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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 0303142A: SATCOM Ground Environment (SPACE)							
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	46.799	39.889	33.694	0.000	33.694	32.923	46.131	45.336	44.725	Continuing	Continuing
253: DSCS-DCS (PHASE II)	7.665	7.088	11.447	0.000	11.447	8.758	8.661	8.596	8.736	Continuing	Continuing
456: MILSATCOM SYSTEM ENGINEERING	15.375	28.638	22.247	0.000	22.247	24.165	37.470	36.740	35.989	Continuing	Continuing
562: MBAND INT SAT TERM MIST	23.759	4.163	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
A. Mission Description and Budget Item Justification											
Military Satellite Communication (MILSATCOM) systems are joint program/project efforts to satisfy ground mobile requirements for each Service, the Joint Chiefs of Staff (JCS), the National Command Authority, the combatant commanders, the National Security Agency, the Office of the Secretary of Defense, and other governmental, non-DoD users. The worldwide MILSATCOM systems are: Ultra High Frequency (UHF) Follow-On Satellite System; Air Force Satellite (FLTSAT/AFSAT) system; the Mobile User Objective System (MUOS); the Super High Frequency (SHF) Defense Satellite Communications System (DSCS); the Wideband Global SATCOM (WGS); the MILSTAR Extremely High Frequency (EHF)(Low Data Rate (LDR) and Medium Data Rate (MDR); the Advanced Extremely High Frequency (AEHF); and future MILSATCOM capabilities, all of these systems are required to support legacy, interim and emerging communication space architectures and Objective Force requirements. The Army is responsible for materiel development, acquisition, product improvement, testing, fielding and integrated logistics support of ground satellite terminals and SATCOM control subsystems and all associated equipment used to provide range extension of Command, Control and Communications Systems for the Warfighter. The Army also participates in the development of MILSATCOM programs, including architectures, payloads, waveforms, antennas and terminal developments to ensure US Army equities are appropriately addressed with our sister services. This includes technology assessment efforts associated with the integration of MILSATCOM components to US Army Landwarnet This responsibility also includes maintaining the life cycle logistics support required to achieve end-to-end connectivity and interoperability, satisfying JCS Command, Control, Communications and Intelligence (C3I) in support of the President, JCS, combatant commanders, Military Departments, Department of State, and other government Departments and Agencies.This program is designated as a DoD Space Program.											

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B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	58.902	40.097	111.712	0.000	111.712
Current President's Budget	46.799	39.889	33.694	0.000	33.694
Total Adjustments	-12.103	-0.208	-78.018	0.000	-78.018
• Congressional General Reductions		-0.208			
• 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	-1.606	0.000			
• Adjustments to Budget Years	-10.497	0.000	-78.018	0.000	-78.018
Change Summary Explanation					
Change Summary Explanation: Funding - FY 2011 : Funding realigned (\$78,018) to other Army priorities.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0303142A: <i>SATCOM Ground Environment (SPACE)</i>				<b>PROJECT</b> 253: <i>DSCS-DCS (PHASE II)</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
253: <i>DSCS-DCS (PHASE II)</i>	7.665	7.088	11.447	0.000	11.447	8.758	8.661	8.596	8.736	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b> This project provides funds to develop strategic and tactical Ground Subsystem equipment and software in support of Joint Chiefs of Staff (JCS) validated Command, Control, Communications and Intelligence (C3I) requirements for the worldwide Defense Enterprise Wideband SATCOM System (DEWSS) and the expansion of the Wideband Global SATCOM (WGS) constellation. It is composed of the Super High Frequency (SHF) Defense Satellite Communications System (DSCS) and WGS programs. Continuing upgrades for the DSCS and WGS are vital to support the emerging power projection and rapid deployment role of the Armed Forces. DSCS and WGS provide Warfighters multiple channels of tactical connectivity as well as interfaces with strategic networks and national decision-makers.											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
Program #1						3.953	0.000	0.000	0.000	0.000	
Continue the development of the DSCS Integrated Management System (DIMS) Interface Software program											
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #2		1.126	2.067	3.874	0.000	3.874
Netcentric Systems Engineering and Analysis						
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		0.000	2.500	5.000	0.000	5.000
Initiate integration and test eforts on the Remote Monitor Control Equipment (RMCE)						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #4  Continue SATCOM Engineering Lab (SEL), PM Admin, and Systems Engineering Technical Assistance (SETA) efforts  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base  FY 2011 OCO Plans: FY 2011 OCO	2.391	2.521	2.573	0.000	2.573
Program #5  Small Business Innovative Research/Small Business technology Transfer Programs (SBIR/STTR)  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base	0.195	0.000	0.000	0.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army				<b>DATE:</b> February 2010							
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>			
FY 2011 OCO Plans: FY 2011 OCO											
Accomplishments/Planned Programs Subtotals				7.665	7.088	11.447	0.000	11.447			
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• Ord. #1: <i>DEWSS Other Procurement Army</i>	63.702	144.650	115.744	0.000	115.744	116.573	176.329	110.068	104.263	Continuing	Continuing
<b>D. Acquisition Strategy</b>											
<p>The Remote Monitoring and Control Equipment (RMCE) will provide the capability to remotely operate several Control subsystems to effect WGS payload control and monitoring from a Wideband SATCOM Operations Center (WSOC) to a non-located earth terminal location. To operate these Control subsystems remotely (Gapfiller Satellite Configuration Control Element (GSCCE), Wideband Global SATCOM Spectrum Monitoring System (WGSMS), Joint Management and Operation System (JMOS), Replacement FM Orderwire (RFMOW), Global Terrestrial Critical Control Circuit System (GTC3S) and Interference Resolution) some system NRE modifications will be necessary. PM DCATS employs Netcentric Systems Engineering to develop the technology for new ground segment equipments which will include studies, risk mitigation, system integration and advanced demonstrations for Netcentric Baseband and Policy Based Control to accommodate technology insertion, data sharing, remote operations, architecture efforts and use of commercial technology to conform to Department of Defense (DoD) requirements.</p>											
<b>E. Performance Metrics</b>											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010	
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**Product Development (\$ in Millions)**

				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
DIMS Software	C/CPFF	JHU/APL Laurel, MD	36.726	0.000		0.000		0.000		0.000	Continuing	Continuing	44.029
RMCE GSCCE	C/FFP	Boeing Colorado Springs, Col	0.000	1.100		3.500		0.000		3.500	Continuing	Continuing	0
RMCE Integration	C/FFP	JHU/APL Laurel, MD	0.000	1.400		1.500		0.000		1.500	Continuing	Continuing	0
<b>Subtotal</b>			36.726	2.500		5.000		0.000		5.000			44.029

**Remarks**

JHU/APL - John Hopkins University/Applied Physics Laboratory

**Support (\$ in Millions)**

				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
Matrix Support	C	Fort Monmouth NJ	7.950	0.376		0.368		0.000		0.368	Continuing	Continuing	0
SETA Support	C/CPFF	Fort Monmouth NJ	3.753	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Netcentric Systems Engineering	C/CPFF	Fort Monmouth NJ	4.281	2.067		3.859		0.000		3.859	Continuing	Continuing	0
Core Support	C/Various	Fort Monmouth	4.663	0.735		0.810		0.000		0.810	Continuing	Continuing	0

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				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total																																																											
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<b>Subtotal</b>			20.647	3.178		5.037		0.000		5.037			0.000																																																								
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<b>Test and Evaluation (\$ in Millions)</b> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="4"></th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th colspan="3"></th> </tr> <tr> <th>Cost Category Item</th> <th>Contract Method &amp; Type</th> <th>Performing Activity &amp; Location</th> <th>Total Prior Years Cost</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> <tr> <td>JSEC</td> <td>C</td> <td>Fort Monmouth NJ</td> <td>8.715</td> <td>0.760</td> <td></td> <td>0.760</td> <td></td> <td>0.000</td> <td></td> <td>0.760</td> <td>Continuing</td> <td>Continuing</td> <td>0</td> </tr> <tr> <td align="right" colspan="3"><b>Subtotal</b></td> <td>8.715</td> <td>0.760</td> <td></td> <td>0.760</td> <td></td> <td>0.000</td> <td></td> <td>0.760</td> <td></td> <td></td> <td>0.000</td> </tr> </table>																		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	JSEC	C	Fort Monmouth NJ	8.715	0.760		0.760		0.000		0.760	Continuing	Continuing	0	<b>Subtotal</b>			8.715	0.760		0.760		0.000		0.760			0.000
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total																																																											
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JSEC - Joint Satellite Engineering Center																																																																					

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<b>Management Services (\$ in Millions)</b> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="4"></th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th colspan="3"></th> </tr> <tr> <th>Cost Category Item</th> <th>Contract Method &amp; Type</th> <th>Performing Activity &amp; Location</th> <th>Total Prior Years Cost</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> <tr> <td>PM Admin</td> <td>C/Various</td> <td>Fort Monmouth NJ</td> <td align="right">6.095</td> <td align="right">0.650</td> <td></td> <td align="right">0.650</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.650</td> <td>Continuing</td> <td>Continuing</td> <td align="right">0</td> </tr> <tr> <td align="right" colspan="3"><b>Subtotal</b></td> <td align="right">6.095</td> <td align="right">0.650</td> <td></td> <td align="right">0.650</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.650</td> <td></td> <td></td> <td align="right">0.000</td> </tr> </table>																		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	PM Admin	C/Various	Fort Monmouth NJ	6.095	0.650		0.650		0.000		0.650	Continuing	Continuing	0	<b>Subtotal</b>			6.095	0.650		0.650		0.000		0.650			0.000
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total																																																											
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PM Admin	C/Various	Fort Monmouth NJ	6.095	0.650		0.650		0.000		0.650	Continuing	Continuing	0																																																								
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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army																								DATE: February 2010			
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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010	
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Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
DIMS Testing V5.2	1	2009	2	2009
DIMS Materiel Release V5.2	2	2009	3	2009
DIMS Testing V6.0	3	2009	4	2009
DIMS Materiel Release V 6.0	1	2010	1	2010
RMCE GSCCE	1	2010	3	2011
RMCE Integration	1	2010	3	2011

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0303142A: <i>SATCOM Ground Environment (SPACE)</i>				<b>PROJECT</b> 456: <i>MILSATCOM SYSTEM ENGINEERING</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
456: <i>MILSATCOM SYSTEM ENGINEERING</i>	15.375	28.638	22.247	0.000	22.247	24.165	37.470	36.740	35.989	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b> MILSATCOM System Engineering provides centralized funding for US Army participation in the development of MILSATCOM programs. This includes engineering, technical and Cost As An Independent Variable (CAIV) related analyses supporting architecture, payloads, network and terminal requirement and design decisions across all MILSATCOM programs. MILSATCOM System Engineering also supports experimentation and/or development of new and emerging SATCOM related technologies. This includes prototyping efforts to address technology gaps identified by US Army Program of Records (POR) in the US Army Technology Transition Matrix. FY2011 funds support increased efforts in the area of Protected Communications and other related efforts.											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
							<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Program #1							1.125	3.000	1.600	0.000	1.600
Protected Advanced EHF (AEHF) Communications System Engineering											
<i>FY 2009 Accomplishments:</i>											
FY 2009											
<i>FY 2010 Plans:</i>											
FY 2010											
<i>FY 2011 Base Plans:</i>											
FY 2011 Base											

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Exhibit R-2A, RDT&E Project 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 0303142A: SATCOM Ground Environment (SPACE)		PROJECT 456: MILSATCOM SYSTEM ENGINEERING				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO								
Program #2 Wideband Global SATCOM (WGS) Communications System Engineering  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base  FY 2011 OCO Plans: FY 2011 OCO				1.100	2.000	1.300	0.000	1.300
Program #3 Experimentation, development, testing and certification of critical SATCOM and SOTM communication and network technologies.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010				5.586	10.155	4.000	0.000	4.000

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Exhibit R-2A, RDT&E Project 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 0303142A: SATCOM Ground Environment (SPACE)	PROJECT 456: MILSATCOM SYSTEM ENGINEERING			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #4  Intelligence, Surveillance, Reconnaissance (ISR) POR Migration to OPM WIN T SATCOM Solutions. Includes Regional Hub Node (RHN) mods, Joint Management and Operations Subsystem (JMOS) mods, Terminal Certifications (WGS)  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base  FY 2011 OCO Plans: FY 2011 OCO	1.964	1.000	1.500	0.000	1.500
Program #5  Federal Communications Commission/ International Telecommunciations Union (FCC/ITU) SOTM Regulatory Proposals/Analyses/Modifications	1.100	1.200	1.130	0.000	1.130

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Exhibit R-2A, RDT&E Project 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 0303142A: SATCOM Ground Environment (SPACE)	PROJECT 456: MILSATCOM SYSTEM ENGINEERING			
B. Accomplishments/Planned Program (\$ in Millions)					
	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 #6  Protected COTM Technical Reference Terminal Prototyping	0.000	9.000	10.617	0.000	10.617
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 #7	0.000	1.500	2.100	0.000	2.100

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0303142A: SATCOM Ground Environment (SPACE)		PROJECT 456: MILSATCOM SYSTEM ENGINEERING		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Protected Wide Area Network (WAN) Prototyping  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 #8  Small Business Innovative Research/Small Business Technology Transfer Programs  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base  FY 2011 OCO Plans: FY 2011 OCO		0.000	0.783	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project 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 0303142A: SATCOM Ground Environment (SPACE)		PROJECT 456: MILSATCOM SYSTEM ENGINEERING		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #9  Soldier Network Extension (SNE) SATCOM Terminal development in support of WIN-T Increment 2 Communications Network. Includes Antenna and Modem modifications required per Increment 2 DT/LUT  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base  FY 2011 OCO Plans: FY 2011 OCO		1.500	0.000	0.000	0.000	0.000
Program #10  Transformational Satellite (TSAT) Communications System Engineering  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base		3.000	0.000	0.000	0.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army				<b>DATE:</b> February 2010	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0303142A: <i>SATCOM Ground Environment (SPACE)</i>	<b>PROJECT</b> 456: <i>MILSATCOM SYSTEM ENGINEERING</i>			
<b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>					
	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 OCO Plans:</i> FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	15.375	28.638	22.247	0.000	22.247
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b>					
N/A					
<b><u>D. Acquisition Strategy</u></b>					
This project funds advanced systems engineering, research, development, test and evaluation of new and emerging technologies to optimize terminal performance and communications control. Once the technologies are mature and deemed feasible, funding and management responsibility for implementation of the technology will transition to Army PORs.					
<b><u>E. Performance Metrics</u></b>					
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.					

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Army</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0303142A: <i>SATCOM Ground Environment (SPACE)</i>				<b>PROJECT</b> 456: <i>MILSATCOM SYSTEM ENGINEERING</i>					
<b>Product Development (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</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>
Protected Advanced EHF and WGS Communications System Engineering	C	Various Location could not be determined.	19.351	3.300		2.169		0.000		2.169	Continuing	Continuing	0
Experimentation, development , testing & certification of SATCOM & SOTM communciation & networking.	C	Various Location could not be determined.	0.000	6.438		4.000		0.000		4.000	Continuing	Continuing	0
Protected COTM Tactical Reference Terminal Prototyping and Protected Wide Area Network Prototyping	C	Various Location could not be determined.	0.000	8.000		5.088		0.000		5.088	Continuing	Continuing	0
Terminal Upgrades, SNE, Engineering Support	C	General Dynamics Taunton MA	1.524	0.000		0.000		0.000		0.000	Continuing	Continuing	0
<b>Subtotal</b>			20.875	17.738		11.257		0.000		11.257			0.000
<b>Remarks</b>													

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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 0303142A: SATCOM Ground Environment (SPACE)				PROJECT 456: MILSATCOM SYSTEM ENGINEERING			

**Support (\$ in Millions)**

				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
Engineering (In House)	C	Core Matrix	15.852	2.000		2.000		0.000		2.000	Continuing	Continuing	0
Engineering Contractors Support	C	JANUS BAH, Linquest, JHU APL	22.135	4.000		3.800		0.000		3.800	Continuing	Continuing	0
System Architecture & Analysis	C	MIT Lincoln Labs Lexington, MA; MITRE, CERDEC	13.063	0.400		0.400		0.000		0.400	Continuing	Continuing	0
<b>Subtotal</b>			51.050	6.400		6.200		0.000		6.200			0.000

**Remarks**

**Test and Evaluation (\$ in Millions)**

				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
Test Support	C	MIT Lincoln Labs Lexington, MA, General Dyanamics, Tauton MA	17.998	0.400		1.500		0.000		1.500	Continuing	Continuing	0
Terminal Certification, ISR POR Migration	C	John Hopkins Unversity	0.000	0.400		0.600		0.000		0.600	Continuing	Continuing	0

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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 0303142A: SATCOM Ground Environment (SPACE)				PROJECT 456: MILSATCOM SYSTEM ENGINEERING					
Test and Evaluation (\$ in Millions)														
				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	
		Applied Physics Laboratory , MD												
Testing, Certification	C	CERDEC Support Technical Testing Location could not be determined.	0.000	2.500		1.500		0.000		1.500	Continuing	Continuing	0	
Subtotal			17.998	3.300		3.600		0.000		3.600			0.000	
Remarks														
Management Services (\$ in Millions)														
				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	
Program Oversight	C	In-House Location could not be determined.	0.000	0.400		0.440		0.000		0.440	Continuing	Continuing	0	
Advanced Architecture/ Advanced Wideband System Architecture	C	MIT Lincoln Labs Lexington MA and General Dynamics Taunton, MA , Linquest, M	8.024	0.800		0.750		0.000		0.750	Continuing	Continuing	0	
Subtotal			8.024	1.200		1.190		0.000		1.190			0.000	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0303142A: <i>SATCOM Ground Environment (SPACE)</i>				<b>PROJECT</b> 456: <i>MILSATCOM SYSTEM ENGINEERING</i>					
Management Services (\$ in Millions)													
				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
<u>Remarks</u>													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			97.947	28.638		22.247		0.000		22.247			0.000
<u>Remarks</u>													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army																								DATE: February 2010			
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																								</			

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Exhibit R-4A, RDT&E Schedule Details: 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 0303142A: SATCOM Ground Environment (SPACE)	PROJECT 456: MILSATCOM SYSTEM ENGINEERING		
Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
Protected COTM Tactical Reference Terminal Development Strategy	4	2009	4	2014
Protected Wide Area Network (WAN) Prototyping	4	2009	3	2012

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0303142A: <i>SATCOM Ground Environment (SPACE)</i>				<b>PROJECT</b> 562: <i>MBAND INT SAT TERM MIST</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
562: <i>MBAND INT SAT TERM MIST</i>	23.759	4.163	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b> A. Mission Description and Budget Item Justification: Multi-band Integrated Satellite Terminal (MIST) funds were to develop the high capacity communications capability (HC3) for Increment 1. The HC3 was to provide high data rate communications capabilities that would be pervasively integrated into the Army's Future Modular Force communication architecture, as well as other Service and Joint communication architectures. As a result of recent Department of Defense (DoD) decision to terminate the Transformational Satellite Communications System (TSAT), the HC3 program has been restructured. Various risk mitigation studies and analyses will be executed with tri-service participation in order to further lower risk prior the development of a follow on satellite terminal. FY10 is the last year of funding and the FY10 funds will support detailed studies and analyses of future MILSATCOM capabilities to support Army requirements.											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
							<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Program #1  High capacity communications capability studies/efforts that include Waveform porting issues and high speed/capacity Cryptographic development  <i>FY 2009 Accomplishments:</i> FY 2009  <i>FY 2010 Plans:</i> FY 2010  <i>FY 2011 Base Plans:</i> FY 2011 Base							5.010	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project 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 0303142A: SATCOM Ground Environment (SPACE)		PROJECT 562: MBAND INT SAT TERM MIST				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO								
Program #2  Antenna/RF and Modem Analysis and risk mitigation efforts				15.036	0.000	0.000	0.000	0.000
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  Requirements process/analysis				3.713	4.047	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009								
FY 2010 Plans: FY 2010								

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0303142A: <i>SATCOM Ground Environment (SPACE)</i>		<b>PROJECT</b> 562: <i>MBAND INT SAT TERM MIST</i>		
<b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 Base Plans:</i> FY 2011 Base  <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Small Business Innovative Research/Small Business Technology Transfer Program  <i>FY 2009 Accomplishments:</i> FY 2009  <i>FY 2010 Plans:</i> FY 2010  <i>FY 2011 Base Plans:</i> FY 2011 Base  <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.116	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		23.759	4.163	0.000	0.000	0.000
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b> N/A						
<b><u>D. Acquisition Strategy</u></b> Plans are starting to be developed for a follow on satellite terminal to support recent DoD budget decisions.						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0303142A: <i>SATCOM Ground Environment</i> (SPACE)	<b>PROJECT</b> 562: <i>MBAND INT SAT TERM MIST</i>
<b>E. Performance Metrics</b> 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.		

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