Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army											Date: February 2015	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604290A *I Mid-tier Networking Vehicular Radio (MNVR)*							
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	-	22.553	9.725	8.763	-	8.763	7.432	2.255	0.518	0.517	Continuing	Continuing
DW1: *Mid-Tier Wideband Networking Vehicular Radio Mnvr*	-	22.553	9.725	8.763	-	8.763	7.432	2.255	0.518	0.517	Continuing	Continuing

Note

FY 2016 supports program management efforts needed to execute the modified NDI strategy for a mid-tier networking vehicular capability; focus is on continued test and system certification efforts for the 118(V)1 (MNVR). Planned activities, in accordance with the MNVR acquisition plan include conduct of IOT&E at NIE 16.2, from which an Operational Test Agency Milestone Assessment Report (OMAR) will be developed to inform a Full-Rate Production decision in 4QFY16.

A. Mission Description and Budget Item Justification

The MNVR enables the extension of data services within the tactical network through seamless integration of the upper and lower tiers; providing software-defined, multi-channel networking radios for a wide variety of Army tactical vehicles to meet the Army's requirement for MWN capability.

The MNVR, a modified Non-Developmental (NDI), supports Army Mission Command operational requirements with a multi-channel, Type 1 (supporting multiple independent levels of security), vehicular mounted radio hosting networking waveforms, the Wideband Networking Waveform (WNW) and the Soldier Radio Waveform (SRW). The MNVR narrows the data capability gap at the Brigade Combat Team (BCT) company level. It provides the capability to build a data extension to the lowest echelons and enables the extension of services from the Forward Operating Base (FOB) to the platform. MNVR provides a dynamic, scalable, On-the-Move (OTM) network architecture, connecting the Soldier to the Mission Command (MC) Network, and enhances capability to exchange voice and data simultaneously and faster than current systems. The advanced network waveforms provide rapid distribution of data and imagery with increased information assurance protection and automatic routing across complex terrain. The system operates Internet Protocol (IP) based networking waveforms offering increased data throughput through self-forming, self-healing, managed communication networks from the brigade to the platoon level. It's route and retransmit functionality links waveforms in different frequency bands, within the 2 Megahertz (MHz) to 2 Gigahertz (GHz) range, to form one coherent network. MNVR has been nomenclatured as AN/PRC 118(V)1.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army					Date: February 2015
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0604290A / *Mid-tier Networking Vehicular Radio (MNVR)*		
B. Program Change Summary ($ in Millions)	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**
Previous President's Budget	23.328	9.730	-	-	-
Current President's Budget	22.553	9.725	8.763	-	8.763
Total Adjustments	-0.775	-0.005	8.763	-	8.763
• Congressional General Reductions	-	-0.005			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.775	-			
• Adjustments to Budget Years	-	-	8.763	-	8.763

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604290A / *Mid-tier Networking Vehicular Radio (MNVR)*	Project (Number/Name) DW1 / *Mid-Tier Wideband Networking Vehicular Radio Mnvr*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
DW1: *Mid-Tier Wideband Networking Vehicular Radio Mnvr*	-	22.553	9.725	8.763	-	8.763	7.432	2.255	0.518	0.517	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

The Mid-tier Networking Vehicular Radios (MNVR) enables the extension of data services within the tactical network through seamless integration of the upper and lower tiers; providing software-defined, multi-channel networking radios for a wide variety of Army tactical vehicles to meet the Army's requirement for the Mid-tier Wideband Networking (MWN) capability. A contract was awarded on 24 September 2013 as a single award, Indefinite Delivery Indefinite Quantity (IDIQ), firm fixed price, over a 3-year ordering period. Production of 232 radios for Test & Evaluation and certification purposes was completed in 3QFY 2014. After a Milestone C (MS C) decision is made in 4QFY 2015, PdM MNVR will support Initial Operational Test and Evaluation (IOT&E) in order to complete all testing and certifications, and support platform integration, meeting the lead time required for production of platform integration assets. Subsequent procurements will be full and open competition, single award, IDIQ, firm fixed price, 5-year ordering period.

A. Mission Description and Budget Item Justification

MNVR enables the extension of data services within the tactical network through seamless integration of the upper and lower tiers; providing software-defined, multi-channel networking radios for a wide variety of Army tactical vehicles to meet the Army's requirement for the MWN capability. The MNVR provides self-forming and self-healing communication networks from the brigade to the platoon level throughout the full range of military operations.

MNVR, a modified Non-Developmental Item (NDI), supports Army Mission Command operational requirements with a multi-channel, Type 1 (supporting multiple independent levels of security), vehicular mounted radio hosting networking waveforms, Wideband Networking Waveform (WNW) and Soldier Radio Waveform (SRW). The MNVR narrows the data capability gap at the Brigade Combat Team (BCT) company level and provides the capability to build a data extension to the lowest echelons, and then enables the extension of services from the Forward Operating Base (FOB) to the platform. MNVR provides a dynamic, scalable, On-the-Move (OTM) network architecture, connecting the Soldier to the Mission Command (MC) Network and enhances capability to exchange voice and data simultaneously and faster than current systems. The advanced network waveforms provide rapid distribution of data and imagery with increased information assurance protection and automatic routing across complex terrain. The system operates Internet Protocol (IP) based networking waveforms offering increased data throughput through self-forming, self-healing, managed communication networks. It's route and retransmit functionality links waveforms in different frequency bands, within the 2 Megahertz (MHz) to 2 Gigahertz (GHz) range, to form one coherent network. MNVR has been nomenclatured as AN/PRC 118(V)1.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Mid-tier Networking Vehicular Radio (MNVR)	22.553	9.725	8.763

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604290A / *Mid-tier Networking Vehicular Radio (MNVR)*	**Project (Number/Name)** DW1 / *Mid-Tier Wideband Networking Vehicular Radio Mnvr*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: RDTE funding supports program management efforts in support of the industry solution for a modified Non-Developmental Item (NDI) radio; contract management, and test & certification efforts through Initial Operational Test & Evaluation (IOT&E). ***FY 2014 Accomplishments:*** FY 2014 funding supported program management, test and evaluation and system security certification activities to execute the modified Non-Developmental Item (NDI) strategy for a mid-tier networking vehicular capability. Activities included a Demonstration at Network Integration Event (NIE) 14.2, and Government Integration Testing (GIT); both were risk reduction activities in support of Limited User Test (LUT) in 3QFY 2015. FY 2014 funding also supported management of first delivery order production for test & certification, and initial platform integration efforts. ***FY 2015 Plans:*** FY 2015 supports program management efforts needed to execute the modified NDI strategy for a mid-tier networking vehicular capability; focus is on test, system certification and initial sustainment planning for the 118(V)1 (MNVR). Planned activities, in accordance with the MNVR acquisition plan include: Counter-RCIED Electronic Warfare (CREW) testing; conduct of LUT at NIE 15.2, from which an Operational Test Agency Milestone Assessment Report (OMAR) will be developed to inform a Milestone C (MS C) decision in 4QFY 2015; Government Regression Testing (GRT); Logistics Demonstration (Log Demo); and Tropical Testing. ***FY 2016 Plans:*** FY 2016 supports program management efforts needed to execute the modified NDI strategy for a mid-tier networking vehicular capability; focus is on continued test and system certification efforts for the 118(V)1 (MNVR). Planned activities, in accordance with the MNVR acquisition plan include conduct of IOT&E at NIE 16.2, from which an OMAR will be developed to inform a Full-Rate Production decision in 4QFY16.			
Accomplishments/Planned Programs Subtotals	22.553	9.725	8.763

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPA Funding - B51001: *Mid-tier Networking Vehicular Radio (MNVR)*	19.200	4.692	27.762	-	27.762	27.726	48.393	49.040	59.118	Continuing	Continuing

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604290A / *Mid-tier Networking Vehicular Radio (MNVR)*	**Project (Number/Name)** DW1 / *Mid-Tier Wideband Networking Vehicular Radio Mnvr*

D. Acquisition Strategy

The Mid-tier Networking Vehicular Radio (MNVR) is a modified Non-Developmental Item (NDI) industry solution for a multi-channel vehicular radio hosting networking waveforms, addressing the Army's requirement for Mid-tier Wideband Networking (MWN) capabilities to support the Warfighter by providing an extension of data services from the upper tactical network at brigade and battalion to the lower tactical network at company and platoon echelon platforms. This approach takes advantage of competitively priced, mature and producible technology that meets technical specifications.

An ADM was signed on 20 September 2013 by the Defense Acquisition Executive (DAE), approving a Materiel Development Decision (MDD). The ADM designated MNVR as an ACAT 1D Special Interest Program under the continued oversight of the DAE. The ADM also approved the award of an Industry contract, and authorized the purchase of up to 232 modified NDI radios for Test & Evaluation, Platform Integration and Certification purposes in order to inform a MS C decision.

In 4QFY 2015, the MNVR program will provide all regulatory and statutory documentation in preparation for the Milestone C (MS C) decision, which will allow the program to move forward into Low Rate Initial Production (LRIP). PdM MNVR will support IOT&E in order to complete all testing and certifications, and support platform integration, meeting the lead time required for production of platform integration assets.

In 4QFY 2016, after Initial Operational Test & Evaluation (IOT&E) is successfully completed, the program will move forward to the Full Rate Production decision to garner approval to field. Delivery Order 3 will then procure radio systems in support of fielding to CS 17-18.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604290A / *Mid-tier Networking Vehicular Radio (MNVR)*	Project (Number/Name) DW1 / *Mid-Tier Wideband Networking Vehicular Radio Mnvr*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services - PMO	Various	Aberdeen Proving Ground : Maryland	26.676	9.259		3.816		7.113		-		7.113	Continuing	Continuing	-
		Subtotal	26.676	9.259		3.816		7.113		-		7.113	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Development Analysis and Product Source Selection	C/FFP	Aberdeen Proving Ground : Maryland	12.411	1.890		-		-		-		-	Continuing	Continuing	-
		Subtotal	12.411	1.890		-		-		-		-	-	-	-

Remarks

Initial Operational Test & Evaluation (IOT&E) has been shifted to 3QFY16. IOT&E assets will be procured with OPA funds, post MS C, now scheduled for 4QFY15.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Test and Evaluation	RO	White Sands Missle Range : New Mexico	10.469	11.404		5.909		1.650		-		1.650	Continuing	Continuing	-
		Subtotal	10.469	11.404		5.909		1.650		-		1.650	-	-	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	49.556	22.553		9.725		8.763		-		8.763	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604290A / *Mid-tier Networking Vehicular Radio (MNVR)*	**Project (Number/Name)** DW1 / *Mid-Tier Wideband Networking Vehicular Radio Mnvr*

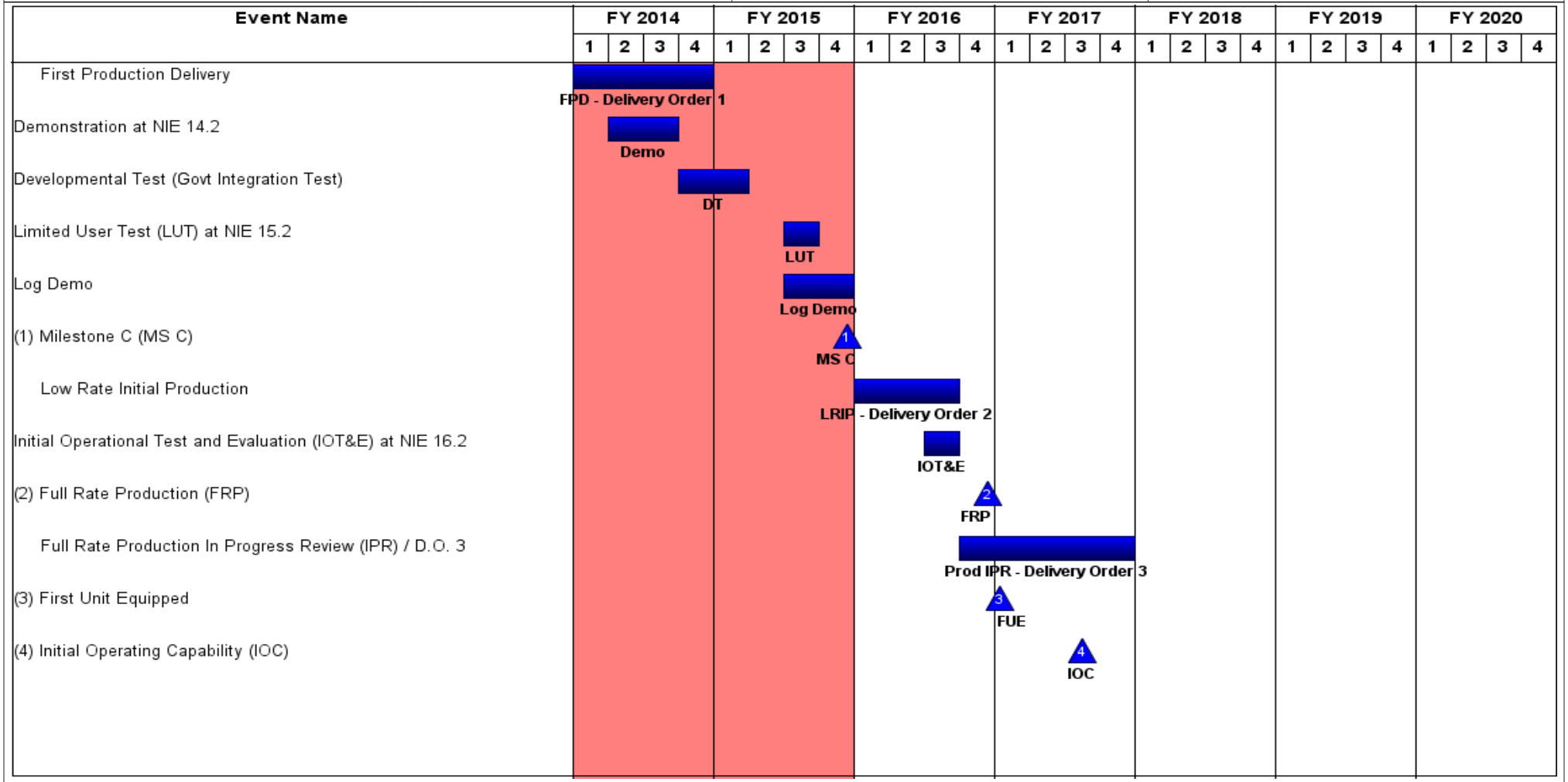

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604290A / *Mid-tier Networking Vehicular Radio (MNVR)*	**Project (Number/Name)** DW1 / *Mid-Tier Wideband Networking Vehicular Radio Mnvr*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
First Production Delivery	4	2013	4	2014
Demonstration at NIE 14.2	2	2014	3	2014
Developmental Test (Govt Integration Test)	4	2014	1	2015
Limited User Test (LUT) at NIE 15.2	3	2015	3	2015
Log Demo	3	2015	4	2015
Milestone C (MS C)	4	2015	4	2015
Low Rate Initial Production	1	2016	3	2016
Initial Operational Test and Evaluation (IOT&E) at NIE 16.2	3	2016	3	2016
Full Rate Production (FRP)	4	2016	4	2016
Full Rate Production In Progress Review (IPR) / D.O. 3	4	2016	4	2017
First Unit Equipped	1	2017	1	2017
Initial Operating Capability (IOC)	3	2017	3	2017