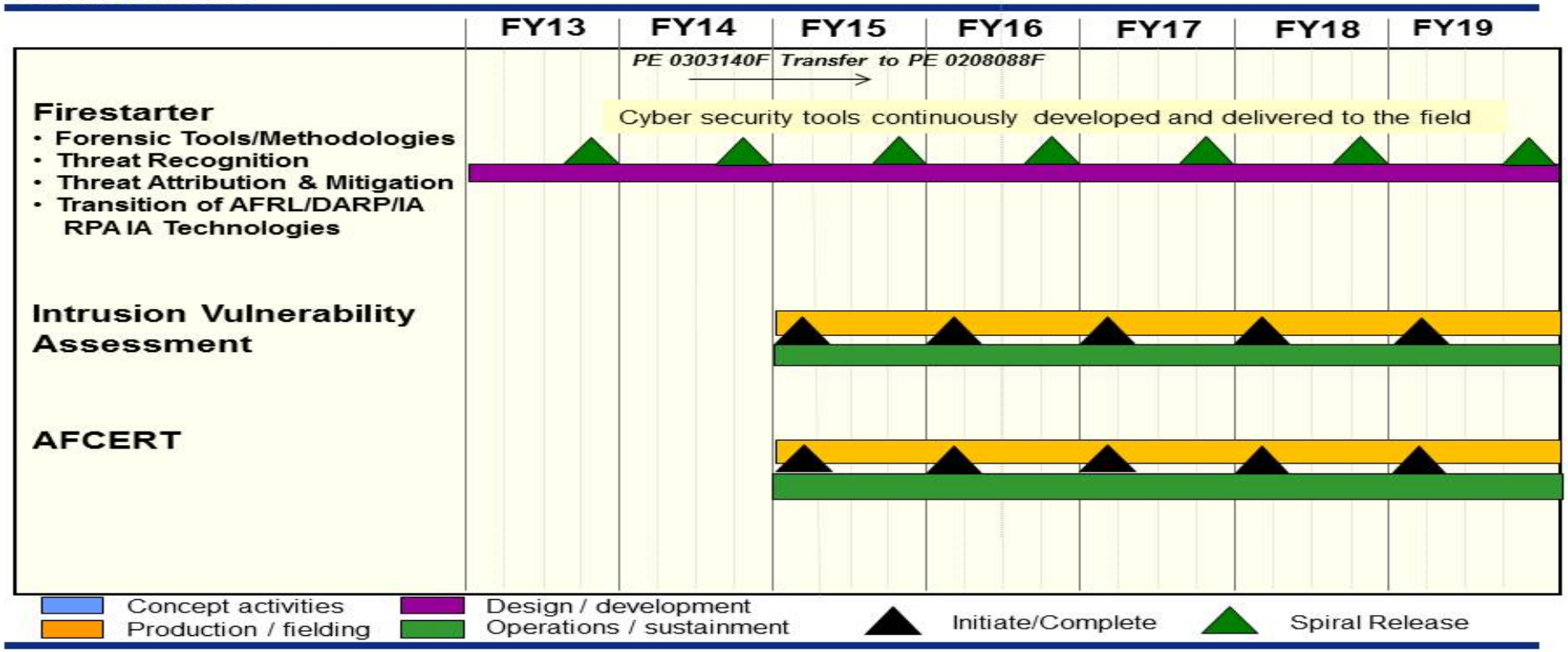

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208088F / *AF Defensive Cyberspace Operations*	Project (Number/Name) ATZ000 / *AFCERT*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
ATZ000: *AFCERT*	-	-	-	-	-	-	25.137	14.012	10.514	0.289	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Mission Description not provided.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: No data provided	-	-	-
FY 2013 Accomplishments: No data provided			
Accomplishments/Planned Programs Subtotals	-	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

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-2A, RDT&E Project Justification: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208088F / *AF Defensive Cyberspace Operations*	Project (Number/Name) BAF000 / *Intrusion/Vulnerability Assessment*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
BAF000: *Intrusion/Vulnerability Assessment*	-	-	-	-	-	-	1.253	1.282	1.313	1.343	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Mission Description not provided.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: No data provided	-	-	-
FY 2013 Accomplishments: No data provided			
Accomplishments/Planned Programs Subtotals	-	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

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.