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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 6: <i>RDT&E Management Support</i>				PE 1001004F: <i>International Activities</i>							
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	3.611	3.764	3.798	-	3.798	3.844	3.902	3.957	4.040	Continuing	Continuing
664645: <i>International Cooperative Research & Development</i>	3.611	3.764	3.798	-	3.798	3.844	3.902	3.957	4.040	Continuing	Continuing

A. Mission Description and Budget Item Justification

The mission of this program is to gain access to our Allies' best defense technologies, eliminate costly duplication of Resesarch and Development (R&D) efforts, accelerate availabilty of defense systems, and to deploy and sustain common or interoperable USAF and allied equipment through International Cooperative Research and Development (ICR&D).

The USAF is party to multiple international cooperative agreements to solve common US and allied military scientific and technological problems, develop materiel solutions to harmonize coalition requirements and build interoperability with our coalition partners. This program element funds the USAF to discover, develop, process, negotiate, implement, and manage these international cooperative agreements and projects in compliance with statutory reporting provisions and exacting legal statutes, fiscal constraints, technology transfer controls, intellectual property rights, third party transfer provisions, quid-pro-quo criteria, industrial base factors, and political-military interests. Included in this budget are international technology assessment teams; space cooperation; specialized working groups; Research Technology Project development; Air Senior National Representative activities; support for cooperative opportunity assessments; developing; processing; negotiating and managing international agreements; oversight of ICR&D projects; program reviews; overseas R&D liaison offices; bilateral and multilateral staff talks; USAF displays at International Trade Shows to promote cooperation and interoperability activities; Engineering and Scientist Exchange Program (ESEP); and Administrative and Professional Exchange Program (APEP).

This program is in Budget Activity 6, Management and Support, funding provides for general R&D management support for all aspects of ICR&D activities in the USAF.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	3.748	3.764	3.811	-	3.811
Current President's Budget	3.611	3.764	3.798	-	3.798
Total Adjustments	-0.137	-	-0.013	-	-0.013
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.137	-			
• Other Adjustments	-	-	-0.013	-	-0.013

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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 6: RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 1001004F: International Activities				PROJECT 664645: International Cooperative Research & Development			
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
664645: International Cooperative Research & Development	3.611	3.764	3.798	-	3.798	3.844	3.902	3.957	4.040	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The mission of this program is to gain access to our Allies' best defense technologies, eliminate costly duplication of Resesarch and Development (R&D) efforts, accelerate availability of defense systems, and to deploy and sustain common or interoperable USAF and allied equipment through International Cooperative Research and Development (ICR&D).

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This program is in Budget Activity 6, Management and Support, funding provides for general R&D management support for all aspects of ICR&D activities in the USAF.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Engineer and Scientist Exchange Program/Administrative and Professional Exchange Program (ESEP/APEP)	0.300	0.300	0.300	-	0.300
Description: Funds the USAF execution and management oversight of ESEP and APEP agreements. Funds eight to ten field level military and civilian personnel from AFMC Facilities, Product Centers, Test Centers, Logistic Centers, and the Academy for tours at selected European and Asian government laboratories or other installations.					
FY 2010 Accomplishments:					

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continuation of execution and management oversight of ESEP and APEP agreements. Funds eight to ten field level military and civilian personnel from AFMC Facilities, Product Centers, Test Centers, Logistic Centers, and the Academy for tours at selected European and Asian government laboratories or other installations. FY 2011 Plans: Continuation of execution and management oversight of ESEP and APEP agreements. Funds eight to ten field level military and civilian personnel from AFMC Facilities, Product Centers, Test Centers, Logistic Centers, and the Academy for tours at selected European and Asian government laboratories or other installations. FY 2012 Base Plans: Continuation of execution and management oversight of ESEP and APEP agreements. Funds eight to ten field level military and civilian personnel from AFMC Facilities, Product Centers, Test Centers, Logistic Centers, and the Academy for tours at selected European and Asian government laboratories or other installations. FY 2012 OCO Plans:							
Title: International Cooperative Research and Development (ICR&D) Description: Funds USAF overseas R&D liaison offices. Funds management support and oversight of International Affairs Armaments Cooperation Division (SAF/IAPQ). Funds USAF participation in NATO forums to promote NATO harmonization of requirements, standardization, and new cooperative R&D programs. Funds USAF support and participation in OSD bi-lateral acquisition forums. Funds technical assessments and international agreements negotiation start-up costs associated with promising cooperative R&D programs. Funds USAF efforts to expand existing relationships, technology development activities and interoperability issues with: Australia, Canada, Denmark, France, Germany, India, Israel, Italy, Japan, NATO, Netherlands, Norway, South Korea, Singapore, Spain, Sweden, and UK. Funds USAF participation in initiating ICR&D relationships and activities with: Brazil, Poland, Chile, Czech Republic, India, South Africa and Turkey. FY 2010 Accomplishments: Continuation of management and support of overseas R&D liaison offices. Funds management support and oversight of International Affairs Armaments Cooperation Division (SAF/IAPQ). Funds USAF participation in NATO forums to promote NATO harmonization of requirements, standardization, and new cooperative R&D programs. Funds USAF support and participation in OSD bi-lateral acquisition forums. Funds technical assessments and international agreements negotiation start-up costs associated with promising cooperative R&D programs. Funds USAF efforts to expand existing relationships, technology development activities and			2.011	2.314	2.251	-	2.251

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
interoperability issues with: Australia, Canada, Denmark, France, Germany, India, Israel, Italy, Japan, NATO, Netherlands, Norway, South Korea, Singapore, Spain, Sweden, and UK. Funds USAF participation in initiating ICR&D relationships and activities with: Brazil, Poland, Chile, Czech Republic, India, South Africa and Turkey. FY 2011 Plans: Continuation of management and support of overseas R&D liaison offices. Funds management support and oversight of International Affairs Armaments Cooperation Division (SAF/IAPQ). Funds USAF participation in NATO forums to promote NATO harmonization of requirements, standardization, and new cooperative R&D programs. Funds USAF support and participation in OSD bi-lateral acquisition forums. Funds technical assessments and international agreements negotiation start-up costs associated with promising cooperative R&D programs. Funds USAF efforts to expand existing relationships, technology development activities and interoperability issues with: Australia, Canada, Denmark, France, Germany, India, Israel, Italy, Japan, NATO, Netherlands, Norway, South Korea, Singapore, Spain, Sweden, and UK. Funds USAF participation in initiating ICR&D relationships and activities with: Brazil, Poland, Chile, Czech Republic, India, South Africa and Turkey. FY 2012 Base Plans: Continuation of management and support of overseas R&D liaison offices. Funds management support and oversight of International Affairs Armaments Cooperation Division (SAF/IAPQ). Funds USAF participation in NATO forums to promote NATO harmonization of requirements, standardization, and new cooperative R&D programs. Funds USAF support and participation in OSD bi-lateral acquisition forums. Funds technical assessments and international agreements negotiation start-up costs associated with promising cooperative R&D programs. Funds USAF efforts to expand existing relationships, technology development activities and interoperability issues with: Australia, Canada, Denmark, France, Germany, India, Israel, Italy, Japan, NATO, Netherlands, Norway, South Korea, Singapore, Spain, Sweden, and UK. Funds USAF participation in initiating ICR&D relationships and activities with: Brazil, Poland, Chile, Czech Republic, India, South Africa and Turkey. FY 2012 OCO Plans:						
Title: Armaments Cooperation Description: Funds the USAF’s ability to develop and negotiate the increasing number proposals for ICRD&A bi-lateral and multi-lateral Agreements with key allies. Work will continue on agreements developed, but not signed, during FY10 in the areas of: materials and composites, human effectiveness, robotics, nanotechnology, coalition information sharing, biometrics, virtual munitions design, hypersonics, alternative energy, IED defeat,		0.750	0.750	0.800	-	0.800

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
WMD defeat, distributed mission operations, lasers, unmanned air systems, reconnaissance and surveillance, command and control, capabilities, interoperability and system level programs. FY 2010 Accomplishments: Continuation of funding for the USAF's ability to develop and negotiate the increasing number proposals for ICRD&A bi-lateral and multi-lateral Agreements with key allies. Work will continue on agreements developed, but not signed, during FY10 in the areas of: materials and composites, human effectiveness, robotics, nanotechnology, coalition information sharing, biometrics, virtual munitions design, hypersonics, alternative energy, IED defeat, WMD defeat, distributed mission operations, lasers, unmanned air systems, reconnaissance and surveillance, command and control, capabilities, interoperability and system level programs. FY 2011 Plans: Continuation of funding for the USAF's ability to develop and negotiate the increasing number proposals for ICRD&A bi-lateral and multi-lateral Agreements with key allies. Work will continue on agreements developed, but not signed, during FY10 in the areas of: materials and composites, human effectiveness, robotics, nanotechnology, coalition information sharing, biometrics, virtual munitions design, hypersonics, alternative energy, IED defeat, WMD defeat, distributed mission operations, lasers, unmanned air systems, reconnaissance and surveillance, command and control, capabilities, interoperability and system level programs. FY 2012 Base Plans: Continuation of funding for the USAF's ability to develop and negotiate the increasing number proposals for ICRD&A bi-lateral and multi-lateral Agreements with key allies. Work will continue on agreements developed, but not signed, during FY10 in the areas of: materials and composites, human effectiveness, robotics, nanotechnology, coalition information sharing, biometrics, virtual munitions design, hypersonics, alternative energy, IED defeat, WMD defeat, distributed mission operations, lasers, unmanned air systems, reconnaissance and surveillance, command and control, capabilities, interoperability and system level programs. FY 2012 OCO Plans:						
Title: Air Force Material Command (AFMC) Description: Funds support and oversight of International Armaments Cooperation R&D efforts within the Air Force Research Laboratories (AFRL). Funds AFRL support of technical assessments and discussions to identify, create, and develop promising cooperative R&D programs.		0.250	0.200	0.200	-	0.200

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
FY 2010 Accomplishments: Continuation of funds support and oversight of International Armaments Cooperation R&D efforts within the Air Force Research Laboratories (AFRL). Funds AFRL support of technical assessments and discussions to identify, create, and develop promising cooperative R&D programs.							
FY 2011 Plans: Continuation of funds support and oversight of International Armaments Cooperation R&D efforts within the Air Force Research Laboratories (AFRL). Funds AFRL support of technical assessments and discussions to identify, create, and develop promising cooperative R&D programs.							
FY 2012 Base Plans: Continuation of funds support and oversight of International Armaments Cooperation R&D efforts within the Air Force Research Laboratories (AFRL). Funds AFRL support of technical assessments and discussions to identify, create, and develop promising cooperative R&D programs.							
FY 2012 OCO Plans:							
Title: International Space Cooperation			0.300	0.150	0.187	-	0.187
Description: Funds research and development activities to provide a foundation upon which to develop operational strategies, concepts of operations, tactics techniques and procedures, and technologies and prototype systems with our allies, which in turn provides foundation for long-term, full spectrum operational cooperation. Space cooperation with our allies enables the USAF access to critical geography for distributed ground systems, and remote test ranges for test and evaluation of space capabilities in electronically challenged environments, as well as joint development and acquisition of space systems.							
FY 2010 Accomplishments: Continuation of funds to support research and development activities to provide a foundation upon which to develop operational strategies, concepts of operations, tactics techniques and procedures, and technologies and prototype systems with our allies, which in turn provides foundation for long-term, full spectrum operational cooperation. Space cooperation with our allies enables the USAF access to critical geography for distributed ground systems, and remote test ranges for test and evaluation of space capabilities in electronically challenged environments, as well as joint development and acquisition of space systems.							
FY 2011 Plans:							

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continuation of funds to support research and development activities to provide a foundation upon which to develop operational strategies, concepts of operations, tactics techniques and procedures, and technologies and prototype systems with our allies, which in turn provides foundation for long-term, full spectrum operational cooperation. Space cooperation with our allies enables the USAF access to critical geography for distributed ground systems, and remote test ranges for test and evaluation of space capabilities in electronically challenged environments, as well as joint development and acquisition of space systems. FY 2012 Base Plans: Continuation of funds to support research and development activities to provide a foundation upon which to develop operational strategies, concepts of operations, tactics techniques and procedures, and technologies and prototype systems with our allies, which in turn provides foundation for long-term, full spectrum operational cooperation. Space cooperation with our allies enables the USAF access to critical geography for distributed ground systems, and remote test ranges for test and evaluation of space capabilities in electronically challenged environments, as well as joint development and acquisition of space systems. FY 2012 OCO Plans:						
Title: Cyberspace Cooperation Description: Funds establishing cooperative relationships with allies in cyberspace missions to ensure interoperability, sharing of information on threats, and developing new capabilities to defeat threats to our critical information systems. Supports integration of air, space, and cyberspace capabilities to create global effects. Cyberspace requires significant research and development efforts and responsiveness to avoid technological surprise. FY 2010 Accomplishments: FY 2011 Plans: Funds establishing cooperative relationships with allies in cyberspace missions to ensure interoperability, sharing of information on threats, and developing new capabilities to defeat threats to our critical information systems. Supports integration of air, space, and cyberspace capabilities to create global effects. Cyberspace requires significant research and development efforts and responsiveness to avoid technological surprise. FY 2012 Base Plans: Continuation of funds establishing cooperative relationships with allies in cyberspace missions to ensure interoperability, sharing of information on threats, and developing new capabilities to defeat threats to our critical		-	0.050	0.060	-	0.060

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<u>B. Accomplishments/Planned Programs (\$ in Millions)</u>	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
information systems. Supports integration of air, space, and cyberspace capabilities to create global effects. Cyberspace requires significant research and development efforts and responsiveness to avoid technological surprise. <i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	3.611	3.764	3.798	-	3.798

<u>C. Other Program Funding Summary (\$ in Millions)</u>												
	<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
•	N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

<u>D. Acquisition Strategy</u>	
<p>This program element is the only source of USAF funds to identify and initiate opportunities for international armaments cooperation to (a) deploy and support common or interoperable equipment with our allies; (b) leverage USAF resources with our allies through cost sharing and economies of scale; and (c) exploit the best US and allied technologies for equipping coalition forces. We obtain these benefits only after international cooperative opportunities are identified, explored, assessed, developed and international agreements are negotiated and concluded. This PE provides funds to execute up-front armaments cooperation responsibilities, realize cooperative opportunities, assess allied technologies and generate sound, cost-effective cooperative programs between the USAF and our international partners. Once these initiatives and programs are started as international efforts they are transferred to the appropriate technology or systems program office and are then funded by the program office.</p>	

<u>E. Performance Metrics</u>	
<p>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.</p>	