Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

2040: Research, Development, Test & Evaluation, Army

PE 0208053A: Joint Tactical Ground System

BA 7: Operational Systems Development

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	1.949	13.258	12.403	0.000	12.403	12.630	13.038	7.982	7.947	Continuing	Continuing
635: JOINT TACT GRD STATION- P3I (MIP)	1.949	13.258	12.403	0.000	12.403	12.630	13.038	7.982	7.947	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element supports development of critical improvements and insertion of technological upgrades to the Joint Tactical Ground Station (JTAGS) and the research and development of the JTAGS Pre-Planned Product Improvement (P3I). JTAGS is presently a transportable information processing system that receives and processes in-theater, direct down-linked data from Defense Support Program (DSP) satellites. JTAGS 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. JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System. JTAGS 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 JTAGS to a new configuration for operation with the next generation of Space Based Infrared System (SBIRS), and to improve warning accuracy and timeliness.

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	1.951	13.258	12.468	0.000	12.468
Current President's Budget	1.949	13.258	12.403	0.000	12.403
Total Adjustments	-0.002	0.000	-0.065	0.000	-0.065
 Congressional General Reductions 		0.000			
 Congressional Directed Reductions 		0.000			
 Congressional Rescissions 	0.000	0.000			
 Congressional Adds 		0.000			
 Congressional Directed Transfers 		0.000			
 Reprogrammings 	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments 1	-0.002	0.000	-0.065	0.000	-0.065

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0208053A: Joint Tactical Ground System	
Change Summary Explanation Change Summary Explanation: Funding - FY 2010 funds were realign	ned to higher priority Army requirements	
Change Summary Explanation. I unumg 11 2010 luitus were realign	nea to inglier priority runny requirements.	

Exhibit R-2A, RDT&E Project Justit	fication: PB 2	011 Army						DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development					NOMENCLA A: Joint Tacti	_	ystem	PROJECT 635: JOINT	FACT GRD STATION-P3I (MIP)			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
635: JOINT TACT GRD STATION- P3I (MIP)	1.949	13.258	12.403	0.000	12.403	12.630	13.038	7.982	7.947	Continuing	Continuing	
Quantity of RDT&E Articles												

A. Mission Description and Budget Item Justification

This program element supports development of critical improvements and insertion of technological upgrades to the Joint Tactical Ground Station (JTAGS) and the research and development of the JTAGS Pre-Planned Product Improvement (P3I). JTAGS is presently a transportable information processing system that receives and processes in-theater, direct down-linked data from Defense Support Program (DSP) satellites. JTAGS 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. JTAGS provides critical support by providing Combatant Commanders near real-time warning of theater ballistic missiles and other battlespace characterization information in their Areas of Responsibility (AOR). The four OCONUS deployed JTAGS units constitute the Army's only in-theater system providing this space-based warning, and JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System. JTAGS 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 JTAGS to a new configuration for operation with the next generation of Space Based Infrared System (SBIRS), and to improve warning accuracy and timeliness. These improvements will be accomplised in a two-Block P3I Program Improvemnt effort. 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. Block 2 upgrades will follow to include removal of five systems from the shelters and integration into operation centers; and Geosynchronous (GEO) Starer capability and associated hardware upgrades.

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

			FY 2011	FY 2011	FY 2011
	FY 2009	FY 2010	Base	OCO	Total
Program #1	1.949	6.815	7.110	0.000	7.110
Execute Block 1 upgrades & Begin Block 2 P3I Follow On Integrated Product and Process Development (IPPD)					
FY 2009 Accomplishments: FY 2009					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: Febr	ruary 2010			
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		ATE: February 2010 CT GRD STATION-P3I (MIP) FY 2011 FY 2011 Total 1.734 0.000 1.734			
B. Accomplishments/Planned Program (\$ in Millions)		'					
	FY 200	9 FY 2010	FY 2011 Base				
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #2	0.0	00 1.000	1.734	0.000	1.734		
Software, Information Assurance (IA) and Exercise Development							
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #3 JTAGS Test and Evaluation Support	0.0	00 0.734	0.233	0.000	0.233		

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0208053A: Joint Tactical Ground Sy	vstem	PROJECT 635: JOINT	TACT GRD S	TATION-P3I	(MIP)
B. Accomplishments/Planned Program (\$ in Millions)			I			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #4		0.000	4.709	3.326	0.000	3.326
JTAGS Modernization (Block 1 and Block 2) and Engineering Support						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Acco	omplishments/Planned Programs Subtotals	1.949	13.258	12.403	0.000	12.403

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army DATE: February 2010												
APPROPRIATION/BUDGET ACTIV 2040: Research, Development, Test & Ev BA 7: Operational Systems Development	valuation, Arm	ny		R-1 ITEM N 0 PE 0208053A			stem	PROJECT 635: JOINT T	TACT GRD S	TATION-P3I	(MIP)	
C. Other Program Funding Summary	(\$ in Millions	<u>s)</u>										
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	<u>FY 2011</u> Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cos	
• Ord. #1: SSN BZ8401 Joint Tactical	0.000	6.682	9.279	0.000	9.279	0.000	0.000	9.415	4.658	Continuing	Continuin	
Ground Station (JTAGS)												
• Ord. #2: PE 0604869A, Proj M06, Patriot/MEADS Combined Aggregate Program (CAP)	454.565	566.215	467.139	0.000	467.139	467.139	408.012	325.018	75.585	Continuing	Continuin	
• Ord. #3: pe 0605456A, Project PA#, PAC-3/MSE Missile	0.000	0.000	62.500	0.000	62.500	62.100	3.500	62.000	64.500	Continuing	Continuin	
• Ord. #4: SSN C53101, MSE Missile	0.000	0.000	0.000	0.000	0.000	607.796	534.022	516.479	503.786	Continuing	Continuin	
• Ord. #5: SSN C53201, PATRIOT/ MEADS GSE	0.000	0.000	0.000	0.000	0.000	0.000	126.589	217.639	528.435	Continuing		
• Ord. #6: <i>PE 0102419A</i> , <i>Proj E55</i> , <i>JLENS</i>	344.850	328.356	372.493	0.000	372.493	176.198	118.448	0.000	0.000	Continuing	Continuin	
• Ord. #7: SSN BZ0525, JLENS Production	0.000	0.000	0.000	0.000	0.000	470.661	419.801	427.731	394.325	Continuing	Continuin	
• Ord. #8: <i>PE 0604802A</i> , <i>Proj S23</i> , <i>SLAMRAAM</i>	31.306	56.441	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuin	
• Ord. #9: <i>PE 0605450A</i> , <i>Project S35</i> , <i>SLAMRAAM</i>	0.000	0.000	23.700	0.000	23.700	17.800	53.500	7.500	7.600	Continuing	Continuin	
• Ord. #10: SSN C81002, SLAMRAAM Launcher	40.349	0.000	116.732	0.000	116.732	83.302	233.762	241.691	248.895	Continuing	Continuin	
• Ord. #11: SSN C81004, SLAMRAAM Missile	0.000	0.000	0.000	0.000	0.000	0.000	39.542	39.426	15.416	Continuing	Continuin	
• Ord. #12: PE 0603305A, Proj TR7, Protection Capability II - Intercept	0.000	0.000	4.296	0.000	4.296	21.303	74.197	93.679	94.006	Continuing	Continuir	
• Ord. #13: SSN WK5053, FAAD GBS • Ord. #14: PE 0603327A, Proj S34, AMD System of System Engineering and Integration	0.000 111.496	0.000 166.061	91.467 0.000	169.260 0.000	260.727 0.000	7.948 0.000	7.935 0.000	0.000 0.000	0.000 0.000	Continuing Continuing		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
2040: Research, Development, Test & Evaluation, Army	PE 0208053A: Joint Tactical Ground System	635: <i>JOINT</i>	TACT GRD STATION-P3I (MIP)
BA 7: Operational Systems Development			
C. Other Program Funding Summary (\$ in Millions)			

•	•	-	FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	Base	<u>oco</u>	Total	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• Ord. #15: PE 0605457A, Project	0.000	0.000	251.124	0.000	251.124	271.543	251.646	228.639	129.043	Continuing	Continuing
S40, Army Integrated Air and Missile											
Defense (AIAMD)											
• Ord. #16: SSN BZ5075, Army IAMD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	24.045	99.102	Continuing	Continuing
Battle Command System (IBCS)											

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 activities 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. Block 1 will be will be fielded in the FY2011-2012 timeframe. Block 2 upgrades will follow in the outyears to include removal of five systems from the shelters and integration into operation centers; and Geosynchronous (GEO) Starer capability and associated hardware upgrades.

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

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)

Product Development (\$ in Millions)

			_										
				FY 2010		FY 2 Ba	-	FY 2	2011 CO	FY 2011 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
Primary Hardware Development	С	Lockheed / Sunnyvale CA	29.191	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Engineering Services Software	С	Northrop Grumman/ Azusa CA	16.844	1.000		1.750		0.000		1.750	Continuing	Continuing	0
Engineering Services Hardware	С	Northrop Grumman / Colorado Springs CO	5.109	3.319		2.903		0.000		2.903	Continuing	Continuing	0
Government Furnished Equipment	С	Multiple Location could not be determined.	1.135	0.125		0.125		0.000		0.125	Continuing	Continuing	0
		Subtotal	52.279	4.444		4.778		0.000		4.778			0.000

Remarks

Support (\$ in Millions)

				FY	2010		2011 ase	FY 2	2011 CO	FY 2011 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 &	С	Multiple Location could not be determined.	20.759	1.265		0.439		0.000		0.439	Continuing	Continuing	0

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army

PE 0208053A: Joint Tactical Ground System

635: JOINT TACT GRD STATION-P3I (MIP)

Support (\$ in Millions)

Copport (¢ m mana				FY 2010			2011 ase		2011 CO	FY 2011 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
Process Development (IPPD) Support													
		Subtotal	20.759	1.265		0.439		0.000		0.439			0.000

Remarks

Test and Evaluation (\$ in Millions)

(,		/	_										ļ
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
White Sands Missile Range	С	Multiple Location could not be determined.	4.272	0.734		0.250		0.000		0.250	Continuing	Continuing	0
		Subtotal	4.272	0.734		0.250		0.000		0.250			0.000

Remarks

N/A-Not Applicable

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

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)

Management Services (\$ in Millions)

				FY 2010			2011 ase	FY O	2011 CO	FY 2011 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	С	Multiple Location could not be determined.	25.824	5.242		5.458		0.000		5.458	Continuing	Continuing	0
Contractor IPPD	С	Nothing entered for Activity and Location. Location could not be determined.	17.022	1.573		1.478		0.000		1.478	Continuing	Continuing	0
		Subtotal	42.846	6.815		6.936		0.000		6.936			0.000

Remarks

	Total Prior Years Cost	FY 2	2010	FY :		2011 CO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	120.156	13.258		12.403	0.000		12.403			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army
BA 7: Operational Systems Development

BA 7: Operational Systems Development

DATE: February 2010

R-1 ITEM NOMENCLATURE
PE 0208053A: Joint Tactical Ground System
635: JOINT TACT GRD STATION-P3I (MIP)

		FY 2009			I	Y:	201	0	FY 2011			1	FY 2012				FY 2013				FY 2014				FY 2015			5
	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 IGC TEST							#	#	#	#																		
P3I IGC FIELDING											#	#	#															
P3I JTAGS BLOCK II MODERNIZATION									#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT				
2040: Research, Development, Test & Evaluation, Army	PE 0208053A: Joint Tactical Ground System	635: <i>JOINT</i>	TACT GRD STATION-P3I (MIP)			
BA 7: Operational Systems Development						

Schedule Details

	Sta	art	Eı	nd
Event	Quarter	Year	Quarter	Year
P3I IGC TEST	3	2010	2	2011
P3I IGC FIELDING	3	2011	1	2012
P3I JTAGS BLOCK II MODERNIZATION	1	2011	3	2015