Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					**R-1 ITEM NOMENCLATURE** PE 0605024F: *Anti-Tamper Technology Executive Agent*						

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	45.828	42.255	35.467	-	35.467	30.338	29.725	28.923	29.433	Continuing	Continuing
675066: *Anti-Tamper Technology Executive Agent*	45.828	42.255	35.467	-	35.467	30.338	29.725	28.923	29.433	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Air Force is the DoD Anti-Tamper Executive Agent (ATEA). The ATEA is responsible for implementing Anti-Tamper (AT) policy, coordinating and providing financial support for AT technology development, establishing and maintaining a data bank/library, providing proper security mechanisms, conducting effective validation and assessing AT implementations. The purpose of developing AT techniques is to protect critical technologies in U.S. weapon systems that may be sold to foreign governments or that could possibly fall into enemy hands. AT technology will permit the U.S. to preserve its critical weapons systems lead while also satisfying customer needs. Furthermore, AT will add longevity to critical technologies by deterring efforts to reverse engineer or develop weapon countermeasures against a system or system component. As the DoD Anti-Tamper Executive Agent, the Air Force will coordinate technology development and enhancement efforts among the Services, DoD Agencies, and laboratories, and with industry. The DoD ATEA will issue contracts for AT technology development as well as plus-up existing AT technology efforts to increase the technology readiness level. Priorities will be given to technologies that benefit the majority of the AT community. The Anti-Tamper technology development and enhancement efforts will occur in the following areas: advanced sensor hardware, generic electronic hardware, signature control, access detection & denial, software, and effectiveness. The program management activities will coordinate the technology development and establish the Anti-Tamper data bank/library. Anti-Tamper validation is a significant responsibility assigned to the Air Force. All DoD acquisition programs, Foreign Military Sales, and Direct Commercial Sales with critical technology/critical information are required to have an Anti-Tamper plan with appropriate validation. The resources required to review Anti-Tamper plans and conduct Anti-Tamper validation began to increase in late FY03. Based on Anti-Tamper validation requirement projections, the number of Anti-Tamper experts needs to expand. Beginning in FY09 additional funding has been dedicated to the technical development of new AT capabilities. Emerging research in the areas of materials, cryptography and electronic circuits has the potential to bring new AT capabilities that have reduced power needs, a smaller form factor, and less detectability by nation class adversary using state of the art reverse engineering tools. The goal of the research is to mature promising technologies to the point that they can be transitioned to a program office or industry prime for implementation in our weapons systems. 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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0605024F: *Anti-Tamper Technology Executive Agent*

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	47.276	42.255	37.140	-	37.140
Current President's Budget	45.828	42.255	35.467	-	35.467
Total Adjustments	-1.448	-	-1.673	-	-1.673
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-1.448	-	-1.673	-	-1.673

Change Summary Explanation
None

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011	

| APPROPRIATION/BUDGET ACTIVITY
3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development | | | | R-1 ITEM NOMENCLATURE
PE 0605024F: Anti-Tamper Technology
Executive Agent | | | | PROJECT
675066: Anti-Tamper Technology Executive
Agent | | |

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675066: Anti-Tamper Technology Executive Agent	45.828	42.255	35.467	-	35.467	30.338	29.725	28.923	29.433	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Air Force is the DoD Anti-Tamper Executive Agent (ATEA). The ATEA is responsible for implementing Anti-Tamper (AT) policy, coordinating and providing financial support for AT technology development, establishing and maintaining a data bank/library, providing proper security mechanisms, conducting effective validation and assessing AT implementations. The purpose of developing AT techniques is to protect critical technologies in U.S. weapon systems that may be sold to foreign governments or that could possibly fall into enemy hands. AT technology will permit the U.S. to preserve its critical weapons systems lead while also satisfying customer needs. Furthermore, AT will add longevity to critical technologies by deterring efforts to reverse engineer or develop weapon countermeasures against a system or system component. As the DoD Anti-Tamper Executive Agent, the Air Force will coordinate technology development and enhancement efforts among the Services, DoD Agencies, and laboratories, and with industry. The DoD ATEA will issue contracts for AT technology development as well as plus-up existing AT technology efforts to increase the technology readiness level. Priorities will be given to technologies that benefit the majority of the AT community. The Anti-Tamper technology development and enhancement efforts will occur in the following areas: advanced sensor hardware, generic electronic hardware, signature control, access detection & denial, software, and effectiveness. The program management activities will coordinate the technology development and establish the Anti-Tamper data bank/library. Anti-Tamper validation is a significant responsibility assigned to the Air Force. All DoD acquisition programs, Foreign Military Sales, and Direct Commercial Sales with critical technology/critical information are required to have an Anti-Tamper plan with appropriate validation. The resources required to review Anti-Tamper plans and conduct Anti-Tamper validation began to increase in late FY03. Based on Anti-Tamper validation requirement projections, the number of Anti-Tamper experts needs to expand. Beginning in FY09 additional funding has been dedicated to the technical development of new AT capabilities. Emerging research in the areas of materials, cryptography and electronic circuits has the potential to bring new AT capabilities that have reduced power needs, a smaller form factor, and less detectability by nation class adversary using state of the art reverse engineering tools. The goal of the research is to mature promising technologies to the point that they can be transitioned to a program office or industry prime for implementation in our weapons systems. 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. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Anti-Tamper Technology **Description:** Advanced Anti-Tamper Technology Executive Agent activities including: AFRL/RYW Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and technology development **FY 2010 Accomplishments:**	45.828	42.255	35.467	-	35.467

Exhibit R-2A, **RDT&E Project Justification:** PB 2012 Air Force		**DATE:** February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0605024F: *Anti-Tamper Technology Executive Agent*	**PROJECT** 675066: *Anti-Tamper Technology Executive Agent*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**
Continue advanced Anti-Tamper Technology Executive Agent activities including: AFRL/RYT Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and Technology ***FY 2011 Plans:*** Continue advanced Anti-Tamper Technology Executive Agent activities including: AFRL/RYW Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and Technology Development. ***FY 2012 Base Plans:*** Continue advanced Anti-Tamper Technology Executive Agent activities including: AFRL/RYW Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and Technology Development. ***FY 2012 OCO Plans:***					
Accomplishments/Planned Programs Subtotals	45.828	42.255	35.467	-	35.467

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• N/A: *NONE*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The DoD ATEA technology development enhancement funding will be used to support existing AT technology development contracts. This funding will be used to increase the technology readiness level for that particular AT technology so as to reduce the risk to programs wanting to implement this AT technology. The DoD ATEA conducts yearly evaluations of technologies, provided by the AT Tri-Service community.

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 2012 Air Force | **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	PE 0605024F: *Anti-Tamper Technology Executive Agent*	675066: *Anti-Tamper Technology Executive Agent*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ATEA Field Office Program Oversight	Various	AFRL/RYW:Dayton, OH	1.107	1.609	Mar 2011	1.361	Mar 2012	-		1.361	Continuing	Continuing	TBD
Security/Infrastructure	Various	AFRL/RYW:Dayton, OH	0.255	0.192	Mar 2011	0.286	Mar 2012	-		0.286	Continuing	Continuing	TBD
Databases, Website & Tools	Various	AFRL/RYW:Dayton, OH	0.812	0.620	Mar 2011	0.755	Mar 2012	-		0.755	Continuing	Continuing	0.000
Education and Outreach Support	Various	AFRL/RYW:Dayton, OH	0.563	0.418	Mar 2011	0.443	Mar 2012	-		0.443	Continuing	Continuing	0.000
Subtotal			2.737	2.839		2.845		-		2.845			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ATEA Outreach & Education AT Conference	Various	AFRL/RYW:WPAFB, OH	-	0.010	Apr 2011	0.010	Apr 2012	-		0.010	Continuing	Continuing	TBD
AT Short Course	PO	MIT/LL:Lexington, MA	0.230	0.275	Apr 2011	0.275	Feb 2012	-		0.275	Continuing	Continuing	TBD
DAU Course	TBD	TBD:TBD,	-	0.010	Apr 2011	-	Feb 2012	-		-	Continuing	Continuing	TBD
SME Training	MIPR	SNL:Albuquerque, NM	0.112	0.075	Mar 2011	0.075	Feb 2012	-		0.075	Continuing	Continuing	TBD
SBIR Workshop	MIPR	AFRL/RYW:WPAFB, OH	0.008	0.008	Jun 2011	0.008	Jun 2012	-		0.008	0.000	0.024	0.000
Threat Report Updates	MIPR	SNL:Albuquerque, NM	0.270	-		-		-		-	0.000	0.270	0.000
OSD Desk Reference	MIPR	Navy:,	0.337	-		-		-		-	0.000	0.337	0.000
AF AT Management	Various	SAF/AQL:Washington, DC	0.033	0.335	Jan 2011	0.335	Jan 2012	-		0.335	0.000	0.703	0.000
Subtotal			0.990	0.713		0.703		-		0.703			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force										DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*				**R-1 ITEM NOMENCLATURE** PE 0605024F: *Anti-Tamper Technology Executive Agent*						**PROJECT** 675066: *Anti-Tamper Technology Executive Agent*		

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Anti-Tamper Verification & Validation Army	Various	Army:Huntsville, AL	0.800	0.800	Mar 2011	0.800	Mar 2012	-		0.800	Continuing	Continuing	TBD
Navy	MIPR	Navy:China Lake, CA	1.227	1.270	Apr 2011	1.270	Apr 2012	-		1.270	Continuing	Continuing	TBD
Air Force	PO	Air Force:WPAFB, OH	0.400	1.203	Feb 2011	1.200	Feb 2012	-		1.200	Continuing	Continuing	TBD
AF Mentorship	PO	Air Force:WPAFB, OH	-	0.525	Jan 2011	0.680	Jan 2012	-		0.680	0.000	1.205	0.000
SNL	MIPR	SNL:Albuquerque, NM	0.760	0.400	Feb 2011	0.700	Feb 2012	-		0.700	Continuing	Continuing	TBD
V&V Contingency	TBD	TBD:TBD,	-	-	Mar 2011	1.023	Mar 2012	-		1.023	Continuing	Continuing	TBD
		Subtotal	3.187	4.198		5.673		-		5.673			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Anti-Tamper Assessments Air Force AT Field Agent	PO	Air Force:WPAFB, OH	0.231	0.340	Feb 2011	0.350	Feb 2012	-		0.350	Continuing	Continuing	TBD
NAWC CRANE (Navy)	MIPR	Navy:Crane, IN	2.398	4.275	Feb 2011	1.350	Feb 2012	-		1.350	Continuing	Continuing	TBD
Army AT Field Agent (Aviation & Missile Cmd/Redstone)	MIPR	Army:Huntsville, AL	0.925	2.645	Feb 2011	1.450	Feb 2012	-		1.450	Continuing	Continuing	TBD
DoD Executive Agent Field Agent (AFRL/RYW)	Allot	Air Force:WPAFB, OH	-	-		-		-		-	Continuing	Continuing	TBD
SNL	MIPR	SNL:Albuquerque, NM	3.226	4.490	Mar 2011	4.015	Mar 2012	-		4.015	Continuing	Continuing	TBD
Assessment Contract Activities	Various	Various:,	-	0.950	Mar 2011	0.250	Mar 2012	-		0.250	Continuing	Continuing	TBD
Capability Development	Various	Services:,	5.646	0.495		-		-		-	0.000	6.141	0.000
Anti-Tamper Technology Development AFRL/RYW	Various	AFRL/RYW:WPAFB, OH	-	-		-		-		-	0.000	0.000	0.000
Technology Contract Activities	Various	AFRL/RYW:WPAFB, OH	17.323	21.310		18.831		-		18.831	0.000	57.464	0.000
New Activity Funds	TBD	TBD:TBD,	9.166	-		-		-		-	0.000	9.166	0.000
		Subtotal	38.915	34.505		26.246		-		26.246			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force								DATE: February 2011	

APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0605024F: *Anti-Tamper Technology Executive Agent*	PROJECT 675066: *Anti-Tamper Technology Executive Agent*

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	45.829	42.255	35.467	-	35.467			

Remarks

Exhibit R-4, **RDT&E Schedule Profile:** PB 2012 Air Force		**DATE:** February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0605024F: *Anti-Tamper Technology Executive Agent*	**PROJECT** 675066: *Anti-Tamper Technology Executive Agent*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0605024F: *Anti-Tamper Technology Executive Agent*	**PROJECT** 675066: *Anti-Tamper Technology Executive Agent*

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ATEA Field Office	1	2010	4	2015
Database and Website Updates & Maintenance	1	2010	4	2015
Education & Outreach	1	2010	4	2015
AT Conference	2	2010	3	2015
Program V&V Evaluations	1	2010	4	2015
Assessments	2	2010	3	2015
Anti-Tamper Technology Development Enhancement	1	2010	4	2015