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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Army										Date: May 2017		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development					PE 1208053A / Joint Tactical Ground System							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	10.228	-	10.228	11.594	10.851	11.131	12.843	Continuing	Continuing
FE7: Joint Tact Grd Station-P3I(MIP)	-	0.000	0.000	10.228	-	10.228	11.594	10.851	11.131	12.843	Continuing	Continuing

Note

Funding moved from PE 0208053A to PE 1208053A as directed by OSD to track Space Programs.

A. Mission Description and Budget Item Justification

The Joint Tactical Ground Station (JTAGS) is a post-production, ACAT III program and is designated as a DoD Space Program. JTAGS provides missile warning message data for the Air and Missile Defense (AMD) architecture and improves performance for Integrated Air and Missile Defense Fire Control Systems/Composite Army Air and Missile Defense Brigades.

JTAGS Block I system is a transportable information processing system, receiving and processing in-theater, direct down-linked data from Defense Support Program (DSP) and other Infrared (IR) satellites. JTAGS disseminates near real time warning, alerting, and cueing information on ballistic missile launches and other tactical events of interest throughout the theater using existing communication networks, providing critical support to Combatant Commanders in their Areas of Responsibility (AOR). Four OCONUS deployed JTAGS units constitute DoD's only in-theater system providing space-based missile warning. The fifth CONUS system is being used as an institutional trainer but is available as a deployable asset. JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System (TES), supporting all Theater Missile Defense pillars, affording the shortest sensor to shooter connectivity. JTAGS funding was moved to a new PE as directed by OSD to track Space Programs.

The JTAGS Program Element (PE) supports development and test to meet JTAGS Operational Requirement(s) Document (ORD) thresholds using improved sensors and algorithms as Pre-Planned Product Improvements (P3I). The P3I Improvements will upgrade JTAGS to a new Block II configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and will improve warning tactical parameters and timeliness. JTAGS Block II is on contract for a two-Phase development effort. JTAGS Block II Phase 1 will be completed in FY17. JTAGS Block II Phase 2 activities are broken into three spirals to expedite getting critical capabilities fielded sooner. P3I Block II Phase 2 Spiral 1 delivers stereo SBIRS Geosynchronous scanner capability and Pseudo-Link 4 (P/L 4) data. Spiral 2 delivers Cobra Brass and "Walkers" data (FY2018-19). Spiral 3 delivers software tuning and testing to the Operational Requirements Document (ORD) (FY2019-20). JROC-Memos 197-12 and 113-13 supports the need to develop and field JTAGS Block II capabilities as soon as possible.

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Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development		PE 1208053A / Joint Tactical Ground System			
B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	10.228	-	10.228
Total Adjustments	0.000	0.000	10.228	-	10.228
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	0.000	0.000	10.228	-	10.228
Change Summary Explanation					
FY18 funding was realigned from PE 0208053A to PE 1208053A to provide greater transparency of OSD Space Programs.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Army										Date: May 2017		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 1208053A / Joint Tactical Ground System				Project (Number/Name) FE7 / Joint Tact Grd Station-P3I(MIP)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
FE7: Joint Tact Grd Station-P3I(MIP)	-	0.000	0.000	10.228	-	10.228	11.594	10.851	11.131	12.843	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Tactical Ground Station (JTAGS) is a post-production, ACAT III program and is designated as a DoD Space Program. JTAGS provides missile warning message data for the Air and Missile Defense (AMD) architecture and improves performance for Integrated Air and Missile Defense Fire Control Systems/Composite Army Air and Missile Defense Brigades.

JTAGS Block I system is a transportable information processing system, receiving and processing in-theater, direct down-linked data from Defense Support Program (DSP) and other Infrared (IR) satellites. JTAGS disseminates near real time warning, alerting, and cueing information on ballistic missile launches and other tactical events of interest throughout the theater using existing communication networks, providing critical support to Combatant Commanders in their Areas of Responsibility (AOR). Four OCONUS deployed JTAGS units constitute DoD's only in-theater system providing space-based missile warning. The fifth CONUS system is being used as an institutional trainer but is available as a deployable asset. JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System (TES), supporting all Theater Missile Defense pillars, affording the shortest sensor to shooter connectivity. JTAGS funding was moved to a new PE as directed by OSD to track Space Programs.

The JTAGS Program Element (PE) supports development and test to meet JTAGS Operational Requirement(s) Document (ORD) thresholds using improved sensors and algorithms as Pre-Planned Product Improvements (P3I). The P3I Improvements will upgrade JTAGS to a new Block II configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and will improve warning tactical parameters and timeliness. JTAGS Block II is on contract for a two-Phase development effort. JTAGS Block II Phase 1 will be completed in FY17. JTAGS Block II Phase 2 activities are broken into three spirals to expedite getting critical capabilities fielded sooner. P3I Block II Phase 2 Spiral 1 delivers stereo SBIRS Geosynchronous scanner capability and Pseudo-Link 4 (P/L 4) data. Spiral 2 delivers Cobra Brass and "Walkers" data (FY2018-19). Spiral 3 delivers software tuning and testing to the Operational Requirements Document (ORD) (FY2019-20). JROC-Memos 197-12 and 113-13 supports the need to develop and field JTAGS Block II capabilities as soon as possible.

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

	FY 2016	FY 2017	FY 2018
Title: JTAGS Test and Evaluation Support	-	-	1.616
Description: Test and evaluation support for the JTAGS P3I Block II program			
FY 2018 Plans: Begin testing support of the JTAGS P3I Block II Phase 2 Spiral 2 development program			
Title: JTAGS Block II Phase 2	-	-	8.612

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Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 1208053A / <i>Joint Tactical Ground System</i>				Project (Number/Name) FE7 / <i>Joint Tact Grd Station-P3I(MIP)</i>			
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2016	FY 2017	FY 2018	
Description: The JTAGS Block II Phase 2 development program is broken into three Spirals, to provide critical capabilities to the fielded JTAGS units faster. Also includes Government management/oversight of the JTAGS Block II program. FY 2018 Plans: Continue development efforts of the JTAGS Block II Phase 2 Spiral 2 program and Government management/oversight.											
Accomplishments/Planned Programs Subtotals								-	-	10.228	
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 278053635: <i>Joint Tact Grd Station - P3I (MIP)</i>	28.015	12.649	-	-	-	-	-	-	-	0	40.664
• BZ8420000: <i>Joint Tactical Ground Station Mods (JTAGS)</i>	9.325	4.417	-	-	-	5.434	-	-	-	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Under this program element, critical improvements will be developed making maximum use of Non-Developmental Items (NDI)/Commercial Off-The-Shelf (COTS) components. After design and integration, the system will be subject to thorough developmental and validation/verification testing to verify performance, operational effectiveness and suitability. P3I Improvements will upgrade JTAGS to a new Block II configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, improving warning tactical parameters and timeliness. JTAGS Block II is on contract for a two-Phase development effort. JTAGS Block II Phase 2 is further divided into three spirals to provide critical capabilities to the fielded units faster. JTAGS Block II Phase 2 Spiral 1 delivers stereo SBIRS Geosynchronous scanner capability and Pseudo-Link 4 (P/L 4) data. Spiral 2 delivers Cobra Brass and "Walkers" data (FY2018-19). Spiral 3 delivers software tuning and testing to the Operational Requirements Document (ORD) (FY2019-20). JTAGS Block II Phase 2 is a Cost Plus Incentive Fee (CPIF) option on the JTAGS Block II (P3I) contract (W9113M-12-C-0055). The option will be exercised based on a contractor updated proposal and Government technical evaluation. JROC-Memos 197-12 and 113-13 direct fielding of JTAGS Block II capabilities as soon as possible.											
E. Performance Metrics											
N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Army												Date: May 2017			
Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name) PE 1208053A / Joint Tactical Ground System				Project (Number/Name) FE7 / Joint Tact Grd Station-P3I(MIP)					
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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 Contract
Government Program Management	Allot	MDSS Project Office : Radstone Arsenal AI	0.000	-		-		2.689	Oct 2017	-		2.689	0.000	2.689	0.000
Subtotal			0.000	-		-		2.689		-		2.689	0.000	2.689	0.000
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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 Contract
JTAGS P3I Block II Phase 2 Development	Option/ CPIF	Northop Grumman : Colorado Springs Co	0.000	-		-		4.590	Dec 2017	-		4.590	Continuing	Continuing	0.000
Subtotal			0.000	-		-		4.590		-		4.590	-	-	0.000
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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 Contract
Contractor Engineering Support	C/CPFF	TBD : Huntsville AL	0.000	-		-		1.333	Dec 2017	-		1.333	Continuing	Continuing	0.000
Subtotal			0.000	-		-		1.333		-		1.333	-	-	0.000
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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 Contract
Test Support (ATEC/AIC/ JITC)	Various	Various : Various	0.000	-		-		1.616	May 2018	-		1.616	Continuing	Continuing	0.000
Subtotal			0.000	-		-		1.616		-		1.616	-	-	0.000

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	Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		0.000		10.228		-		10.228	-	-	-
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Army																								Date: May 2017				
Appropriation/Budget Activity												R-1 Program Element (Number/Name)												Project (Number/Name)				
2040 / 7												PE 1208053A / Joint Tactical Ground System												FE7 / Joint Tact Grd Station-P3I(MIP)				
Event Name	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	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
JTAGS P3I Block II Phase 2									JTAGS P3I Block II Phase 2																			
JTAGS P3I Block II Phase 2 Spiral 1																												
JTAGS P3I Block II Phase 2 Spiral 2																												
JTAGS P3I Block II Phase 2 Spiral 3																												
JTAGS P3I Block II Phase 2 Spiral 4																												
JTAGS P3I Block II Phase 2 Spiral 2 (Cobra Brass and Slow Walkers)									JTAGS P3I Block II Phase 2 Spiral 2																			
JTAGS P3I Block II Phase 2 Spiral 3 (tuning and testing to ORD)									JTAGS P3I Block II Phase 2 Spiral 3																			
Future Sensor Integration and Technology Refresh									Future Sensor Integration																			

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Army			Date: May 2017
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
JTAGS P3I Block II Phase 2	1	2018	3	2021
JTAGS P3I Block II Phase 2 Spiral 2 (Cobra Brass and Slow Walkers)	1	2018	2	2019
JTAGS P3I Block II Phase 2 Spiral 3 (tuning and testing to ORD)	1	2019	3	2020
Future Sensor Integration and Technology Refresh	3	2020	4	2022