

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army										Date: February 2015			
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0208053A / Joint Tactical Ground System								
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	-	14.504	10.209	20.515	-	20.515	15.560	8.696	10.606	10.934	Continuing	Continuing	
635: Joint Tact Grd Station-P3I(MIP)	-	14.504	10.209	20.515	-	20.515	15.560	8.696	10.606	10.934	Continuing	Continuing	

**Note**

Above Threshold Reprogramming(ATR) of \$7.4M.

**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. The JTAGS Program Element (PE) supports development and test to meet JTAGS ORD thresholds using improved sensors and algorithms as Pre-Planned Product Improvements (P3I). Presently, JTAGS Block 1 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 then 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 a deployable asset. JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System (TES). JTAGS supports all Theater Missile Defense pillars and by being located in-theater, affords the shortest sensor to shooter connectivity. P3I Improvements will upgrade JTAGS to a new Block 2 configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and will improve warning tactical parameters and timeliness. JTAGS Block 2 P3I is on contract for a two-Phase development effort. Phase 1 deshelters five systems, adds SBIRS Geosynchronous (GEO) scanner capability (FY 2012-15) and updates hardware/software/communication systems. Phase 2 activities include stereo SBIRS GEO starrer sensor data and Net Centric capabilities (FY 2015-18). JROC-Memos 197-12 and 113-13 directs fielding of JTAGS P3I Block 2 Phase 1 by FY15 and Phase 2 by FY 2017.

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army				Date: February 2015	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development		PE 0208053A / Joint Tactical Ground System			
B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	7.104	10.209	20.662	-	20.662
Current President's Budget	14.504	10.209	20.515	-	20.515
Total Adjustments	7.400	-	-0.147	-	-0.147
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	7.400	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-0.147	-	-0.147

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0208053A / Joint Tactical Ground System				Project (Number/Name) 635 / Joint Tact Grd Station-P3I(MIP)			
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
635: Joint Tact Grd Station-P3I(MIP)	-	14.504	10.209	20.515	-	20.515	15.560	8.696	10.606	10.934	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Not applicable for this item.

**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. The JTAGS Program Element (PE) supports development and test to meet JTAGS ORD thresholds using improved sensors and algorithms as Pre-Planned Product Improvements (P3I). Presently, JTAGS Block 1 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 then 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 a deployable asset. JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System (TES). JTAGS supports all Theater Missile Defense pillars and by being located in-theater, affords the shortest sensor to shooter connectivity. P3I Improvements will upgrade JTAGS to a new Block 2 configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and will improve warning tactical parameters and timeliness. JTAGS Block 2 P3I is on contract for a two-Phase development effort. Phase 1 deshelters five systems, adds SBIRS Geosynchronous (GEO) scanner capability (FY 2012-15) and updates hardware/software/communication systems. Phase 2 activities include stereo SBIRS GEO starrer sensor data and Net Centric capabilities (FY 2015-18). JROC-Memos 197-12 and 113-13 directs fielding of JTAGS P3I Block 2 Phase 1 by FY15 and Phase 2 by FY 2017.

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

	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>
<b>Title:</b> Execute Block 1 Upgrades	0.200	-	-
<b>Description:</b> Funding is to be provided for the following effort			
<b>FY 2014 Accomplishments:</b> Information Assurance (IA) Testing and Software Upgrades			
<b>Title:</b> JTAGS Test and Evaluation Support	0.898	1.743	1.413
<b>Description:</b> Funding is provided for the following effort			

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army									Date: February 2015		
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0208053A / Joint Tactical Ground System				Project (Number/Name) 635 / Joint Tact Grd Station-P3I(MIP)			
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: JTAGS Block 2 Phase 1 Testing											
FY 2015 Plans: JTAGS Block 2 Phase 1 Testing											
FY 2016 Plans: JTAGS Block 2 Phase 2 Testing											
Title: JTAGS P3I Block 2 Phase 1 Development (Deshelterization; Hardware/Software Upgrades)									6.006	8.466	-
Description: Funding is provided for the following effort											
FY 2014 Accomplishments: Continue P3I Phase 1 Development											
FY 2015 Plans: Complete P3I Phase 1 Development											
Title: JTAGS P3I Block 2 Phase 2									7.400	-	19.102
Description: Phase 2 activities include stereo SBIRS GEO starer sensor data and Net Centric capabilities, per JROC Memos 197-12 and 113-13.											
FY 2014 Accomplishments: Begin JTAGS P3I Phase 2 Development effort											
FY 2016 Plans: Development of Phase 2 capabilities.											
Accomplishments/Planned Programs Subtotals									14.504	10.209	20.515
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
• SSN BZ8401: SSN BZ8401, Joint Tactical Ground Station (JTAGS)	9.899	5.286	3.906	-	3.906	4.452	-	5.431	-	Continuing	Continuing
Remarks											

# UNCLASSIFIED

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2016 Army		<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208053A / <i>Joint Tactical Ground System</i>	<b>Project (Number/Name)</b> 635 / <i>Joint Tact Grd Station-P3I(MIP)</i>
<p><b><u>D. Acquisition Strategy</u></b></p> <p>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 2 configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and will improve warning tactical parameters and timeliness. JTAGS Block 2 P3I is on contract for a two-Phase development effort. Phase 1 deshelers five systems, addressing obsolescence issues, adds SBIRS Geosynchronous (GEO) scanner capability (FY 2012-15) and updates hardware/software/communication systems. Phase 2 activities include stereo SBIRS GEO starer sensor data, Net Centric capabilities (FY 2015-18), and technical refresh issues (as required). JROC-Memos 197-12 and 113-13 directs fielding of JTAGS P3I Block 2 Phase 1 by FY15 and Phase 2 by FY 2017.</p> <p><b><u>E. Performance Metrics</u></b></p> <p>N/A</p>		

## UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army												Date: February 2015			
Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name) PE 0208053A / Joint Tactical Ground System					Project (Number/Name) 635 / Joint Tact Grd Station-P3I(MIP)				
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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	Various	various : various	50.796	3.279		2.599		2.779		-		2.779	Continuing	Continuing	Continuing
Subtotal			50.796	3.279		2.599		2.779		-		2.779	-	-	-
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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 Block 1 Engineering Services Hardware/Software	SS/CPFF	Northrop Grumman : Colorado Springs, CO/Various	39.682	0.200		-		-		-		-	Continuing	Continuing	Continuing
P3I Phase 1 Development	SS/CPIF	Northrop Grumman : Colorado Springs, CO/Various	40.270	0.627		4.598		-		-		-	Continuing	Continuing	Continuing
P3I Phase 2 Development	SS/CPIF	Northrop Grumman : Colorado Springs, CO/Various	0.000	7.400	Feb 2015	-		15.033	Dec 2015	-		15.033	Continuing	Continuing	Continuing
Government Furnished Equipment	TBD	Various : Various	1.510	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			81.462	8.227		4.598		15.033		-		15.033	-	-	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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	Various	various : various	27.666	2.100		1.269		1.290	Dec 2015	-		1.290	Continuing	Continuing	Continuing
Subtotal			27.666	2.100		1.269		1.290		-		1.290	-	-	-

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2016 Army												<b>Date:</b> February 2015		
<b>Appropriation/Budget Activity</b> 2040 / 7						<b>R-1 Program Element (Number/Name)</b> PE 0208053A / <i>Joint Tactical Ground System</i>				<b>Project (Number/Name)</b> 635 / <i>Joint Tact Grd Station-P3I(MIP)</i>				

  

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Test Support (ATEC/JITC/ETC)	Various	various : various	7.062	0.898		1.743		1.413		-		1.413	Continuing	Continuing	Continuing
<b>Subtotal</b>			7.062	0.898		1.743		1.413		-		1.413	-	-	-

  

<b>Remarks</b> N/A-Not Applicable															
--------------------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

  

			<b>Prior Years</b>	<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			166.986	14.504		10.209		20.515		-		20.515	-	-	-

  

<b>Remarks</b>															
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**UNCLASSIFIED**

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army																Date: February 2015																
Appropriation/Budget Activity 2040 / 7										R-1 Program Element (Number/Name) PE 0208053A / Joint Tactical Ground System								Project (Number/Name) 635 / Joint Tact Grd Station-P3I(MIP)														
Event Name	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020							
	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				
P3I JTAGS Block 2																																
					P3I JTAGS Block 2 Upgrade																											
P3I H/W & S/W Block 2 Phase 1 Deshelterization and Geosynchronous																																
					P3I Hardware/Software																											
P3I GEO Starer and Net Centric Upgrade (P3I Block 2 Phase 2 Upgrade)																																
									P3I GEO Starer																							
Future Sensor Integration and Technology Refresh																									Future Sensor Integration							



**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2016 Army			<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208053A / <i>Joint Tactical Ground System</i>	<b>Project (Number/Name)</b> 635 / <i>Joint Tact Grd Station-P3I(MIP)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
P3I JTAGS Block 2	3	2012	4	2018
P3I H/W & S/W Block 2 Phase 1 Deshelterization and Geosynchronous (GEO) Scanner	4	2012	1	2016
P3I GEO Starer and Net Centric Upgrade (P3I Block 2 Phase 2 Upgrade)	2	2015	3	2018
Future Sensor Integration and Technology Refresh	2	2019	4	2021