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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 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0605626A: Aerial Common Sensor - SDD							
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	0.000	0.000	211.500	0.000	211.500	31.400	3.200	0.000	0.000	0	457.600
AC5: AERIAL COMMON SENSOR - SDD	0.000	0.000	211.500	0.000	211.500	31.400	3.200	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Aerial Common Sensor program has been restructured and renamed Enhanced Medium Altitude Reconnaissance and Surveillance system (EMARSS). EMARSS is the Army's future force airborne intelligence collection, processing, and targeting support system. EMARSS is a manned multi-INT Airborne Intelligence Surveillance and Reconnaissance (AISR) system that provides a persistent capability to detect, locate, classify/identify, and track surface targets in day/night, near-all-weather conditions with a high degree of timeliness and accuracy. EMARSS aircraft will be located within Aerial Exploitation Battalions (AEB), which are assigned to the U.S. Army Intelligence and Security Command (INSCOM). The EMARSS system will consist of a commercial derivative aircraft equipped with Electro-optic/Infrared (EO/IR) Full Motion Video (FMV) sensor, a COMINT collection system, an aerial precision geolocation system, line-of-site (LOS) tactical and beyond line-of-site (LOS/BLOS) communications suites, two operator workstations and a self-protection suite. EMARSS will operate as a single platform in support of tactical missions. Mission altitude and flight tracks are chosen to optimize sensor data collection on the target area of interest while avoiding known threats. Flight tracks may be selected to strike a balance among the capabilities of multiple sensors, or to optimize collection from individual sensors based upon the daily collection tasking dictated by the tactical commanders Priority Intelligence Requirements (PIRs). EMARSS will provide efficient response to Combat Forces ISR tasking with centralized Processing, Exploitation & Dissemination (PED) of ISR while simultaneously transmitting critical FMV and intelligence products to engaged tactical forces. The National Security Agency's Military Intelligence Program (MIP) provides funding to support enhanced SIGINT capabilities.FY11 Base funding in the amount of \$211.500 million funds continuation of the EMARSS Engineering, Manufacturing and Development (EMD) contract and purchases one EMD (1) aircraft system. Funding supports Developmental and Operational Tests (DT/OT); and Limited Users Test (LUT); Purchases Government Furnished Equipment (GFE) and support; Preparation for ASARC/MS C and documentation; Continues Army test support; Program Management Office (PMO) support; DCGS-A on-board processing and System Integration Laboratory (SIL) efforts. FY10 was funded through PE 0307207A Project 024

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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	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	211.500	0.000	211.500
Total Adjustments	0.000	0.000	211.500	0.000	211.500
• 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			
• Adjustments to Budget Years	0.000	0.000	211.500	0.000	211.500
Change Summary Explanation					
Change Summary Explanation: Funding - FY 2011: Program transferred to this PE from 0307665A.					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010				
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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	
AC5: AERIAL COMMON SENSOR - SDD	0.000	0.000	211.500	0.000	211.500	31.400	3.200	0.000	0.000	Continuing	Continuing	
Quantity of RDT&E Articles												
A. Mission Description and Budget Item Justification												
The Aerial Common Sensor program has been restructured and renamed Enhanced Medium Altitude Reconnaissance and Surveillance system (EMARSS). EMARSS is the Army's future force airborne intelligence collection, processing, and targeting support system. EMARSS is a manned multi-INT Airborne Intelligence Surveillance and Reconnaissance (AISR) system that provides a persistent capability to detect, locate, classify/identify, and track surface targets in day/night, near-all-weather conditions with a high degree of timeliness and accuracy. EMARSS aircraft will be located within Aerial Exploitation Battalions (AEB), which are assigned to the U.S. Army Intelligence and Security Command (INSCOM). The EMARSS system will consist of a commercial derivative aircraft equipped with Electro-optic/Infrared (EO/IR) Full Motion Video (FMV) sensor, a COMINT collection system, an aerial precision geolocation system, line-of-site (LOS) tactical and beyond line-of-site (LOS/BLOS) communications suites, two operator workstations and a self-protection suite. EMARSS will operate as a single platform in support of tactical missions. Mission altitude and flight tracks are chosen to optimize sensor data collection on the target area of interest while avoiding known threats. Flight tracks may be selected to strike a balance among the capabilities of multiple sensors, or to optimize collection from individual sensors based upon the daily collection tasking dictated by the tactical commanders Priority Intelligence Requirements (PIRs). EMARSS will provide efficient response to Combat Forces ISR tasking with centralized Processing, Exploitation & Dissemination (PED) of ISR while simultaneously transmitting critical FMV and intelligence products to engaged tactical forces. The National Security Agency's Military Intelligence Program (MIP) provides funding to support enhanced SIGINT capabilities.FY11 Base funding in the amount of \$211.500 million funds continuation of the EMARSS Engineering, Manufacturing and Development (EMD) contract and purchases one EMD (1) aircraft system. Funding supports Developmental and Operational Tests (DT/OT); and Limited Users Test (LUT); Purchases Government Furnished Equipment (GFE) and support; Preparation for ASARC/MS C and documentation; Continues Army test support; Program Management Office (PMO) support; DCGS-A on-board processing and System Integration Laboratory (SIL) efforts. FY11 OCO - No budget requestFY10 was funded through PE 0307207A Project 024												
B. Accomplishments/Planned Program (\$ in Millions)												
								FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1								0.000	0.000	176.332	0.000	176.332

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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 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0605626A: Aerial Common Sensor - SDD	PROJECT AC5: AERIAL COMMON SENSOR - SDD			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Continues EMD contract, purchases 1 EMD aircraft, purchases GFE and technical support. Continues DCGS-A on board processing and test.  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 #2  Continues Government test support, Program Management Office (PMO) and MS C preparation.  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	0.000	35.168	0.000	35.168

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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 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605626A: <i>Aerial Common Sensor - SDD</i>				<b>PROJECT</b> AC5: <i>AERIAL COMMON SENSOR - SDD</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>	
Accomplishments/Planned Programs Subtotals						0.000	0.000	211.500	0.000	211.500	
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></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>Army PE 0307207A Project 024</i>	0.000	115.430	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	115.430
• Ord. #2: <i>Army PE 0203744A Project 028</i>	0.000	0.074	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	.074
• Ord. #3: <i>A02005</i>	0.000	0.000	88.483	0.000	88.483	204.677	243.373	385.439	362.382	0	1,284.354
• Ord. #4: <i>ACS NSA MIP</i>	3.690	2.022	1.350	0.000	1.350	10.634	9.554	7.395	7.395	Continuing	Continuing
• Ord. #5: <i>GRCS NSA MIP</i>	6.790	2.780	0.685	0.000	0.685	5.246	4.697	3.601	3.601	Continuing	Continuing
<b><u>D. Acquisition Strategy</u></b>											
<p>The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is a program of record supported by an Army G-3/5/7 Directed Requirement (DR) signed 11 December 2009. The decision to pursue EMARSS is a direct result of relooking the Army's approach to the Airborne Intelligence Surveillance and Reconnaissance (ISR) construct and applying the lessons learned from current overseas operations. The second quarter FY10 Material Development Decision (MDD) review will authorize the program to enter the acquisition process in the Engineering and Manufacturing Development (EMD) Phase. The EMARSS EMD contract will be competitively awarded to a single contractor. An option for LRIP is anticipated to be part of this effort. MS C is scheduled for 4QFY11 and FRP in 3QFY12.</p>											
<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 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605626A: <i>Aerial Common Sensor - SDD</i>				<b>PROJECT</b> AC5: <i>AERIAL COMMON SENSOR - SDD</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>
EMARSS EMD	C/CPIF	TBD Location could not be determined.	0.000	0.000		167.912		0.000		167.912	Continuing	Continuing	0
Vortex Data Links/PALS/ DBOS	C/FFP	L3COMM Warner Robins AFB	0.000	0.000		1.470		0.000		1.470	Continuing	Continuing	0
Other GFE/COMSEC Equipment	C/TBD	TBD Location could not be determined.	0.000	0.000		0.250		0.000		0.250	Continuing	Continuing	0
Airborne Precision Geo- Location (APG) System	C/TBD	NSA Location could not be determined.	0.000	0.000		0.500		0.000		0.500	Continuing	Continuing	0
<b>Subtotal</b>			0.000	0.000		170.132		0.000		170.132			0.000
<b>Remarks</b>													
<b>Support (\$ 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>
DCGS-A & Orion S/W processing on Board	C/TBD	Various Location could not be determined.	0.000	0.000		6.200		0.000		6.200	Continuing	Continuing	0

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Army</b>											<b>DATE:</b> February 2010		
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<b>Support (\$ 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>
<b>Subtotal</b>			0.000	0.000		6.200		0.000		6.200			0.000
<b>Remarks</b>													
<b>Test and Evaluation (\$ 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>
Test Support	C	Gov't/various Location could not be determined.	0.000	0.000		5.200		0.000		5.200	Continuing	Continuing	0
Test Flight Ranges	C	Gov't/various Location could not be determined.	0.000	0.000		6.000		0.000		6.000	Continuing	Continuing	0
<b>Subtotal</b>			0.000	0.000		11.200		0.000		11.200			0.000
<b>Remarks</b>													

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Army</b>											<b>DATE:</b> February 2010		
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<b>Management Services (\$ 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>
PMO Staff/travel/O/H expenses	C	PM AC Sensors: Ft. Monmouth, NJ; Aberdeen, MD	0.000	0.000		8.550		0.000		8.550	Continuing	Continuing	0
Program SETA Support	C	CACI BAH,USFalcon, LM: NJ/DC	0.000	0.000		4.700		0.000		4.700	Continuing	Continuing	0
SETA Mgmt Support	SS/CPFF	Mitre: various Location could not be determined.	0.000	0.000		2.310		0.000		2.310	Continuing	Continuing	0
Gov't Matrix Support	C	Multiple: Ft. Monmouth NJ	0.000	0.000		2.550		0.000		2.550	Continuing	Continuing	0
Gov't Matrix Support - 2	C/CPFF	PMFW AMRDEC: Redstone, Al	0.000	0.000		5.858		0.000		5.858	Continuing	Continuing	0
<b>Subtotal</b>			0.000	0.000		23.968		0.000		23.968			0.000
<b>Remarks</b>													
			<b>Total Prior Years Cost</b>	<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			0.000	0.000		211.500		0.000		211.500			0.000
<b>Remarks</b>													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army																		DATE: February 2010					
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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Army			<b>DATE:</b> February 2010
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Material Development Decision (MDD)	1	2010	1	2010
Contract Award IPR	2	2010	2	2010
Engineering Manufacturing & Development	2	2010	3	2011
SRR/SFR	3	2010	3	2010
System Design Review	1	2011	1	2011
CT/DT	1	2011	2	2011
DT/OT & LUT	2	2011	3	2011
MS C	3	2011	3	2011
LRIP	3	2011	2	2012
IOT&E	1	2012	1	2012
Full Rate Production	2	2012	2	2012
Production	2	2012	3	2015

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