

# UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Office of Secretary Of Defense										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 1: Basic Research					R-1 ITEM NOMENCLATURE PE 0601110D8Z: Basic Research Initiatives							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	7.170	19.405	11.171	-	11.171	13.091	19.795	24.621	24.958	Continuing	Continuing
P010: Basic Research Initiatives	-	7.170	19.405	11.171	-	11.171	13.091	19.795	24.621	24.958	Continuing	Continuing
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
This program element (PE) incorporates Minerva Research Initiative activities, which include university-led basic research in social science and sponsored research faculty chair positions at defense education institutions, and activities to implement the basic research office strategic plan for the Department of Defense (DoD).												
A. Mission Description and Budget Item Justification												
Basic research provides the DoD with a deep and broad awareness of current directions in science and engineering through the scientific performers in areas of research that are important to U.S. military capabilities including, among others, physics and the physical sciences, materials science, chemistry and chemical engineering, electrical engineering, applied mathematics, computer science, mechanical and aerodynamic engineering, ocean sciences, biological sciences, and the social sciences. Basic research sustains scientific and engineering communities in areas that form the critical technical underpinnings of DoD capabilities. Basic research through exploration and discovery provides the unique means for disruptive non-incremental advances that can improve or radically change military strategy and operations.												
The Minerva Research Initiative is a university-based social science basic research program directed from within the Office of the Secretary of Defense (OSD) and executed by the Services, consistent with the January 2012 priorities document "Sustaining U.S. Global Leadership: Priorities for 21st Century Defense" and the Quadrennial Defense Review (QDR) requirements. This program seeks to build a deeper understanding of the social, cultural, and political forces that shape regions of the world of strategic importance to the United States. Deeper understanding of the cultural and political environments where threats, such as radical actors and regime disruptions, develop supports more effective strategic and operational policy decisions.												
The Strategic Support for Basic Research (SSBR) program funds initiatives to implement the Assistant Secretary of Defense for Research and Engineering (ASD(R&E)) strategic plan for defense basic research. This plan defines specific and quantifiable actions to help create conditions for defense basic research investments capable of creating high-payoff, transformative scientific breakthroughs for DoD. The SSBR initiatives support the five aims of: (1) providing scientific leadership; (2) attracting the Nation’s best Scientists and Engineers (S&Es); (3) ensuring the coherence and balance of the Basic Research portfolio; (4) fostering connections between DoD performers and DoD; and (5) improving the efficiency of the defense research business environment.												

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014 Base</b>	<b>FY 2014 OCO</b>	<b>FY 2014 Total</b>
Previous President's Budget	7.482	19.405	13.754	-	13.754
Current President's Budget	7.170	19.405	11.171	-	11.171
Total Adjustments	-0.312	0.000	-2.583	-	-2.583
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.310	-			
• SBIR/STTR Transfer	-	-			
• Baseline Adjustments	-	-	-2.583	-	-2.583
• Other Adjustments	-0.002	-	-	-	-

**Change Summary Explanation**

FY 2014 baseline adjustments are in compliance with the Department of Defense new Strategic Guidance on the Asia-Pacific rebalance.

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense										DATE: April 2013		
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
P010: Basic Research Initiatives	-	7.170	19.405	11.171	-	11.171	13.091	19.795	24.621	24.958	Continuing	Continuing

<sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

## A. Mission Description and Budget Item Justification

Basic research provides the DoD with a deep and broad awareness of current directions in science and engineering through the scientific performers in areas of research that are important to U.S. military capabilities including, among others, physics and the physical sciences, materials science, chemistry and chemical engineering, electrical engineering, applied mathematics, computer science, mechanical and aerodynamic engineering, ocean sciences, biological sciences, and the social sciences. Basic research sustains scientific and engineering communities in areas that form the critical technical underpinnings of DoD capabilities. Basic research through exploration and discovery provides the unique means for disruptive non-incremental advances that can improve or radically change military strategy and operations.

The Minerva Research Initiative is a university-based social science basic research program directed from within the Office of the Secretary of Defense (OSD) and executed by the Services, consistent with the January 2012 priorities document "Sustaining U.S. Global Leadership: Priorities for 21st Century Defense" and the Quadrennial Defense Review (QDR) requirements. This program seeks to build a deeper understanding of the social, cultural, and political forces that shape regions of the world of strategic importance to the United States. Deeper understanding of the cultural and political environments where threats, such as radical actors and regime disruptions, develop supports more effective strategic and operational policy decisions.

The Strategic Support for Basic Research (SSBR) program funds initiatives to implement the Assistant Secretary of Defense for Research and Engineering (ASD(R&E)) strategic plan for defense basic research. This plan defines specific and quantifiable actions to help create conditions for defense basic research investments capable of creating high-payoff, transformative scientific breakthroughs for DoD. The SSBR initiatives support the five aims of (1) providing scientific leadership; (2) attracting the Nation's best Scientists and Engineers (S&Es); (3) ensuring the coherence and balance of the Basic Research portfolio; (4) fostering connections between DoD performers and DoD; and (5) improving the efficiency of the defense research business environment.

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

	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>
<b>Title:</b> Minerva Research Initiative	5.769	16.520	7.331
<b>Description:</b> The Minerva Research Initiative is a university-based social science basic research program directed from within the OSD and executed by the Services, consistent with the January 2012 priorities document "Sustaining U.S. Global Leadership: Priorities for 21st Century Defense" and the QDR requirements. This program seeks to build a deeper understanding of the social, cultural, and political forces that shape regions of the world of strategic importance to the United States. Deeper understanding of the cultural and political environments where threats such as radical actors and regime disruptions develop supports more effective strategic and operational policy decisions.			

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2012</b>	<b>FY 2013</b>
<p><b><i>FY 2012 Accomplishments:</i></b> The FY 2012 Broad Agency Announcement (BAA) yielded 350 white papers and 53 full proposals, over half from principal investigators (PIs) that had never received DoD funds before. Of these, ten new grants for university led research were awarded, giving support to approximately 30 new PIs at 17 institutions. This represents the first solicitation and new program funding for university research since FY 2009. In preparation for the FY 2013 BAA, sought and received research prioritization input from Service leadership, Defense Advanced Research Projects Agency (DARPA), Combatant Commands (COCOMs), Joint Staff (J5), the intelligence community and others. Supported faculty chairs for 14 Minerva Research Fellows at defense education institutions such as war colleges and service academies.</p> <p><b><i>FY 2013 Plans:</i></b> A Department-wide solicitation of topics to be set as Minerva priority social science research areas drew responses from Service leadership, DARPA, COCOMs, J5, the intelligence community and others. The resulting BAA and correlated source selection process identified several new university-led research grants to be awarded in these newly derived focus areas. The FY 2013 BAA yielded 270 white papers. Full proposals from this set will be selected for award in accordance with recommendations from a panel of defense Science and Technology (S&amp;T), defense policy, and academic experts as well as the appropriated FY 2013 budget.</p> <p>Maintain sponsored faculty chairs for Minerva Research Fellows at defense education institutions (war colleges and service academies).</p> <p><b><i>FY 2014 Plans:</i></b> Continue and start new university-led research initiatives. Maintain support of sponsored Minerva faculty chairs at defense education institutions, such as war colleges and service academies.</p>			
<p><b><i>Title:</i></b> Strategic Support for Basic Research (SSBR)</p> <p><b><i>Description:</i></b> The SSBR program funds initiatives to implement the ASD(R&amp;E) strategic plan for defense basic research. This plan defines specific and quantifiable actions to help create conditions for defense basic research investments capable of creating high-payoff, transformative scientific breakthroughs for DoD. The SSBR initiatives support the five aims of (1) providing scientific leadership; (2) attracting the Nation's best scientists and engineers; (3) ensuring the coherence and balance of the Basic Research portfolio; (4) fostering connections between DoD performers and DoD; and (5) improving the efficiency of the defense research business environment.</p> <p><b><i>FY 2012 Accomplishments:</i></b> Conducted three scientific workshops to define/determine the state and direction of emerging area in today's basic research. Provided insight into: grand challenges, the potential for each field,the investments needed to move the field forward, and an</p>		1.401	2.885
			3.840

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2012</b>	<b>FY 2013</b>
<p>assessment of current and future projected leadership in international basic research. In addition, organized Multidisciplinary University Research Initiative (MURI) Reviews with industrial participation to network and identify potential high impact areas of transition. Generated a strategic plan and associated implementation plan, tying the strategic plan to the recently released Report of the Defense Science Board Task Force on Basic Research.</p> <p><b><i>FY 2013 Plans:</i></b> Conduct workshops for scientific situational awareness. Convene National research leaders to provide external perspectives on potential breakthroughs and barriers to advancement in rapidly evolving fields of basic research. Analyze university related business practices for improvement. Acquire scientific expertise to oversee engineering and science initiatives. Conduct ASD(R&amp;E) Deans Dialog event to foster more active connections with research universities. Establish DoD wide Basic Research objectives and priorities.</p> <p><b><i>FY 2014 Plans:</i></b> Conduct workshops for scientific situational awareness. Convene National research leaders to provide external perspectives on potential breakthroughs and barriers to advancement in rapidly evolving fields of basic research. Continue to analyze university related business practices for improvement. Continue support for scientific expertise to oversee engineering and science initiatives. Conduct annual ASD(R&amp;E) Deans Dialog event to foster active connections with research universities.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>		7.170	19.405
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b> N/A			
<b>E. Performance Metrics</b> N/A			