Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Missile Defense Agency	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605502C: *Small Business Innovative Research BMDO*

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	101.230	-	-	-	-	-	-	-	-	0.000	101.230
ZX45: *Small Business Innovative Research (SBIR)*	101.230	-	-	-	-	-	-	-	-	0.000	101.230

Note

NA

A. Mission Description and Budget Item Justification

This project explores innovative concepts pursuant to Public Law 106-554 (Small Business Reauthorization Act of 2000) and Public Law 107-50 (Small Business Technology Transfer Program Reauthorization Act of 2001), which mandates a two-phase competition for small businesses with innovative technologies that can also be commercialized. The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs will develop new dual-use technologies for possible future MDA BMDS needs. Dual-use means that the technologies will also be judged on their potential for future private sector investment both as a vehicle for reducing development time and cost, unit costs of new MDA BMDS technologies, and as a route to national economic growth through new commercial products. MDA will conduct the competition and will award and manage the contracts with assistance from our executing agents.

The Missile Defense Agency`s SBIR/STTR investments are divided into eight Research Areas:

Interceptors: advanced focal plane arrays and seeker components, axial and divert/attitude control systems technology, guidance & control, on-board discrimination, and improved lightweight structures for BMD systems.

Space: large format focal plane arrays and imaging components, photovoltaics and lightweight reserve batteries, radiation hard electronics and electro-optics, and lightweight space-environment structures and components.

Directed Energy: solid-state laser systems and components, thermal management, scene generation technology for HWIL testing, directed energy electro-optics, and laser materials.

Modeling and Simulation: software tools to enhance BMDS M&S capability, improved physics/chemistry- based phenomenology for improved models.

Manufacturing, Producibility and Field Sustainment: technologies for improved system affordability, producibility and reliability covering all aspects of BMDS hardware.

Radar: improved systems and components for BMD radar systems including transmit/receive modules, wide-band gap semiconductors, thermal management, array technologies, and improved algorithms and signal processing tools.

C2BMC: tools and techniques for enhancing battle management, end-to-end communications, sensor registration and multi-sensor/multi-shooter engagement scenarios.

Innovative Concepts and Special Focus Area: emerging game changing approaches to missile defense and special emphasis technologies such as strained layer super-lattice materials.

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Missile Defense Agency	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 6: *RDT&E Management Support*	**R-1 ITEM NOMENCLATURE** PE 0605502C: *Small Business Innovative Research BMDO*

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	101.230	-	-	-	-
Total Adjustments	101.230	-	-	-	-
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	101.230	-			
• Other Adjustment Detail	-	-	-	-	-

Change Summary Explanation

NA

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605502C: *Small Business Innovative Research BMDO*	PROJECT ZX45: *Small Business Innovative Research (SBIR)*	

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
ZX45: *Small Business Innovative Research (SBIR)*	101.230	-	-	-	-	-	-	-	-	0.000	101.230
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

A. Mission Description and Budget Item Justification

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Innovative Concepts and Special Focus Area: emerging game changing approaches to missile defense and special emphasis technologies such as strained layer super-lattice materials.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: FY10 Accomplishments/Planned Program	101.230	-	-
Articles:	0		
Description: See Description Below			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605502C: *Small Business Innovative Research BMDO*	PROJECT ZX45: *Small Business Innovative Research (SBIR)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
FY 2010 Accomplishments: Awarded 151 Phase Is (~$100K each) and 92 Phase IIs (including mods to existing Phase IIs) (average award ~$860K). Phase I Selections were in the following 9 research areas: C2BMC, Directed Energy, Insensitive Munitions/Safety, Information Assurance, Interceptor Technology, Manufacturing and Producibility, Modeling Simulation and Phenomenology, Radar Technology and Space Technology. Phase II Selections were in the following 10 research areas: Airborne Component Technology, Discrimination, Information Assurance, Integration (C2BMC), Interceptor Technology, Manufacturing Process, Modeling & Simulation, Radar Systems Technology, Safety/Insensitive Munitions and Space Technology.			
Accomplishments/Planned Programs Subtotals	101.230	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

NA

E. Performance Metrics

NA