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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 United States Special Operations Command **DATE:** April 2013

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>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	11.249	2.711	4.448	0.000	-	0.000	0.000	0.000	0.000	0.000	0.00	18.408
S395: <i>SOF Visual Augmentation, Lasers and Sensor Systems</i>	11.249	2.711	4.448	0.000	-	0.000	0.000	0.000	0.000	0.000	0.00	18.408

[#] 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

Beginning in FY 2014, this Program Element (PE) 1160479BB, SOF Visual Augmentation, Lasers and Sensor Systems has been consolidated into SOCOM PE 1160431BB, Warrior Systems.

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)	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014 Base</u>	<u>FY 2014 OCO</u>	<u>FY 2014 Total</u>
Previous President's Budget	3.000	4.448	0.000	-	0.000
Current President's Budget	2.711	4.448	0.000	-	0.000
Total Adjustments	-0.289	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.212	-			
• SBIR/STTR Transfer	-0.077	-			

Change Summary Explanation

Funding:

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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
0400: Research, Development, Test & Evaluation, Defense-Wide	PE 1160479BB: SOF Visual Augmentation, Lasers and Sensor Systems	
BA 7: Operational Systems Development		
FY 2012: Net decrease of -\$0.289 million is due to reprogramming to higher command priorities (-\$0.212 million) and Small Business Innovation Research transfer (-\$0.077 million).		
FY 2013: None.		
FY 2014: None.		
Schedule: None.		
Technical: None.		

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Exhibit R-2A, RDT&E Project Justification: PB 2014 United States Special Operations Command										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 1160479BB: SOF Visual Augmentation, Lasers and Sensor Systems				PROJECT S395: SOF Visual Augmentation, Lasers and Sensor Systems			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
S395: SOF Visual Augmentation, Lasers and Sensor Systems	11.249	2.711	4.448	0.000	-	0.000	0.000	0.000	0.000	0.000	0.00	18.408
Quantity of RDT&E Articles												

[#] 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

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(SOF). 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.

Visual Augmentation Systems (VAS). This program develops, buys prototypes, and supports fielding of operator-borne combat optics for SOF. These devices provide the SOF operator the ability to maneuver, conduct fire control operations, and perform surveillance and reconnaissance. Research and Development efforts will develop, test, and evaluate prototype systems of the next generation Fusion system.

These Visual Augmentation Systems will provide an all-weather, low-light capability for SOF personnel by employing a Block approach. This Block approach produces a family of VAS systems which will utilize a variety of different sensor technologies to satisfy the capabilities defined by individual Block requirement. Some examples of the types of sensor technologies that these systems may utilize include: Image Intensification, Thermal, Short Wave Infrared (SWIR) and/or multi-spectral. To date the Target Engagement Portfolio has utilized several Block system approaches that have been fielded by the VAS program. These VAS programs will be a developmental effort to produce and field the next generation systems for SOF personnel. Some of the capability shortfalls identified by the SOF community are the following: (1) ability to detect, classify, and engage targets out to 800 m without the use of an infra-red illuminator; (2) ability to determine wind speed at ranges out to 500 m or greater and (3) ability to observe bullet trace at ranges of 800 m or greater.

Visual Augmentation Systems Weapons Accessories (VASWA). This program effort enhances all SOF weapons, both individual and crew served, by leveraging the latest technological advances in optional accessories (up to 30 different functions / capabilities) such as combat optics, aiming laser modules, visible lights, and close quarters battle sights. Miniature Day-Night Sight (MDNS) for crew-served weapons enhances all SOF Weapons by leveraging existing image intensification and thermal technology to improve combat effectiveness for all crew-served weapon systems. Development efforts include test and evaluation of the Advanced Target Pointer Illuminator Aiming Laser (ATPIAL) hardening to withstand the live-fire shock profiles for the Combat Assault Rifle (CAR), VAS and clandestine pointer. Leveraging extensive modeling and simulation efforts executed by National Labs. Also, competitively award RDT&E contracts to select vendors in order to develop

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<p>clandestine operator-borne visual augmentation devices. These accessories greatly improve the combat effectiveness of the weapon systems and the survivability of the SOF operator.</p>												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2012	FY 2013	FY 2014
Title: VAS										2.711	4.448	0.000
<p>FY 2012 Accomplishments: Initiated the development of the next generation of operator-borne visual augmentation devices to improve situational awareness, sharing of data/images and target acquisition.</p>												
<p>FY 2013 Plans: Continue the development of the next generation of operator-borne visual augmentation devices to improve situational awareness, sharing of data/images and target acquisition. The primary capability shortfalls addressed include the following under all lighting conditions: (1) Ability to detect, classify, and engage targets out to 800 m without the use of an infra-red illuminator; (2) Ability to determine wind speed at ranges out to 500 m or greater; and (3) Ability to observe bullet trace at ranges of 800 m or greater.</p>												
Accomplishments/Planned Programs Subtotals										2.711	4.448	0.000
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• PROC1: <i>VISUAL AUGMENTATION, LASERS AND SENSOR SYSTEMS</i>	16.142	34.028	0.000		0.000	0.000	0.000	0.000	0.000	0.000	50.062	
Remarks												
D. Acquisition Strategy												
<p>VAS utilizes FY 2012 and FY 2013 RDT&E funds to develop prototypes for the SOF next generation operator-borne visual augmentation devices. These developmental efforts will leverage Science and Technology projects conducted to date and lead to the development of prototype systems for SOF to evaluate and an Indefinite Delivery Indefinite Quantity production contract in FY 2014 and FY 2015 to support SOF procurement of the production version of the next generation operator-borne visual augmentation devices.</p>												
E. Performance Metrics												
N/A												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 United States Special Operations Command												DATE: April 2013			
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				
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
VAS	C/FFP	Joint Special Operations Program Office:Crane, IN	1.015	2.500	Apr 2012	3.453	Jun 2013	-		-		-	Continuing	Continuing	
Prior Year Funding	C/CPFF	PM Sensors and Lasers:Ft Belvoir, VA	7.844	-		-		-		-		-	Continuing	Continuing	
Subtotal			8.859	2.500		3.453		0.000		0.000		0.000			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
VAS	C/CPFF	Joint Special Operations Program Office:Crane, IN	0.000	0.211	Apr 2012	0.995	Jan 2013	-		-		-	Continuing	Continuing	
Prior Year Funding	C/CPFF	HQ USSOCOM:Tampa, FL	2.390	-		-		-		-		-	Continuing	Continuing	
Subtotal			2.390	0.211		0.995		0.000		0.000		0.000			
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			11.249	2.711		4.448		0.000		0.000		0.000			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 United States Special Operations Command **DATE:** April 2013

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	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Visual Augmentation System Binocular/ Monocular																												
Development of the Next Generation Operator-borne Combat Optics																												
Integration and Testing of the Next Generation Operator-borne Combat Optics																												
Development of the Next Generation Visual Augmentation Device for Target Engagement Systems																												
Integration and Testing of the Next Generation Visual Augmentation Device for Target Engagement Systems																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 United States Special Operations Command			DATE: April 2013
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>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Visual Augmentation System Binocular/Monocular</i>				
Development of the Next Generation Operator-borne Combat Optics	1	2012	4	2013
Integration and Testing of the Next Generation Operator-borne Combat Optics	3	2013	2	2014
Development of the Next Generation Visual Augmentation Device for Target Engagement Systems	2	2013	2	2014
Integration and Testing of the Next Generation Visual Augmentation Device for Target Engagement Systems	2	2014	2	2015