

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Army	DATE: February 2012
---	----------------------------

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				PE 0208053A: <i>Joint Tactical Ground System</i>							
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	12.403	27.630	31.397	-	31.397	14.109	7.912	8.039	8.219	Continuing	Continuing
635: <i>JOINT TACT GRD STATION-P3I (MIP)</i>	12.403	27.630	31.397	-	31.397	14.109	7.912	8.039	8.219	Continuing	Continuing

A. Mission Description and Budget Item Justification

This system is an integral part of the overall Air and Missile Defense (AMD) architecture and will provide for an incrementally fielded Integrated Air and Missile Defense Fire Control System/capability for the composite Army Air and Missile Defense Brigades. This program element supports development of critical improvements and insertion of technology upgrades to the Joint Tactical Ground Station (JTGS) and the research and development of the JTGS Pre-Planned Product Improvement (P3I). JTGS is presently a transportable information processing system that receives and processes in-theater, direct down-linked data from Defense Support Program (DSP) satellites. JTGS disseminates warning, alerting, and cueing information on Ballistic Missiles and other tactical events of interest throughout the theater using existing communication networks. This program is designated as a DoD Space program. JTGS provides critical support by providing Combatant Commanders near real-time warning of theater ballistic missiles and other battle space characterization information in their Areas of Responsibility (AOR). The four OCONUS deployed JTGS units constitute the DoD's only in-theater system providing space-based warning. JTGS is designated as the in-theater element of the United States Strategic Command's Theater Event System. JTGS supports all Theater Missile Defense pillars and by being located in-theater, provides the shortest sensor to shooter connectivity. The objectives of the improvements are to upgrade JTGS to a new configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and to improve warning accuracy and timeliness. These improvements will be accomplished in a two-Block P3I Program development effort. Block 1 activities include Information Assurance (IA) upgrades: Highly Elliptical Orbit (HEO) Automation Track Transfer (ATT) Integration bridging Initial Geosynchronous Capability (IGC); new commercial antennas; Source on Source (SoS) Upgrade; and SIPRNET capability. Utilizing FY12 and out years funding, Block 2 upgrades will be executed in two phases. Phase 1 upgrade includes desheltering five systems and the reintegration of the various hardware/software/communication systems into operation centers and Geosynchronous (GEO) scanner capability (FY 13-14).

B. Program Change Summary (\$ in Millions)	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>
Previous President's Budget	12.403	27.630	31.397	-	31.397
Current President's Budget	12.403	27.630	31.397	-	31.397
Total Adjustments	-	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0208053A: Joint Tactical Ground System				PROJECT 635: JOINT TACT GRD STATION-P3I (MIP)			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
635: JOINT TACT GRD STATION-P3I (MIP)	12.403	27.630	31.397	-	31.397	14.109	7.912	8.039	8.219	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This system is an integral part of the overall Air and Missile Defense (AMD) architecture and will provide for an incrementally fielded Integrated Air and Missile Defense Fire Control System/capability for the composite Army Air and Missile Defense Brigades. This program element supports development of critical improvements and insertion of technology upgrades to the Joint Tactical Ground Station (JTGS) and the research and development of the JTGS Pre-Planned Product Improvement (P3I). JTGS is presently a transportable information processing system that receives and processes in-theater, direct down-linked data from Defense Support Program (DSP) satellites. JTGS disseminates warning, alerting, and cueing information on Ballistic Missiles and other tactical events of interest throughout the theater using existing communication networks. This program is designated as a DoD Space program. JTGS provides critical support by providing Combatant Commanders near real-time warning of theater ballistic missiles and other battle space characterization information in their Areas of Responsibility (AOR). The four OCONUS deployed JTGS units constitute the DoD's only in-theater system providing space-based warning. JTGS is designated as the in-theater element of the United States Strategic Command's Theater Event System. JTGS supports all Theater Missile Defense pillars and by being located in-theater, provides the shortest sensor to shooter connectivity. The objectives of the improvements are to upgrade JTGS to a new configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and to improve warning accuracy and timeliness. These improvements will be accomplished in a two-Block P3I Program development effort. Block 1 activities include Information Assurance (IA) upgrades: Highly Elliptical Orbit (HEO) Automation Track Transfer (ATT) Integration bridging Initial Geosynchronous Capability (IGC); new commercial antennas; Source on Source (SoS) Upgrade; and SIPRNET capability. Utilizing FY12 and out years funding, Block 2 upgrades will be executed in two phases. Phase 1 upgrade includes desheltering five systems and the reintegration of the various hardware/software/communication systems into operation centers and Geosynchronous (GEO) scanner capability (FY 13-14).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: Execute Block 1 Upgrades	7.110	0.200	-
Articles:	0	0	
Description: Funding is provided for the following effort			
FY 2011 Accomplishments: Complete Block 1 development			
FY 2012 Plans: Software, Information Assurance (IA) Upgrade Testing			
Title: Software Upgrades, IA Maintenance, Software Deficiency Report (DR) Resolution and Exercise Participation	1.734	0.750	0.500
Articles:	0	0	

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0208053A: Joint Tactical Ground System	PROJECT 635: JOINT TACT GRD STATION-P3I (MIP)		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Description: Funding is provided for the following effort FY 2011 Accomplishments: Scheduled IA Maintenance, Software Deficiency Report (DR) Resolution, and Exercise Participation FY 2012 Plans: Scheduled IA Maintenance, Software Deficiency Report (DR) Resolution, and Exercise Participation FY 2013 Plans: Fielded System Software and Information Assurance Upgrades				
Title: JTAGS Test and Evaluation Support Description: Funding is provided for the following effort FY 2011 Accomplishments: Test of IGC FY 2012 Plans: Test of P3I Phase 1 System Integration into existing Command Operation Centers FY 2013 Plans: Completion of P3I Block 1 Phase 2 Testing		Articles: 0.233 0	1.700 0	1.000
Title: P3I Upgrades (Deshelterization; Hardware/Software Upgrades, Direct Downlink of GEO Starer Data. Includes Government IPPD) Description: Funding is provided for the following effort FY 2011 Accomplishments: P3I RFP and Source Selection FY 2012 Plans: Begin P3I Phase 1 Development Upgrades FY 2013 Plans:		Articles: 3.326 0	24.980 0	29.897

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army										DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0208053A: Joint Tactical Ground System				PROJECT 635: JOINT TACT GRD STATION-P3I (MIP)				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2011	FY 2012	FY 2013
Initiate Block 2 Phase 2 Development Through PDR and CDR												
Accomplishments/Planned Programs Subtotals										12.403	27.630	31.397
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost	
• SSN BZ8401: SSN BZ8401, Joint Tactical Ground Station (JTGS)	9.279	1.199	2.680		2.680		4.432	4.496	4.768	Continuing	Continuing	
• PE 0208053: PE 0208053, Proj 635, Joint Tactical Ground Station - P3I (MIP)	12.403	27.630	31.397		31.397		7.912	8.039	8.219	Continuing	Continuing	
• PE 0604869A: PE 0604869A, Proj M06, Patriot/MEADS Combined Aggregate Program (CAP)	467.139	406.605	396.612		396.612					Continuing	Continuing	
• PE 0605456A: PE 0605456A, Proj PA3, PAC-3/MSE Missile	62.500	88.993	68.287		68.287		131.745	62.370	65.055	Continuing	Continuing	
• SSN C53101: SSN C53101, MSE Missile		74.953	12.683		12.683		498.205	588.231	559.007	Continuing	Continuing	
• PE 0102419A: PE 0102419A, Proj E55, JLENS	372.493	344.655								Continuing	Continuing	
• PE 0605455A: PE 0605455A, Proj S35, SLAMRAAM	23.700	19.931								Continuing	Continuing	
• SSN C81002: SSN C81002, SLAMRAAM Launcher	116.732									Continuing	Continuing	
• PE 0603305A: PE 0603305A, Proj TR7, Indirect Fire ProtectionProtection Capability II - Intercept	4.296	21.126	75.222		75.222		114.099	144.738	150.000	Continuing	Continuing	
• SSN WK5053: SSN WK5053, FAAD GBS	91.467	7.958	7.871		7.871					Continuing	Continuing	

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0208053A: Joint Tactical Ground System				PROJECT 635: JOINT TACT GRD STATION-P3I (MIP)			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PE 0605457A: PE 0605457A, Proj S40, Army Integrated Air and Missile Defense (IAMD)	251.124	270.607	259.201		259.201		389.908	373.319	313.542	Continuing	Continuing
• SSN BZ5075: SSN BZ5075, Army IAMD Battle Command System (IBCS)							101.700	256.859	408.525	Continuing	Continuing
• PE 0604820A: PE 0604820A, Proj E10, SENTINEL		2.890	3.449		3.449		1.968	2.937	2.987	Continuing	Continuing
• PE 0654741 Prj 126: PE 654741, FAAD C2 ED	8.262	9.739	3.631		3.631		3.423	3.464		Continuing	Continuing
• PE 0654741, Prj 146: PE 654741, AIR & MSL DEFENSE PLANNING CONTROL	19.227	15.532	15.275		15.275		14.823	14.992		Continuing	Continuing
• PE 0654741, Prj 149: PE 654741, COUNTER ROCKETS, ARTILLERY & MORTAR	6.720	57.739	53.705		53.705					Continuing	Continuing
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 a thorough developmental and limited user test (LUT) to verify performance, operational effectiveness and suitability. All Block 1 activities (formerly known as Defense Support Program (DSP)-Only Multi-Mission Mobile Processor (M3P) (DM3P)) were rebaselined and resources refocused to maintain viability of JTAGS. Block 1 activites include Information Assurance (IA) upgrades; Highly Elliptical Orbit (HEO) Automation Track Transfer (ATT) Integration upgrades; and a bridging Initial Geosynchronous Capability (IGC); new commercial antennas; and SIPRNET capability. Utilizing FY12 and outyears funds, Block 2 upgrades will be executed in two phases. Phase 1 upgrade includes desheltering five systems and the reintegration of the various hardware/software/communication systems into operation centers and Geosynchronous (GEO) scanner capability (FY 13-14).											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army										DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development				PE 0208053A: Joint Tactical Ground System				635: JOINT TACT GRD STATION-P3I (MIP)					
Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government IPPD	Various	various:various	43.931	6.558		5.275		-		5.275	Continuing	Continuing	Continuing
Contractor IPPD	Various	TBD:TBD	21.551	1.678		1.750		-		1.750	Continuing	Continuing	Continuing
Subtotal			65.482	8.236		7.025		-		7.025			
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services Software	Various	Northrop Grumman:Arlington, VA	22.130	0.750		0.500		-		0.500	Continuing	Continuing	Continuing
Engineering Services Hardware	Various	Northrop Grumman:Arlington, VA	14.234	-		-		-		-	Continuing	Continuing	Continuing
Government Furnished Equipment	Various	various:various	1.510	0.200		0.350		-		0.350	Continuing	Continuing	Continuing
Development Engineering Software and Hardware	TBD	TBD:TBD	-	-		2.000		-		2.000	Continuing	Continuing	Continuing
P3I Development	Various	TBD:TBD	-	16.744		19.772		-		19.772	Continuing	Continuing	Continuing
Subtotal			37.874	17.694		22.622		-		22.622			
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Integrated Product & Process Development (IPPD) Support	Various	various:various	22.902	0.450		0.750		-		0.750	Continuing	Continuing	Continuing
Subtotal			22.902	0.450		0.750		-		0.750			

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army											DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0208053A: <i>Joint Tactical Ground System</i>				PROJECT 635: <i>JOINT TACT GRD STATION-P3I (MIP)</i>					

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ATEC	Various	various:various	5.506	1.250		1.000		-		1.000	Continuing	Continuing	Continuing
Subtotal			5.506	1.250		1.000		-		1.000			

Remarks N/A-Not Applicable													
--------------------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	131.764	27.630		31.397		-		31.397			

Remarks											
----------------	--	--	--	--	--	--	--	--	--	--	--

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army			DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0208053A: <i>Joint Tactical Ground System</i>		PROJECT 635: <i>JOINT TACT GRD STATION-P3I (MIP)</i>	

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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 BLOCK 1 IGC FIELDING																												
P3I JTAGS BLOCK 2																												
P3I H/W & S/W BLK 2 PHASE 1 DESHELTERIZATION AND GEO SCANNER																												
P3I GEO STARER UPGRADE (P3I BLK 2 PHASE 2 UPGRADE)																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0208053A: <i>Joint Tactical Ground System</i>	PROJECT 635: <i>JOINT TACT GRD STATION-P3I (MIP)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
P3I BLOCK 1 IGC FIELDING	2	2011	2	2012
P3I JTAGS BLOCK 2	3	2012	3	2017
P3I H/W & S/W BLK 2 PHASE 1 DESHELTERIZATION AND GEO SCANNER	1	2012	2	2014
P3I GEO STARER UPGRADE (P3I BLK 2 PHASE 2 UPGRADE)	2	2013	3	2017