

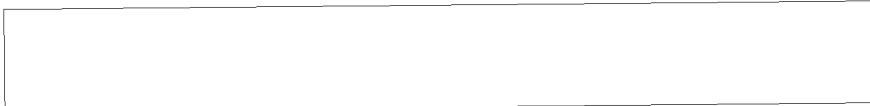
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(U) Broad Agency Announcement (BAA) Overview




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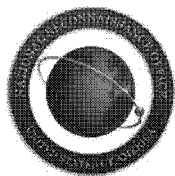


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Classified By:   
Derived From: INCG dated 20120213  
Declassify On: 20411231

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## (U) Agenda

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+ (U)  BAA Overview

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+ (U)  BAA Process

+ (U) Past BAA Efforts and Benefit

+ (U) Current BAA Efforts

+ (U) Questions?

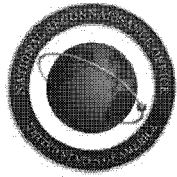
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## (U) [REDACTED] BAA Overview

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**(U) Purpose:** Identify key concepts and ideas used to:

- + Shape the future of IA; evolve and enhance CSM's mission in developing encryption solutions securely passing information between systems
- + Improve ways to detect, report, and respond to cyber threats

**(U) Objective:** Develop cutting-edge concept demonstrations and prototypes delivered as technical reports and/or functional demonstration models providing critical information and insight to reduce risk and enhance future cryptographic and technology capabilities

**Early risk reduction to remove IA and crypto off the critical path**

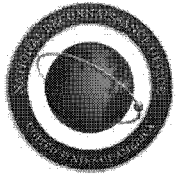
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(U) [redacted] **BAA Overview (cont'd)**

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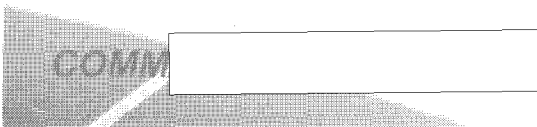
**(U) Details:** BAA projects are awarded to determine technological feasibility of high technological risk, potentially high payoff ideas. Submissions are limited in project scope

+  $\leq$  12 months duration

+  $\leq$  \$500,000 cost

**(U) Duration:** In FY16 the [redacted] BAA is an open BAA whereby submissions may be provided at anytime during the fiscal year

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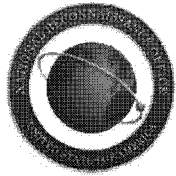


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## (U) Past BAA Efforts and Benefit

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- + (U) Secure Carrier Ethernet
  - + ViaSat Corp.
- + (U) High-Speed Space Crypto System In a Package
  - + ViaSat Corp.
- + (U) Advanced Detection of Evolving Cyber Attacks
  - + Applied Research Labs: University of Texas Austin

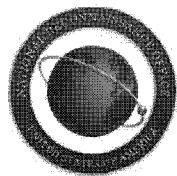
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## (U) Secure Carrier Ethernet

(U) **Developer:** ViaSat Corp. (FY12)

(U) **Objective:**

- + Develop a comprehensive set of tools to thoroughly evaluate Ethernet Security Specification (ESS) (MACsec) and Secure Carrier Ethernet protocols
- + Develop simulation-based and HW-based tools to evaluate and demonstrate key aspects of the security protocols including:

(U) **Outcome:** Technology and results used by the NRO and NSA to develop ESS, core requirement for the KG-142 (100 Gbps Ethernet Encryptor) [redacted]

[redacted]

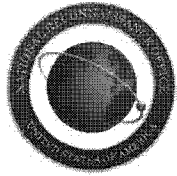
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## (U) High-Speed Space Crypto System in a Package (HSC-SiP)

**(U) Developer:** ViaSat Corp. (FY15)

**(U) Objective:** Develop and validate a new high-speed architecture for space-based Full Crypto System In a Package (SiP) with order of magnitude improvement in SWaP , providing > 1Gbps throughput, suitable for CubeSat application

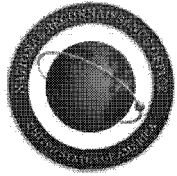
**(U) Outcome:** Technical report and hardware prototype delivered. Risk reduction for advanced packaging techniques. Technology and lessons learned leveraged in CSiP formal development/production acquisition (SCHWALL) in FY17 (competitive).



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## (U) Advanced Detection of Evolving Cyber Attacks

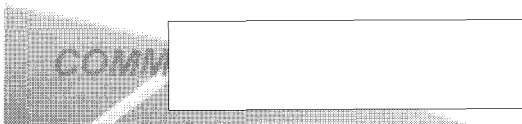
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**(U) Developer:** Applied Research Labs: University of Texas at Austin (ARL:UT) (FY14)

**(U) Objective:** Enhance automated cyber threat detection capabilities targeting advanced persistent threats (APT) by creating an automated approach generating large amounts of attack data used to train robust APT detectors

**(U) Outcome:** Transitioned detection algorithms to  Developed enhanced detection capabilities for NRO's existing enterprise security information event management tools.

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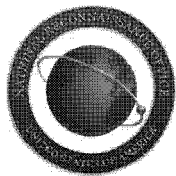


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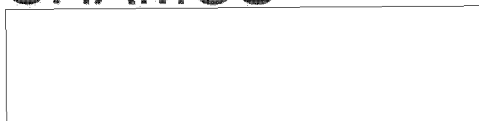
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## (U) Current BAA Efforts

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- + (U) Space Cyber Threats and Countermeasures – SHAMUS



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- + (U) Tractable Attack Pattern Detection (TAPD)

- + Applied Research Labs: University of Texas Austin

- + (U) High Speed Crypto Enabling Technology

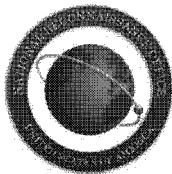
- + ViaSat



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~~TOP SECRET//TALENT-KEYHOLE//NOFORN~~



# (U) Space Cyber Threats and Countermeasures - SHAMUS

(U) Developer:

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~~(TS//TK//NF)~~ Objective:

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+ Will transition technology to SAO

+

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# (U) Tractable Attack Pattern Detection (TAPD)

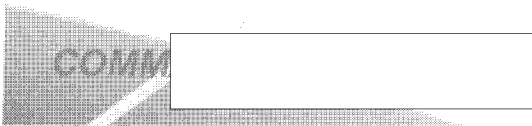
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(U) Developer: Applied Research Labs: University of Texas at Austin (ARLUT)

(U) Objective:

+ Will transition technology

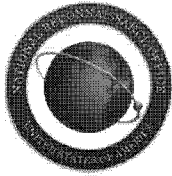
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## (U) High Speed Crypto Enabling Technology

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(U) Developer: ViaSat

(U) Objective:

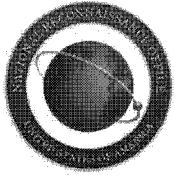
- + Begin  next generation ethernet encryptor (EE) (b)(3)
- + Leverage current 100G EE technology (same vendor) to show proof of concept via architectures and VHDL demos
- + Emerging requirement from NISP and C2S environment
  - + Will be utilized to develop requirements if development effort (formal acquisition) is needed



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## (U) Other BAAs

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+ (U) Not all BAAs successfully transition due to various reasons

+ (U) Naval Postgraduate School

+ (U) Multilevel Security

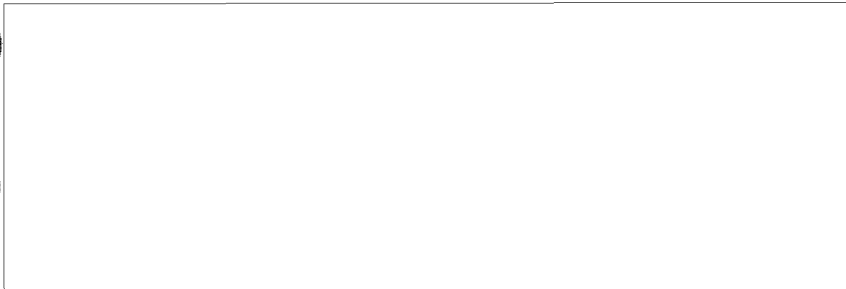
+ (U) Hosted Payloads Architecture

+ (U)

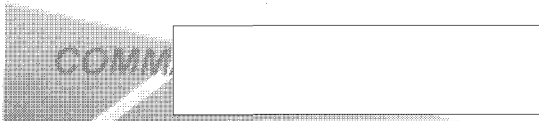
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# FY16 Summary

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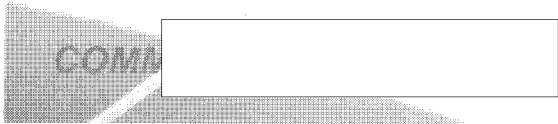
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Submission ID	Offeror	Project Title	Received	Status	Reponse Due	Transition Partner	Award Date	Expenditure Date	Value				
4000	[Redacted]	[Redacted]	2/23/2016	[Redacted]		[Redacted]	6/27/2016	6/27/2017	\$				
4002			3/3/2016										
4003			3/3/2016										
4004			3/3/2016										
4006			3/4/2016										
4009			7/6/2016		08/12/16		6/27/2016	6/27/2017	\$				
4011			6/23/2016				9/19/2016 (Proj)	9/19/2017	\$				
4012			6/23/2016		08/12/16		9/6/2016 (Proj)	9/6/2017	\$				
4013			6/23/2016		08/12/16		9/6/2016 (Proj)	9/6/2017	\$				
4014			6/23/2016										
4015			7/6/2016										
4016			7/6/2016										
4017			7/6/2016										
4018			7/6/2016										
4019			7/6/2016		08/12/16		9/6/2016 (Proj)	3/6/2017	\$				
			7/6/2016										
Total									\$				
FY16 Budget									\$				
Unobligated									\$				

Various reasons:  
[Redacted]

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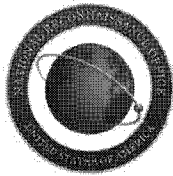
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# Academy Outreach

- + [ ] annually sponsors [ ] of Military Service Academy Outreach
- + USAFA & USMA - [ ] ea (summer internships)
- + USNA [ ]
- + Outreach is focused on training, education, and senior project sponsorships promoting STEM (specifically computer sciences and mathematics)
- + USAFA & USMA typically send 1-2 cadets to support a 4-5 week summer internship
- + [ ]
- + Funds typically expend within 12 months ARO

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# (U) Questions ?



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