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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2017 Air Force **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605024F / <i>Anti-Tamper Technology Executive Agency</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	33.775	26.718	31.952	0.000	31.952	33.056	33.004	34.435	35.847	Continuing	Continuing
675066: <i>Anti-Tamper Technology Executive Agent</i>	-	33.775	26.718	31.952	0.000	31.952	33.056	33.004	34.435	35.847	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Program MDAP/MAIS Code:**  
**Project MDAP/MAIS Code(s):** N42

**A. Mission Description and Budget Item Justification**

The Anti-Tamper (AT) Technology Executive Agency budget funds activities related to two AT responsibilities required by DoDD 5200.47E Anti-Tamper. These responsibilities include areas unique to the DoD Executive Agent for Anti-Tamper (ATEA) and Air Force Component AT Office of Primary Responsibility (OPR). The ATEA is responsible for developing and implementing AT policy, coordinating and providing financial support for AT technology development and evaluations, hardware/software vulnerability assessments, laboratory infrastructure, establishing and maintaining a data bank/library of AT technologies, providing security mechanisms, providing outreach and education to the DoD AT community, and funding validation and evaluations of AT implementations across all DoD acquisition programs. The AF AT OPR, that is also funded by this PE and is responsible for the oversight and security of AT on all AF acquisition programs under the Program Protection Planning process and manages AF AT technology development.

The DoD ATEA coordinates technology development among the DoD Services/Agencies, National Laboratories, and Industry.

AT protects critical program information (CPI) in U.S. weapon systems that may be sold to foreign governments or that could possibly fall into enemy hands on the battlefield. AT protections permit the U.S. to preserve its technological advantage and the combat capabilities of critical weapons systems while supporting the warfighters' mission requirements. Furthermore, AT adds longevity to DoD weapon systems and critical technologies by deterring efforts to reverse engineer or develop weapon countermeasures against the system or system component.

All DoD acquisition programs, Foreign Military Sales, and Direct Commercial Sales with resident critical program information (RCPI) require a validated AT Plan. The AT program includes resources required for subject matter experts (SMEs) to review AT Plans and conduct AT validation on all DoD Weapon Systems, and perform AT assessments of both commercial off the shelf and government off the shelf products. As technology advances, AT continues to perform AT hardware/software assessment capabilities. These capabilities include the acquisition of specialized equipment, maintenance and/or renovations to support the integration of this equipment, and modifications to new and/or existing laboratory facilities to meet equipment and security requirements.

The DoD ATEA technology development strategy is to coordinate DoD AT technology development across the Services which fund development of new AT technology, as well as enhance existing AT technology efforts to increase the technology readiness level (TRL) and facilitate transition for programs to implement. The AT technology development and enhancement efforts include: advanced AT sensor hardware, secure processing, crypto-analysis, tamper penalties, and other AT enablers.

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The Air Force AT OPR conducts Anti-Tamper technology development to meet Air Force service needs to mature promising AT technologies to transition to Air Force weapons systems. Technology development priorities are given to those technologies that most benefit AF acquisition programs. These activities are coordinated through the ATEA as a part of the ATEA technology development roadmap and to coordinate with Navy and Army AT technology development efforts. This program is in Budget Activity 07, Operational System Development, because it includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
Previous President's Budget	34.815	26.718	29.871	0.000	29.871
Current President's Budget	33.775	26.718	31.952	0.000	31.952
Total Adjustments	-1.040	0.000	2.081	0.000	2.081
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-1.040	0.000			
• Other Adjustments	0.000	0.000	2.081	0.000	2.081

**Change Summary Explanation**

FY16: Reduction of 3.177M due under execution with a payback in FY17 and

<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Title:</b> DoD Anti-Tamper Technology Executive Agent (DoDATEA)	29.129	20.873	23.815
<b>Description:</b> AT technology coordination and evaluations, hardware/software vulnerability assessments, laboratory infrastructure; provide outreach and education to the AT Community, conduct effective validation and evaluation of AT implementation as well as implementation of AT policy.			
<b>FY 2015 Accomplishments:</b>			
- Conducted effective validation and evaluation of AT implementation on all DoD Acquisition programs, continued AT technology development and evaluations, hardware/software vulnerability assessments, and maintained AT laboratory infrastructure.			
- Trained acquisition workforce on AT policy and technology, and implemented AT policy within the AT Community.			
<b>FY 2016 Plans:</b>			

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<ul style="list-style-type: none"> <li>- Conduct effective validation and evaluation of AT implementation on all DoD Acquisition programs; continue AT hardware/software technical development, vulnerability assessments, and maintenance of AT laboratory infrastructure.</li> <li>- Continue to train acquisition workforce on AT policy and technology, and implement AT policy within the AT Community.</li> </ul> <p><b>FY 2017 Plans:</b></p> <ul style="list-style-type: none"> <li>- Conduct effective validation and evaluation of AT implementation on all DoD Acquisition programs; continue AT hardware/software technical development, vulnerability assessments, and maintenance of AT laboratory infrastructure.</li> <li>- Continue to train acquisition workforce on AT policy and technology, and implement AT policy within the AT Community.</li> </ul>				
<p><b>Title:</b> DoDATEA Program Management Support</p> <p><b>Description:</b> Includes civilian pay, A&amp;AS, outreach and education, travel, supplies, and AFLCMC/WWG support</p> <p><b>FY 2015 Accomplishments:</b> Supported and funded program office efforts, including civilian pay, A&amp;AS, outreach and education, travel, and supplies.</p> <p><b>FY 2016 Plans:</b> Support program office efforts, including civilian pay, A&amp;AS, outreach and education, travel, and supplies.</p> <p><b>FY 2017 Plans:</b> Support program office efforts, including civilian pay, A&amp;AS, outreach and education, travel, and supplies.</p>		4.114	5.228	5.487
<p><b>Title:</b> Air Force Anti-Tamper Office Program Management Support</p> <p><b>Description:</b> Includes civilian pay, A&amp;AS, travel, and supplies for Air Force Component AT OPR.</p> <p><b>FY 2015 Accomplishments:</b> Supported and funded civilian pay, A&amp;AS, travel, and supplies.</p> <p><b>FY 2016 Plans:</b> Includes civilian pay, A&amp;AS, travel, and supplies.</p> <p><b>FY 2017 Plans:</b> Includes civilian pay, A&amp;AS, travel, and supplies.</p>		0.532	0.617	0.650
<p><b>Title:</b> Air Force Anti-Tamper Office Technology Development</p> <p><b>Description:</b> The Air Force Anti-Tamper office reviews the AT Plans for all AF acquisition programs under the Program Protection Planning process. The Air Force AT office must conduct Anti-Tamper technology development to meet Air Force service needs to mature promising AT technologies to transition to Air Force weapons systems.</p>		0.000	0.000	2.000

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<p>The AT technology development and enhancement efforts include: advanced AT sensor hardware, secure processing, crypto-analysis, tamper penalties, and other AT enablers. Technology development priorities will be given to those technologies that most benefit AF acquisition programs.</p> <p>The Air Force Anti-Tamper office will fund and manage new technology efforts to protect Air Force critical program information. These new AT technology requirements will be obtained from AF programs and these new AT technologies will then transition to Air Force programs.</p> <p><b>FY 2015 Accomplishments:</b> No funding received for FY15 for technology development.</p> <p><b>FY 2016 Plans:</b> No funding received for FY16 for technology development.</p> <p><b>FY 2017 Plans:</b> The Air Force Anti-Tamper office reviews the AT Plans for all AF acquisition programs under the Program Protection Planning process. The Air Force AT office must conduct Anti-Tamper technology development to meet Air Force service needs to mature promising AT technologies to transition to Air Force weapons systems.</p> <p>The AT technology development and enhancement efforts include: advanced AT sensor hardware, secure processing, crypto-analysis, tamper penalties, and other AT enablers. Technology development priorities will be given to those technologies that most benefit AF acquisition programs.</p>				
<b>Accomplishments/Planned Programs Subtotals</b>		33.775	26.718	31.952
<b>D. Other Program Funding Summary (\$ in Millions)</b>				
N/A				
<b>Remarks</b>				
<b>E. Acquisition Strategy</b>				
<p>The DoD ATEA acquisition strategy is to coordinate DoD AT technology developments across the Services which fund coordination and assessments of new AT technology, as well as enhance existing AT technology efforts by increasing TRL. The ATEA will coordinate the Technology Roadmap with major Prime vendors. Evaluating their AT CRADA projects is of major importance. The ATEA will also coordinate with the Service AT personnel to foster communication and understand what programs, Services are developing for their AT implementation. Emerging research areas such as materials, cryptography and electronic circuits have the potential to bring new AT capabilities with reduced power needs and smaller form factor. The goal of the research is to mature promising technologies to the point they can be</p>				

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transitioned to a program office or industry for implementation in our weapon systems. Priorities will be given to those technologies that most benefit the DoD AT community.

The Air Force AT Office in 2017, will fund and manage new technology efforts to protect Air Force critical program information. These new AT technology requirements will be obtained from AF programs and these new AT technologies will then transition to Air Force programs.

**F. 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.

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2017 Air Force</b>											<b>Date:</b> February 2016				
<b>Appropriation/Budget Activity</b> 3600 / 7				<b>R-1 Program Element (Number/Name)</b> PE 0605024F / <i>Anti-Tamper Technology Executive Agency</i>				<b>Project (Number/Name)</b> 675066 / <i>Anti-Tamper Technology Executive Agent</i>							

<b>Product Development (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Air Force Anti-Tamper Office Technology Development	Various	Not specified. : TBD	-	0.000		0.000		2.000		0.000		2.000	Continuing	Continuing	-
<b>Subtotal</b>			-	0.000		0.000		2.000		0.000		2.000	-	-	-

**Remarks**  
In the FY17 PB, the Air Force received funding specifically for Technology Development.

<b>Support (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DoD Anti-Tamper Technology Executive Agent (DoDATEA)	Various	Not specified. : TBD	-	29.129		20.873		23.815		0.000		23.815	Continuing	Continuing	-
<b>Subtotal</b>			-	29.129		20.873		23.815		0.000		23.815	-	-	-

**Remarks**  
This funding is to support DoD ATEA requirements. Funding was broken out starting in FY15 between DoD ATEA and Air Force requirements.

<b>Test and Evaluation (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0605024F / <i>Anti-Tamper Technology Executive Agency</i>	<b>Project (Number/Name)</b> 675066 / <i>Anti-Tamper Technology Executive Agent</i>
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<b>Management Services (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Force Anti-Tamper Office Program Management Support	Various	Not specified. : TBD	-	0.532		0.617		0.650		0.000		0.650	Continuing	Continuing	-
DoDATEA Program Management Support	Various	Not specified. : TBD	-	4.114		5.228		5.487		0.000		5.487	Continuing	Continuing	-
<b>Subtotal</b>			-	4.646		5.845		6.137		0.000		6.137	-	-	-

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>		-	33.775	26.718	31.952	0.000	-	-	-

**Remarks**  
Additional funding breakout and award dates are classified per the Anti-Tamper Security Classification Guide. Please contact the ATEA if additional information is required.

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2017 Air Force		<b>Date:</b> February 2016
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FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

ATEA Program Office	[REDACTED]																											
AT RDT&E	[REDACTED]																											

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0605024F / <i>Anti-Tamper Technology Executive Agency</i>	<b>Project (Number/Name)</b> 675066 / <i>Anti-Tamper Technology Executive Agent</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ATEA Program Office	1	2015	4	2021
AT RDT&E	1	2015	4	2021

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