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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 United States Special Operations Command **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				PE 1160479BB: <i>SOF Visual Augmentation, Lasers and Sensor Systems</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	4.764	-	3.000	-	3.000	2.395	-	-	-	0.000	10.159
S395: <i>SOF Visual Augmentation, Lasers and Sensor Systems</i>	4.764	-	3.000	-	3.000	2.395	-	-	-	0.000	10.159

A. Mission Description and Budget Item Justification

This program element provides for development, testing, and integration of specialized visual augmentation, laser and sensor systems equipment to meet the unique requirements of Special Operations Forces (SOF). Specialized equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. These operations are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to enemy threats to ensure mission success.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	8.533	-	-	-	-
Current President's Budget	4.764	-	3.000	-	3.000
Total Adjustments	-3.769	-	3.000	-	3.000
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-3.663	-			
• SBIR/STTR Transfer	-0.106	-			
• Other Adjustment	-	-	3.000	-	3.000

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: S395: *SOF Visual Augmentation, Lasers and Sensor Systems*

Congressional Add: *ASICS Miniaturization for Lasers and Sensors*

	FY 2010	FY 2011
	2.390	-
Congressional Add Subtotals for Project: S395	2.390	-
Congressional Add Totals for all Projects	2.390	-

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 1160479BB: <i>SOF Visual Augmentation, Lasers and Sensor Systems</i>	
<p><u>Change Summary Explanation</u></p> <p>Funding:</p> <p>FY 2010 Decrease of \$3.769 million is due to Sectional 8097 congressional reduction (-\$.012 million), reprogramming to higher command priorities (-\$0.863 million) and the transfer of two congressional adds to the correct Program Element as follows: Thermal Pointer/Illuminator for Force Protection (-\$1.593 million) and Miniature Day Night Sight for Crew Served Weapons (-\$1.195 million), and a transfer of funds for Small Business Innovative Research (-\$.106 million).</p> <p>FY 2011 None.</p> <p>FY 2012 Increase provides for fusion goggle efforts (\$3.000 million).</p> <p>Schedule: None.</p> <p>Technical: None.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 United States Special Operations Command **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT			
0400: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development				PE 1160479BB: SOF Visual Augmentation, Lasers and Sensor Systems				S395: SOF Visual Augmentation, Lasers and Sensor Systems			
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
S395: SOF Visual Augmentation, Lasers and Sensor Systems	4.764	-	3.000	-	3.000	2.395	-	-	-	0.000	10.159
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project provides for development, testing and integration of specialized visual augmentation, laser and sensor system equipment to meet the unique requirements of Special Operations Forces. Specialized equipment will permit small, highly trained forces to conduct required operations within harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorist, or highly sophisticated threat mandates that SOF systems remain technologically superior to enemy threats to ensure mission success.

- Precision Laser Targeting Device (PLTD). This program combines day/night optical system with a laser range finder to allow the detection and observation of targets. The range finder calculates the Global Positioning System (GPS) location of the target for identification and targeting purposes. The device provides precision accuracy in the geo-location of targets for the precise delivery of GPS-guided munitions. The system will greatly reduce fratricide incidents and reduce collateral damage during close air support missions.
- Visual Augmentation System Binocular/Monocular (VAS-B/M). This program procures head/helmet mounted night vision system goggle systems. These goggles provide the SOF operator the ability to maneuver, conduct fire control operations, and perform surveillance and reconnaissance. Research and development efforts will develop the next generation of digital fusion goggle.
- Application Specific Integrated Circuit Sensor (ASICS) Miniaturization for Lasers and Sensors. This FY 2010 congressional add evaluates SOF system specific electronics for chip miniaturization resulting in potential system level power and weight savings.

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

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Precision Laser Targeting Device (PLTD) Block 1	1.960	-	-	-	-
FY 2010 Accomplishments: Continued effort to reduce size, weight and accuracy to meet the warfighter requirements.					
Title: Visual Augmentation Systems Binocular/Monocular	0.414	-	3.000	-	3.000
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
Procured three prototype systems with different video formats for evaluation.					
<i>FY 2012 Base Plans:</i> Initiates the development of the next generation digital fusion goggle to improve situational awareness, sharing of data/images and target acquisition in a form factor and cost suitable for SOF missions.					
Accomplishments/Planned Programs Subtotals	2.374	-	3.000	-	3.000

	FY 2010	FY 2011
<i>Congressional Add:</i> ASICS Miniaturization for Lasers and Sensors	2.390	-
<i>FY 2010 Accomplishments:</i> Initiated the evaluation of SOF system circuits for miniaturization.		
Congressional Adds Subtotals	2.390	-

C. Other Program Funding Summary (\$ in Millions)											
<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>
• PROC1: <i>VISUAL AUGMENTATION, LASERS AND SENSOR SYSTEMS</i>	35.181	21.826	15.758	3.531	19.289	15.191	10.337	7.282	8.116	Continuing	Continuing

D. Acquisition Strategy
<ul style="list-style-type: none"> • Precision Laser Targeting Device (PLTD). This program leverages an Army warfighter rapid acquisition program to develop a SOF version of a laser targeting device capable of providing geo-location of a target for the delivery of GPS-guided munitions. • Visual Augmentation System Binocular/Monocular (VAS-B/M). Develops the SOF next generation digital fusion goggles, leveraging Science and Technology funds to narrow down the promising digital solutions. Will utilize FY 2012 and FY 2013 RDT&E funds to further develop and improve product samples. • ASICS Miniaturization for Lasers and Sensors. Evaluates the miniaturization of SOF integrated circuitry.

E. Performance Metrics
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 United States Special Operations Command **DATE:** February 2011

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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Precision Laser Targeting Device	C/CPFF	PM Sensors and Lasers:Ft. Belvoir, VA	7.844	-		-		-		-	0.000	7.844	
Visual Augmentation System Binocular/Monocular	C/FFP	NSWC-CRANE:Crane, IN	1.015	-		-		-		-	0.000	1.015	
Subtotal			8.859	-		-		-		-	0.000	8.859	

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Visual Augmentation - System Binocular/Monocular	C/CPFF	HQ USSOCOM:Tampa, FL	-	-		3.000	Apr 2012	-		3.000	2.400	5.400	
ASICS Miniaturization for Laser and Sensors	C/CPFF	HQ USSOCOM:Tampa, FL	2.390	-		-		-		-	0.000	2.390	
Subtotal			2.390	-		3.000		-		3.000	2.400	7.790	

	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		-		3.000		-		3.000		2.400	16.649	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 United States Special Operations Command **DATE:** February 2011

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	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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
<i>Precision Laser Targeting Device (PLTD)</i>																												
Develop the Ruggedized PLTD																												
<i>Visual Augmentation System Binocular/ Monocular</i>																												
Evaluate Prototypes																												
Develop Next Generation Digital Fusion Goggle																												
Integrate and Test Next Generation Digital Fusion Goggle																												
<i>ASICS Miniaturization for Lasers and Sensors</i>																												
Evaluate of SOF Circuit Miniaturization																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 United States Special Operations Command	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 1160479BB: <i>SOF Visual Augmentation, Lasers and Sensor Systems</i>	PROJECT S395: <i>SOF Visual Augmentation, Lasers and Sensor Systems</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Precision Laser Targeting Device (PLTD)</i>				
Develop the Ruggedized PLTD	2	2010	2	2011
<i>Visual Augmentation System Binocular/Monocular</i>				
Evaluate Prototypes	2	2010	4	2010
Develop Next Generation Digital Fusion Goggle	3	2012	3	2013
Integrate and Test Next Generation Digital Fusion Goggle	2	2013	2	2014
<i>ASICS Miniaturization for Lasers and Sensors</i>				
Evaluate of SOF Circuit Miniaturization	4	2010	4	2011

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