Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army

Date: March 2014

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

2040: Research, Development, Test & Evaluation, Army I BA 5: System

PE 0604827A I Soldier Systems - Warrior Dem/Val

Development & Demonstration (SDD)

,	,											
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO <sup>#</sup>	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	28.358	18.467	6.157	-	6.157	11.976	16.416	9.459	5.092	Continuing	Continuing
DX7: TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM	-	-	-	0.922	-	0.922	0.940	0.958	0.977	0.996	Continuing	Continuing
S65: Soldier Power	-	4.499	7.410	-	-	-	-	-	-	-	-	11.909
S75: Ground Soldier Ensemble	-	23.859	11.057	5.235	-	5.235	11.036	15.458	8.482	4.096	Continuing	Continuing

<sup>&</sup>lt;sup>#</sup> The FY 2015 OCO Request will be submitted at a later date.

#### Note

Army

Fiscal Year 2014: Program Decreases of \$5.718 million to Ground Soldier Ensemble and \$2.000 million to Soldier Power.

### A. Mission Description and Budget Item Justification

This program element contains four projects: Project S56 for Mounted Soldier System (MSS), Project S65 for Soldier Power, Project S75 for Nett Warrior (NW), [named in honor of Medal of Honor recipient COL Robert Nett], previously known as Ground Soldier System (GSS), and Project DX7 Tactical Communications and Protective System (TCAPS). MSS provides an integrated suite of enhancements to the combat vehicle crew member and commander to address identifiable capability gaps in their ability to fight, communicate, and maneuver across the full spectrum of operations. MSS consists of lightweight, modular, and misison tailorable equipment and Command, Control, Communications and Computer (C4) devices worn, carried, or used by mounted crew members in performance of their missions. Congressionally added funding in FY10 for Soldier Power efforts has been applied to the Soldier Power project line. NW provides unparalleled situational awareness and understanding to the dismounted leader allowing for faster and more accurate decisions in the tactical fight. This translates into Soldiers being at the right place, at the right time, with the right equipment making them more effective, more lethal, and more survivable in the execution of their combat mission. TCAPS enables Soldiers to communicate over radios in combat environments while simultaneously providing hearing protection from both steady state and impulse noise.

PE 0604827A: Soldier Systems - Warrior Dem/Val

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Appropriation/Budget Activity

R-1 Program Element (Number/Name)

2040: Research, Development, Test & Evaluation, Army I BA 5: System Development & Demonstration (SDD)

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army

• Other Adjustments 2

PE 0604827A / Soldier Systems - Warrior Dem/Val

-3.704

Date: March 2014

-3.704

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
	<del></del>		<del></del>		
Previous President's Budget	51.851	48.477	18.923	-	18.923
Current President's Budget	28.358	18.467	6.157	-	6.157
Total Adjustments	-23.493	-30.010	-12.766	-	-12.766
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>	-	-			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-	-			
Other Adjustments 1	-23.493	-30.010	-9.062	-	-9.062

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2015 A	Army							Date: Marc	ch 2014	
Appropriation/Budget Activity 2040 / 5					R-1 Progra PE 060482 Dem/Val	am Elemen 27A / Soldie			DX7 I TÀC	umber/Nar TICAL COM TIVE SYSTE	ИMUNICATI	ONS AND
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DX7: TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM	-	-	-	0.922	-	0.922	0.940	0.958	0.977	0.996	Continuing	Continuing
Quantity of RDT&E Articles	-	-	_	-	-	_	-	-	-	-		

<sup>\*</sup> The FY 2015 OCO Request will be submitted at a later date.

## A. Mission Description and Budget Item Justification

The Tactical Communications and Protective System (TCAPS) provides Soldiers with advanced, active hearing protection that simultaneously protects Soldiers' hearing while enabling situational awareness and mission command. TCAPS protects Soldiers against harmful impulse and steady-state noises characteristic of combat environments while enabling Soldiers to communicate with each other using voice communications or over a tactical radio. TCAPS also enhances survivability and situational awareness by allowing Soldiers to selectively amplify faint sounds that would not be otherwise audible.

By reducing noise-induced hearing damage, TCAPS contributes to the reduction of post-service disability compensation and limits lost in-service time related to hearing injury. TCAPS will employ commercial-off-the-shelf (COTS) solution(s) that annually are evaluated. The best commercial solutions will cut into production. TCAPS will also evaluate lower cost active hearing protection solutions for soldiers without radios.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Title: Testing Tactical Communications and Protective Ssystem (TCAPS)	-	-	0.922
Description: TCAPS procurement of test articles and testing			
FY 2015 Plans: TCAPS will buy test articles and conduct an annual relook of commercial technology to seek improved capabilities, conduct testing and transition to procurement.			
Accomplishments/Planned Programs Subtotals	-	-	0.922

## C. Other Program Funding Summary (\$ in Millions)

			FY 2015	FY 2015	FY 2015					Cost To	
Line Item	FY 2013	FY 2014	Base	OCO	<b>Total</b>	FY 2016	FY 2017	FY 2018	FY 2019	Complete	<b>Total Cost</b>
SSN B55510: Tactical	12.967	31.868	24.354	-	24.354	21.809	20.176	20.462	20.867	-	152.503
Communications											

Communications and Protective System

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
2040 / 5	PE 0604827A I Soldier Systems - Warrior		TICAL COMMUNICATIONS AND
	Dem/Val	PROTECT	TIVE SYSTEM

## C. Other Program Funding Summary (\$ in Millions)

			FY 2015	FY 2015	FY 2015					<b>Cost To</b>	
<u>Line Item</u>	FY 2013	FY 2014	<b>Base</b>	OCO	<u>Total</u>	FY 2016	FY 2017	FY 2018	FY 2019	Complete	<b>Total Cost</b>

### Remarks

## D. Acquisition Strategy

TCAPS is an ACAT III program leveraging commercial-off-the-shelf (COTS) technology. TCAPS will conduct an annual relook of commercial technology to seek improved capabilities, reduce cost, conduct testing and transition to procurement.

## E. Performance Metrics

N/A

PE 0604827A: Soldier Systems - Warrior Dem/Val Army

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Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	015 Army	/							_	Date:	March 20	14	
Appropriation/Budge 2040 / 5	t Activity	1					4827A / S		umber/Na stems - V		DX7 / T	(Number ACTICAL CTIVE S	СОММИ	VICATIO	NS AND
Management Service	es (\$ in M	illions)		FY 2	2013	FY:	2014		2015 ise		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value o Contrac
SEPM	MIPR	Fort Belvoir : Ft Belvoir, VA	0.018	-		-		0.300		-		0.300	-	0.318	-
		Subtotal	0.018	-		-		0.300		-		0.300	-	0.318	-
Support (\$ in Millions	s)			FY 2	2013	FY:	2014		2015 ise		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contrac
Test Articles (Engineering Assessment)	MIPR	DLA DSCP : Philadelphia, PA	0.026	-		-		0.028	May 2015	-		0.028	-	0.054	-
Test Articles (Development Test)	MIPR	DLA DSCP : Philadelphia, PA	0.020	-		-		0.019	May 2015	-		0.019	-	0.039	-
Test Articles (OT)	MIPR	DLA DSCP : Philadelphia, PA	0.120	-		-		0.141	May 2015	-		0.141	-	0.261	-
		Subtotal	0.166	-		-		0.188		-		0.188	-	0.354	-
Test and Evaluation	(\$ in Milli	ons)		FY 2	2013	FY:	2014		2015 ise		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contrac
Annual Relook of Technology/Evaluation	MIPR	ATEC, AEC, OTC, ARL-SLAD : Various Locations	0.177	-		-		0.190	Jan 2015	-		0.190	-	0.367	-
Developmental and Operational Test	Various	ATEC, AEC, OTC, ARL-SLAD : Various Locations	0.411	-		-		0.244	Feb 2015	-		0.244	-	0.655	-
Customer Test	Various	Army Hearing Program Office : Various Locations	0.028	-		-		-		-		-	-	0.028	-
		Subtotal	0.616	-		-		0.434		-		0.434	-	1.050	_

PE 0604827A: Soldier Systems - Warrior Dem/Val Army

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2	2015 Army						Date:	March 20	)14	
Appropriation/Budget Activity 2040 / 5			_	Element (Number/N Soldier Systems -	•	Project DX7 / TA PROTEC	CTICAL	СОМЙИ	NICATIO	NS AND
	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.800	-	-	0.922	-		0.922	-	1.722	-
Remarks										

xhibit R-4, RDT&E Schedule Profile: PB 2015 A	Army																				Date	e: M	arch	201	4		
ppropriation/Budget Activity 040 / 5							R-1 Program Element (Number/Name) PE 0604827A I Soldier Systems - Warrior Dem/Val											DX7	roject (Number/Name) DX7 I TACTICAL COMMUNICA PROTECTIVE SYSTEM				TION	IS A			
	F	FY 2013 FY 201					014 FY 2015 FY						FY 2016 FY 2			Y 2	017			FY 2	2018	3		FY 2	2019		
	1	2 3	4	1	2	3	4	1	2	3 4	4 '	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Annual Relook of Technology for Evaluation/ Integration Test for FY16				·	·											·	·		·								
Developmental and Operational Assessment for FY16																											
Annual Relook of Technology for Evaluation/ Integration Test for FY17																											
Developmental and Operational Assessment for FY17																											
Annual Relook of Technology for Evaluation/ Integration for FY18																											
Developmental and Operational Assessment for FY18																											
Annual Relook of Technology for Evaluation/ Integration Test for FY19																											
Developmental and Operational Assessment for FY19																											
Annual Relook of Technology for Evaluation/ Integration Test for FY20																											
Developmental and Operational Assessment for FY20																											

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
· · · · · · · · · · · · · · · · · · ·	,	DX7 I TÀC	umber/Name) TICAL COMMUNICATIONS AND IVE SYSTEM

# Schedule Details

	St	art	E	nd
Events	Quarter	Year	Quarter	Year
Annual Relook of Technology for Evaluation/Integration Test for FY16	1	2015	3	2015
Developmental and Operational Assessment for FY16	2	2015	4	2015
Annual Relook of Technology for Evaluation/Integration Test for FY17	1	2016	3	2016
Developmental and Operational Assessment for FY17	2	2016	4	2016
Annual Relook of Technology for Evaluation/Integration for FY18	1	2017	3	2017
Developmental and Operational Assessment for FY18	2	2017	4	2017
Annual Relook of Technology for Evaluation/Integration Test for FY19	1	2018	3	2018
Developmental and Operational Assessment for FY19	2	2018	4	2018
Annual Relook of Technology for Evaluation/Integration Test for FY20	1	2019	3	2019
Developmental and Operational Assessment for FY20	2	2019	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army											Date: March 2014			
Appropriation/Budget Activity 2040 / 5							i <b>t (Number</b> er Systems -		Project (Number/Name) 665 / Soldier Power					
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost		
S65: Soldier Power	-	4.499	7.410	-	-	-	-	-	-	-	-	11.909		
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-				

<sup>\*</sup> The FY 2015 OCO Request will be submitted at a later date.

#### Note

Army

Not applicable for this item.

## A. Mission Description and Budget Item Justification

Soldier and Small Unit Power Systems enable dismounted Soldiers and squads to execute their missions with significantly less battery weight and enable longer missions without a daily unit re-supply of batteries. These improved systems enable the warfighter to sustain themselves for extended mission duration in the most austere operating environments. An advanced, Integrated Soldier Power/Data System (ISPDS) provides the Soldier with a worn power/data capability that is significantly more efficient and lighter than carrying separate batteries for each device. Soldier and Small Unit Power systems address the power and energy capability gap created by the increase in mission essential, Soldier-portable power consumers, such as Situational Awareness (SA) displays, Global Positioning System (GPS) navigation, weapon sensors, and portable Soldier radios. This effort began as a Congressional add for development and system improvement for early fuel cell and battery technology and has developed into a line of power sources and solutions suited for not only the individual Soldier, but for the small unit as well. These power solutions include, but are not limited to, Soldier-worn power systems, integrated power vests, power management devices and small unit chargers/scavengers; all intended for use in the most austere operating environments. Soldier-portable power systems reduce the weight and logistical burden associated with moving fuel and primary (disposable) batteries across the conventional battlefield. By using renewable energy and power scavenging technology, Soldiers and small units are able to operate independently for longer durations without being tethered to a large generator, vehicle, or supply train. This effort supports the August 2013 Small Unit Power MDD, September 2013 Small Unit Power Capability Development Document (CDD), March 2011 Soldier Protection CDD, the December 2011 Operational Energy Initial Capabilities Document (ICDD), the Army Chief of Staff's Squad: Foundation of the Decisive Force initia

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Individual Soldier Power	3.404	1.940	-
Articles:	-	-	-
Description: Integrated Soldier Power/Data System (ISPDS) and individual power			
FY 2013 Accomplishments:			
Mature an integrated Soldier system capable of managing power and system C4I data from Soldier worn/carried peripherals.			
This system is comprised of a safe, high energy, lightweight, Soldier-wearable battery that conforms to the Soldiers body armor			
and improved outer tactical vest. This conformal battery is the central source of power for all Soldier worn devices and serves			

PE 0604827A: Soldier Systems - Warrior Dem/Val

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xhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: M	arch 2014		
ppropriation/Budget Activity 040 / 5	R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val		ect (Number/Name) I Soldier Power			
B. Accomplishments/Planned Programs (\$ in Millions, Article Q	uantities in Each)		FY 2013	FY 2014	FY 2015	
is the central power storage point for integrated. This integrated Solata through a wiring system that is integrated into the fabric of the include Soldier carried power/data management devices that are calcource.	improved outer tactical vest and/or its soft armor. Efforts	also				
FY 2014 Plans: Will continue to mature an integrated Soldier system capable of mare peripherals. This system will be comprised of a safe, high energy, listoldier's body armor and improved outer tactical vest. This improve all Soldier worn devices and serve as the central power storage point will pass its power and peripheral C4I data through a wiring system actical vest and/or its soft armor. Will continue to mature Soldier caparvesting energy from a variety of available power source and will reariety of operating environments and capable of providing over twice.	ightweight, Soldier-wearable battery that will conform to the conformal battery will be the central source of power for the integrated Soldier. This integrated Soldier systemated will be integrated into the fabric of the improved outer arried power/data management devices that are capable mature a highly efficient solar technology conducive to a	che or em er of				
Fitle: Squad and Soldier Power Generation	4.	ticles:	1.095	4.584		
<b>Description:</b> Soldier portable, renewable energy solutions for Square		ucies.	-	-	•	
FY 2013 Accomplishments: Development of Soldier-portable, renewable energy solutions that happerations for 72 hours while decreasing dependence on packaged enewable energy solutions and hybridized technology. Technologies is kinetic and/or solar energy harvesters. These technologies are correct from the sun. Continue development of lightweight, Soldier-portal supporting the variety of batteries used in the conventional IBCT for	fuel and combat logistics through the use of improved es include Soldier worn energy harvesting technologies scapable of harvesting energy from the Soldiers movementable chargers and power scavenging technology capable	it and/				
FY 2014 Plans:  Vill continue development of Soldier-portable, renewable energy so nustere operations for 72 hours, while decreasing dependence on coechnology. Will continue development and optimization of lightweigh batteries used in the conventional IBCT formation.	ombat logistics through the use of fuels cells and hybridi	zed				
Fitle: Soldier Power Test and Evaluation			_	0.886		

PE 0604827A: Soldier Systems - Warrior Dem/Val Army

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014		
1	,	Project (N S65 / Soldi	umber/Name) ier Power

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Integration testing and annual testing and evaluation events			
FY 2014 Plans: Conduct annual developmental test and evaluation on Soldier Power components at Electronic Proving Ground, Arizona and Aberdeen Proving Ground, Maryland with focus on environmental testing, reliability, electro-magnetic interference and electro-magnetic compatibility. Conduct operational test and evaluation on Soldier Power components at Fort Bliss, Texas and Fort Bragg, North Carolina to evaluate operational reliability and performance at the Soldier and Squad levels.			
Accomplishments/Planned Programs Subtotals	4.499	7.410	-

# C. Other Program Funding Summary (\$ in Millions)

N/A

### Remarks

## D. Acquisition Strategy

Pursue a variety of Soldier power initiatives under full and open competition. These initiatives range from Commercial-Off-The-Shelf (COTS) solutions to developmental efforts. The type of solicitation depends on the maturity of the technology. The power initiatives will be evaluated through scheduled test and evaluation events, and if successful, selected for procurement and subsequent fielding and sustainment.

## E. Performance Metrics

N/A

PE 0604827A: Soldier Systems - Warrior Dem/Val Army

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Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2015 Army	/				,			,	Date:	March 20	014	
<b>Appropriation/Budg</b> 2040 / 5	et Activity	1					4827A / S		lumber/N /stems - V			: <b>(Numbe</b> i oldier Pov			
Management Servic	es (\$ in M	illions)		FY 2	2013	FY 2	014		2015 ase		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contrac
PM integration and oversight	MIPR	Various : Various	0.000	1.263		2.088		-		-		-	Continuing	Continuing	Continuir
		Subtotal	0.000	1.263		2.088		-		-		-	-	-	_
Product Developme	nt (\$ in M	illions)		FY 2	2013	FY 2	014		2015 ase		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Soldier Power Development and Integration	TBD	TBD : TBD	5.648	2.456		3.774		-		-		-	Continuing	Continuing	Continuir
-		Subtotal	5.648	2.456		3.774		-		-		-	-	-	-
Support (\$ in Million	ıs)			FY 2	2013	FY 2	014		2015 ase		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contrac
Martix Support	MIPR	ARL, CERDEC, Various : Various	0.732	0.780		0.828		-		-		-	Continuing	Continuing	Continuir
		Subtotal	0.732	0.780		0.828		-		-		-	-	-	-
Test and Evaluation	(\$ in Milli	ons)		FY 2	2013	FY 2	014		2015 ase		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Various Testing Organizations	MIPR	Various : Various	0.000	-		0.720		-		-		-	Continuing	Continuing	Continuin
		Subtotal	0.000	-		0.720		-		-		-	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2	2015 Army	,								Date:	March 20	14	
Appropriation/Budget Activity 2040 / 5	PE 060							Project (Number/Name) S65 / Soldier Power					
Prior Years FY 2013					2014	1	2015 ase	1	2015 CO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6.380	4.499		7.410		-		-		-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 A	rmy														D	ate: N	larch	201	4	
Appropriation/Budget Activity 2040 / 5					` ` ` '									Project (Number/Name) S65 / Soldier Power						
	FY	2013	F	Y 201	4		FY 2	015		FY 2	016	F'	<b>/</b> 201	7	F	Y 201	В		FY 20	19
	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	3 4
Individual Soldier Power Maturation/Integration											·									
Individual Soldier Power Evaluation (NIE 13.2)																				
Squad Soldier Power Maturation/Integration																				
Squad Soldier Power Evaluation (NIE 13.2)																				
Individual Soldier Power Evaluation																			,	
Squad Soldier Power Evaluation																				

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
	3	Project (N S65 / Sold	umber/Name) ier Power

# Schedule Details

	St	art	End		
Events	Quarter	Year	Quarter	Year	
Individual Soldier Power Maturation/Integration	1	2013	4	2014	
Individual Soldier Power Evaluation (NIE 13.2)	2	2013	3	2013	
Squad Soldier Power Maturation/Integration	1	2013	4	2014	
Squad Soldier Power Evaluation (NIE 13.2)	2	2013	3	2013	
Individual Soldier Power Evaluation	2	2014	3	2014	
Squad Soldier Power Evaluation	2	2014	3	2014	

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army											Date: March 2014			
Appropriation/Budget Activity 2040 / 5							<b>t (Number</b> / r Systems -	•	<b>Project (Number/Name)</b> S75 <i>I Ground Soldier Ensemble</i>					
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost		
S75: Ground Soldier Ensemble	-	23.859	11.057	5.235	-	5.235	11.036	15.458	8.482	4.096	Continuing	Continuing		
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-				

<sup>&</sup>lt;sup>#</sup> The FY 2015 OCO Request will be submitted at a later date.

#### Note

Army

Previously funded in 0603827A - Soldier Systems Advanced Development - S49 Ground Soldier System.

### A. Mission Description and Budget Item Justification

The Nett Warrior (NW) Program (named in honor of Medal of Honor recipient Colonel Robert C. Nett), also known as the Ground Soldier System (GSS) Program, leverages commercial smart devices and secure Army tactical radios to provide the dismounted leader an integrated mission command and situational awareness system for use during combat operations. The NW system provides leaders electronic real-time information on friendly positions; information about enemy activity and movement; navigational data and map imagery; a collaborative planning tool; and other mission related graphics which effectively puts the power of the entire Army tactical network in the hands of the dismounted leader. The NW system also provides the same integrated mission command capability to the tactical vehicle-mounted leaders so that when dismounted the leader still maintains the common operating picture (COP) and has continuous situational awareness. This capability provides unparalleled situational awareness and enhanced communications to the dismounted leader allowing for faster, more accurate decisions and reduced fratricide in the tactical fight.

The continued development and integration of the NW program harnesses soldiers' experience in combat operations and employs combat veterans for Soldier feedback enhancing human factor design and fightability of the system. The NW program also integrates applications from other programs aimed at considerably reducing the weight and bulk of the dismounted soldier's load by using End User Devices. This project funds the following: 1) Yearly developmental and operational test of the NW with continually advancing commercial smart device technology inserted, 2) Software development for planned updates, 3) Integration with AN/PRC-154A, including vehicle power integration, 4) Government led integration and system engineering and program management, 5) Incorporation of other applications and capabilities into Nett Warrior, 6) and Conduct NW IOT&E with Mechanized and Infantry units in FY14 and FY15.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Test and Evaluation including twice a year Network Integration Evaluation (NIE) to gain Soldier feedback	7.242	6.357	2.873
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments:  Continued NW developmental and operational evaluation of the latest commercial smart devices and emerging technologies.  Conducted testing at NIE (with multiple commercial smart devices to support yearly production decisions) and program			

PE 0604827A: Soldier Systems - Warrior Dem/Val

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	Date	e: March 2014	
R-1 Program Element (Number/Name) PE 0604827A I Soldier Systems - Warrior Dem/Val			
Quantities in Each)	FY 201	3 FY 2014	FY 2015
Initial Production extension decision; Logistics Demonstr	ation;		
ation (IOT&E) Phase I (Mechanized unit) at Network action decisions. Support NW as a baseline NIE system NW; yearly Army Interoperability Certification; environments			
se II (Infantry unit) for a Full Rate Production (FRP) Decis port, equipping, training, test costs, and spares for NW; ctronic warfare testing; Stryker Interoperability testing; ar	sion.		
• •		1.680	0.56
Ai	rticles:	-	-
eting Developmental Tests (DT), and Operational Testing applications to expand Nett Warrior capabilities to meet	(OT) other		
cial smart devices, cables, and other hardware for poten	tial		
	PE 0604827A / Soldier Systems - Warrior Dem/Val  Quantities in Each)  upport, equipping, training, test costs, and spares for NW Initial Production extension decision; Logistics Demonstration; environmental testing; electronic warfare testing; electronic warfare testing; and initial Production extension decision. Fund continual elation (IOT&E) Phase I (Mechanized unit) at Network action decisions. Support NW as a baseline NIE system NW; yearly Army Interoperability Certification; environmentation prevention testing for new commercial smart devices are II (Infantry unit) for a Full Rate Production (FRP) Decision, equipping, training, test costs, and spares for NW; ctronic warfare testing; Stryker Interoperability testing; and intercial smart devices.  Il Platform software development kit for commercial smart string Developmental Tests (DT), and Operational Testing applications to expand Nett Warrior capabilities to meet after to support Army Interoperability Certification testing	R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val  Ruantities in Each) upport, equipping, training, test costs, and spares for NW Initial Production extension decision; Logistics Demonstration; cation; environmental testing; electronic warfare testing; and  Demental events and user verification. Fund continual lation (IOT&E) Phase I (Mechanized unit) at Network lation decisions. Support NW as a baseline NIE system NW; yearly Army Interoperability Certification; environmental tration prevention testing for new commercial smart devices.  Rel I (Infantry unit) for a Full Rate Production (FRP) Decision. Boort, equipping, training, test costs, and spares for NW; ctronic warfare testing; Stryker Interoperability testing; and mercial smart devices.  I Platform software development kit for commercial smart enting Developmental Tests (DT), and Operational Testing (OT) applications to expand Nett Warrior capabilities to meet other lates to support Army Interoperability Certification testing and	R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val  Ruantities in Each) Unport, equipping, training, test costs, and spares for NW Initial Production extension decision; Logistics Demonstration; cation; environmental testing; electronic warfare testing; and  Demental events and user verification. Fund continual lation (IOT&E) Phase I (Mechanized unit) at Network laction decisions. Support NW as a baseline NIE system NW; yearly Army Interoperability Certification; environmental tration prevention testing for new commercial smart devices.  Relations and user verification through operational late II (Infantry unit) for a Full Rate Production (FRP) Decision. Pr

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: N	larch 2014	
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val	Project (Nu S75 / Groun		lame) er Ensemble	
B. Accomplishments/Planned Programs (\$ in Millions, Article Q	uantities in Each)	FY	2013	FY 2014	FY 2015
combat applications and keep pace with emerging technology and ir Capability Set insertion.	form the acquisition decision process as to yearly Army				
FY 2015 Plans: Integrate and evaluate small quantities of the latest commercial small into the NW system. Will continue to integrate 3rd party software concontinually allow NW to keep pace with emerging technology and inf Capability Set insertion.	nbat applications for increased functionality. This will				
Title: Software Development and Integration	Ar	ticles:	2.099	2.032	0.96
Description: Funding is provided for the following effort					
FY 2013 Accomplishments: Continued software integration of the Army's Joint Battle Command device hardware to support Governmental T&E activities by conduct that led to production decisions and fielding for FY14. Integrated approther requirements utilizing a common smart device. Provided Softw testing and other testing supporting DT and OT.	ing Developmental Tests (DT), and Operational Testing olications that expanded Nett Warrior capabilities to mee	(OT)			
FY 2014 Plans: Develop software based on the Army's Joint Battle Command Platforhardware for potential integration into the NW system to provide the basis. Integrate software for open architecture to facilitate incorporate maintaining Secret Level Accreditation. Maintain software updates a blocking updates, maintain information assurance accreditation, and	most current capability into production on a semi-annual ion of other applications with minimal integration while nd changes for NW program to keep pace with Army sof	tware			
FY 2015 Plans: Will continually integrate applications that expand Nett Warrior capal device. Will continually modify the NW software architecture to align allow for easier integration of third party applications onto the common software updates that allow the NW program to keep pace with Army for Army Capability Sets and information assurance accreditation.	with Mobile Handheld CE V2.0 emerging architecture aron Army platoon level computational platform. Will maint	nd ain			
Title: Integration with AN/PRC-154A and Cross Domain Capability	Ar	ticles:	-	0.480	-

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Exhibit R-2A, RDT&E Project Justi	fication: PB	2015 Army							Date: M	arch 2014	
Appropriation/Budget Activity 2040 / 5					04827A / Sc	nent (Numb Ildier System			t (Number/N Ground Soldie		
B. Accomplishments/Planned Prog	grams (\$ in N	//illions, Art	icle Quantit	ties in Each)	1				FY 2013	FY 2014	FY 2015
<b>Description:</b> Funding is provided for	r the following	effort									
FY 2014 Plans: Integrate new commercial smart dev	ices with AN	/PRC-154A	Radio and c	ross domain	quards as t	echnology cl	nanges over	time.			
Title: Conduct Systems Engineering						<u> </u>		rticles:	10.277	0.508	0.833
Description: Funding is provided for	r the following	effort									
Conducted government systems engine preparation for upcoming acquisition evaluation. Collected input from Sold effectiveness via surveys and electron according to continue to conduct government systems. Continue to conduct government systems according to the conduct government systems and electron preparation for Full Releader training. Collect input from Sold effectiveness via surveys and electrons.	lifecycle dec liers at semi- onic data mor stems enginee ate Production	ision. Integra annual NIE of hitoring from ering and propon decision. i-annual NIE	ated the late events that in Development ogram mana Develop advice events to in	st commercing the street of th	al smart dev / size, weigh erational Tes  port for NW ronic training size, weight,	ices and tec t, power, figl ting (DT/OT) program incl g materials for power, fight	hnology for to ntability, safe ovents. uding or improved ability, safety	ety and			
FY 2015 Plans: Will continue to conduct government advanced electronic training materia power, fightability, safety and effective	ls for improve	ed leader tra									
				Accon	nplishment	s/Planned P	rograms Su	btotals	23.859	11.057	5.235
C. Other Program Funding Summa	ary (\$ in Milli	ons)	FY 2015	FY 2015	FY 2015					Cost To	
Line Item	FY 2013	FY 2014	Base	OCO	Total	FY 2016	FY 2017	FY 201	8 FY 2019	Complete	
• OPA 3, R80501: <i>OPA 3,</i>	93.914	61.859	84.761	-	84.761	87.706	48.857	46.96	53.008	Continuing	Continuing
R80501, Ground Soldier System • RDT&E, PE 0603827A S49: RDT&E, PE 0603827A S49 - Ground Soldier System (GSS)	-	-	-	-	-	-	-	17.56	5 17.825	5 Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
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## C. Other Program Funding Summary (\$ in Millions)

			FY 2015	FY 2015	FY 2015					<b>Cost To</b>	
Line Item	FY 2013	FY 2014	<b>Base</b>	OCO	<u>Total</u>	FY 2016	FY 2017	FY 2018	FY 2019	Complete	<b>Total Cost</b>

#### Remarks

## D. Acquisition Strategy

The Nett Warrior (NW) program provides unparalleled situational awareness and mission command to dismounted combat leaders through an integrated End User Device, power source and radio. The NW program executed a MS A in FY09 and began three competing TD phase contracts leading to developmental and operational testing FY10-11. A Configuration Steering Board (CSB) was held August 2011 which restructured the program to implement COTS-based technology. Twice a year technology maturation and integration is assessed at NIE events. The NW MS C was approved 3 April 2012 followed by a low rate Capability Set (CS) 14 production award. Conducted Developmental Test and Evaluation during 4QFY12-1QFY13, followed by 1QFY13 Operational Test (OT) as well as hardware, software, integration and program management. The Developmental and Operational tests validated the system utility, supportability, and austere-environment power production and regeneration strategy that resulted in a production decision in the 2QFY13 to procure the CS14 quantity of NW systems and support. Conduct a 1QFY14 Operational Test, Developmental and Operational Tests during 2QFY14-3QFY14, as well as hardware, software, integration and program management. The Developmental and Operational tests will continue to validate the system utility, supportability, and austere-environment power production and regeneration strategy-leading to a production decision in the 2QFY14 to procure the CS15 quantity of NW systems and support. While in production NW also continues to reduce size, weight and power through a semi-annual integration and evaluation and test of the latest commercial smart device technologies which evolve continuously.

## E. Performance Metrics

N/A

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Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	.015 Army	/								Date:	March 20	014	
<b>Appropriation/Budge</b> 2040 / 5	t Activity	1					4827A / S	<b>ement (N</b> Soldier Sy				(Number		emble	
Management Service	s (\$ in M	lillions)		FY 2	013	FY 2	2014	FY 2 Ba			2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Hardware and software integration and evaluation	Various	Various : Various	12.422	4.241		1.680		0.565		-		0.565	Continuing	Continuing	Continuin
Systems Engineering and program management support	Various	Various : Various	10.566	10.277		0.508		0.833		-		0.833	Continuing	Continuing	Continuin
SSIBTR	Various	Various : Various	0.258	-		-		-		-		-	-	0.258	-
		Subtotal	23.246	14.518		2.188		1.398		-		1.398	-	-	-
Product Developmen	nt (\$ in M	illions)		FY 2	013	FY 2	014	FY 2 Ba			2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Integration with Project Manager Tactical Radios and Vehicle Platforms	Various	Various : Various	1.882	-		0.480		-		-		-	Continuing	Continuing	Continuin
		Subtotal	1.882	-		0.480		-		-		-	-	-	-
Support (\$ in Millions	5)			FY 2	013	FY 2	014	FY 2 Ba			2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Software Development and Integration	Various	Various : Various	3.696	2.099		2.032		0.964		-		0.964	Continuing	Continuing	Continuin
		Subtotal	3.696	2.099		2.032		0.964		-		0.964	-	-	-
Test and Evaluation (	(\$ in Milli	ions)		FY 2	013	FY 2	2014	FY 2 Ba			2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Various Testing Organizations	Various	Various : Various	8.780	7.242		6.357		2.873		-		2.873	Continuing	Continuing	Continuin

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Exhibit R-3, RDT&E	Project Co	ost Analysis: PB 2	2015 Army	′								Date:	March 20	)14	
<b>Appropriation/Budg</b> 2040 / 5	et Activity	,					4827A / S	<b>ement (N</b> Soldier Sy		•	_	(Numbe Fround So	r/ <b>Name)</b> Idier Ense	emble	
Test and Evaluation	(\$ in Milli	ons)		FY 2	2013	FY 2	2014	1	2015 ase		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
		Subtotal	8.780	7.242		6.357		2.873		-		2.873	-	-	-
			Prior Years	FY 2	2013	FY 2	2014	1	2015 ase		2015 CO	FY 2015 Total	Cost To	Total Cost	Target Value of Contract
		Project Cost Totals	37.604	23.859		11.057		5.235		-		5.235	-	-	-

Remarks

chibit R-4, RDT&E Schedule Profile: PB 2015 A ppropriation/Budget Activity 140 / 5	R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val  Pate: March 2014  Project (Number/Name) S75 / Ground Soldier Ensemble																												
												,.															,		
	<u> </u>		2013			FY 2	т	_		FY 2	1	_		FY					Y 20				_	2018	1		FY		_
[	1	2	3	4	1	2	3	4	1	2	3	4	1	2	2	3	4 ′	1	2	3	4	1	2	3	4	1	2	3	
NW Low Rate Initial Production (LRIP)																													
NW Developmental Test (DT)																													
Network Integration Evaluation (NIE 13.1)																													
NW First Unit Equipment (FUE)																													
Network Integration Evaluation (NIE 13.2)																													
Low Rate Initial Production (LRIP) #2 Contract Awards																													
NW Low Rate Initial Production (LRIP) #2																													
Capability Set (CS14) Fielding																													
Network Integration Evaluation (NIE 14.1) (Base line only)																													
Initial Test & Evaluation (IOT&E) (Mech)																													
Capability Set (CS15) Contract Awards																													_
Capability Set (CS15) Production																													
Capability Set (CS15) Fielding																													_
Initial Test & Evaluation (IOT&E) (Infantry)																													_
Capability Set (CS16) Contract Awards																													
Capability Set (CS16) Production																													
Capability Set (CS16) Fielding																													_
Follow-on Operational Test & Evaluation (FOT&E)																													
Capability Set (CS17) Contract Awards																													
Capability Set (CS17) Production																													
Capability Set (CS17) Fielding																													

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
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# Schedule Details

	Sta	Start						
Events	Quarter	Year	Quarter	Year				
NW Low Rate Initial Production (LRIP)	3	2012	2	2014				
NW Developmental Test (DT)	4	2012	1	2013				
Network Integration Evaluation (NIE 13.1)	1	2013	1	2013				
NW First Unit Equipment (FUE)	1	2014	1	2014				
Network Integration Evaluation (NIE 13.2)	3	2013	3	2013				
ow Rate Initial Production (LRIP) #2 Contract Awards	3	2013	4	2013				
NW Low Rate Initial Production (LRIP) #2	3	2013	1	2014				
Capability Set (CS14) Fielding	1	2014	1	2015				
Network Integration Evaluation (NIE 14.1) (Base line only)	1	2014	1	2014				
nitial Test & Evaluation (IOT&E) (Mech)	3	2014	3	2014				
Capability Set (CS15) Contract Awards	3	2014	4	2014				
Capability Set (CS15) Production	3	2014	2	2015				
Capability Set (CS15) Fielding	1	2015	1	2016				
nitial Test & Evaluation (IOT&E) (Infantry)	1	2015	1	2015				
Capability Set (CS16) Contract Awards	3	2015	4	2015				
Capability Set (CS16) Production	3	2015	2	2016				
Capability Set (CS16) Fielding	4	2015	4	2016				
follow-on Operational Test & Evaluation (FOT&E)	1	2016	1	2016				
Capability Set (CS17) Contract Awards	3	2016	4	2016				
Capability Set (CS17) Production	3	2016	2	2017				
Capability Set (CS17) Fielding	4	2016	4	2017				