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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Army									DATE: February 2011		
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 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	-	211.500	31.465	-	31.465	3.335	30.234	28.807	28.699	Continuing	Continuing
AC5: Enhanced Medium Alt Recon Surv Sys (EMARSS) (MIP)	-	211.500	31.465	-	31.465	3.335	30.234	28.807	28.699	Continuing	Continuing

Note
Change Summary Explanation: Funding - FY 2011: Program transferred to this PE from 0307665A.

A. Mission Description and Budget Item Justification
The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's next generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. EMARSS provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS aircraft will be assigned to the U.S. Army Intelligence and Security Command's (INSCOM) Aerial Exploitation Battalions (AEB). EMARSS is an improvement over the existing MARSS QRC in that it hosts an on board DCGS-A capability, improved satellite communications, and improved aircraft performance.

EMARSS will consist of a commercial derivative aircraft equipped with an Electro-optical/Infrared (EO/IR) Full Motion Video (FMV) sensor, a Communications Intelligence (COMINT) collection system, an aerial precision geolocation (APG) system, tactical line-of-site (LOS) and beyond line-of-site (BLOS) communications suites, two Distributed Common Ground System ? Army (DCGS-A) enabled operator workstations and a self-protection suite.

EMARSS will operate as a single platform in direct support of tactical missions. EMARSS, working with and incorporating elements of the DCGS-A, will provide efficient response to Combat Forces Intelligence, Surveillance and Reconnaissance (ISR) tasking with centralized Processing, Exploitation & Dissemination (PED) of ISR products while simultaneously transmitting critical FMV and other intelligence products to engaged tactical forces.

FY12 Base funding in the amount of \$31.465 million funds continuation of the EMARSS Engineering, Manufacturing and Development (EMD) contract. Funding supports Developmental and Operational Tests (DT/OT) and Limited Users Test (LUT); Government Furnished Equipment (GFE) support; preparation for ASARC/MSC and documentation; Continues Army test support; Program Management Office (PMO) support; DCGS-A on-board processing and Developmental System Integration laboratory (DSIL) efforts.

FY12 OCO - No budget request

FY10 was funded through RE 0307207A Project 024

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
2040: Research, Development, Test & Evaluation, Army		PE 0605626A: Aerial Common Sensor - SDD			
BA 5: Development & Demonstration (SDD)					
B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	-	211.500	31.400	-	31.400
Current President's Budget	-	211.500	31.465	-	31.465
Total Adjustments	-	-	0.065	-	0.065
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	0.065	-	0.065

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
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: Enhanced Medium Alt Recon Surv Sys (EMARSS) (MIP)			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
AC5: Enhanced Medium Alt Recon Surv Sys (EMARSS) (MIP)	-	211.500	31.465	-	31.465	3.335	30.234	28.807	28.699	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's next generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. EMARSS provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS aircraft will be assigned to the U.S. Army Intelligence and Security Command's (INSCOM) Aerial Exploitation Battalions (AEB). EMARSS is an improvement over the existing Medium Altitude Reconnaissance and Surveillance System Quick Reaction Capability (MARSS QRC) in that it hosts an on board (DCGS-A) capability, improved satellite communications, and improved aircraft performance.</p> <p>EMARSS will consist of a commercial derivative aircraft equipped with an Electro-optical/Infrared (EO/IR) Full Motion Video (FMV) sensor, a Communications Intelligence (COMINT) collection system, an aerial precision geolocation (APG) system, tactical line-of-site (LOS) and beyond line-of-site (BLOS) communications suites, two Distributed Common Ground System ? Army (DCGS-A) enabled operator workstations and a self-protection suite.</p> <p>EMARSS will operate as a single platform in direct support of tactical missions. EMARSS, working with and incorporating elements of the DCGS-A, will provide efficient response to Combat Forces Intelligence, Surveillance and Reconnaissance (ISR) tasking with centralized Processing, Exploitation & Dissemination (PED) of ISR products while simultaneously transmitting critical FMV and other intelligence products to engaged tactical forces.</p> <p>FY12 Base funding in the amount of \$31.465 million funds continuation of the EMARSS Engineering, Manufacturing and Development (EMD) contract. Funding supports Developmental and Operational Tests (DT/OT) and Limited Users Test (LUT); Government Furnished Equipment (GFE) support; preparation for ASARC/MS C and documentation; Continues Army test support; Program Management Office (PMO) support; DCGS-A on-board processing and Developmental System Integration laboratory (DSIL) efforts.</p> <p>FY12 OCO - No budget request</p> <p>FY10 was funded through RE 0307207A Project 024</p>											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2010	FY 2011	FY 2012	
Title: EMD Effort								-	176.332	-	
Articles:									0		
Description: Funding is provided for the following efforts:											

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2010	FY 2011	FY 2012		
FY 2011 Plans: Continues EMD contract, purchases of aircraft and GFE and technical support. Continues DCGS-A on board processing and test.											
Title: Software Integrations Costs Description: Support costs for efforts include: DCGS-A S/W integration and PM SETA support							-	-	3.995		
FY 2012 Plans: Continues DCGS-A on board processing and PM SETA support											
Title: TEST EFFORTS Articles: Description: Funding is provided for the following effort							-	11.200 0	20.500		
FY 2011 Plans: Government Test and Flight Range Support											
FY 2012 Plans: Gov't DT/OT,LUT, LFTE, and FOA											
Title: PROGRAM MANAGEMENT SUPPORT Articles: Description: Funding is provided for the following effort							-	23.968 0	6.970		
FY 2011 Plans: Continues Program Management Office (PMO) and travel.											
FY 2012 Plans: Continues Government Program Management Office (PMO) and travel, Government Matrix and Aircraft Engineering support.											
Accomplishments/Planned Programs Subtotals							-	211.500	31.465		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• RDTE: RDTE	115.430									0.000	115.430
• RDT&E, Army: RDTE, Army	0.074									0.000	0.074

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C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• Aircraft Procurement: Aircraft Procurement		88.483	539.574		539.574		504.321	243.672	122.699	0.000	1,741.512
• ACS NSA MIP: ACS NSA MIP	2.022	1.350	10.634		10.634		7.395	7.395		Continuing	Continuing
• GSCS NSA MIP: GRCS NSA MIP	2.780	0.685	5.246		5.246		3.601	3.601		Continuing	Continuing
D. Acquisition Strategy											
The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is a program of record based on 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 Army Material Development Decision (MDD) review was completed in 2Q FY10. The program entered the acquisition process in the Engineering and Manufacturing Development (EMD) phase with 4Q10 contract award. This award was competitively awarded to a single contractor. An option for LRIP is anticipated to be part of this effort. MS C is scheduled for 4QFY12 and FRP in 3QFY13.											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				PE 0605626A: Aerial Common Sensor - SDD				AC5: Enhanced Medium Alt Recon Surv Sys (EMARSS) (MIP)					
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
PMO Staff/travel/O/H expenses	Various	PM, AC Sensors: Ft. Monmouth, NJ; Aberdeen, MD:Ft. Monmouth, NJ; Aberdeen, MD	-	8.550		2.921		-		2.921	Continuing	Continuing	Continuing
Gov't Matrix Support	Various	Multiple: Ft. Monmouth, NJ:Multiple: Ft. Monmouth, NJ; Aberdeen, MD	-	2.550		2.550		-		2.550	Continuing	Continuing	Continuing
Gov't Aircraft Matrix Support	Various	PMFW, AMRDEC: Redstone, Al:Redstone, AL	-	5.858		1.499		-		1.499	Continuing	Continuing	Continuing
Subtotal			-	16.958		6.970		-		6.970			
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
EMARSS EMD	C/FP	Boeing Company:Ridley Park, PA	-	167.912		-		-		-	0.000	167.912	0.000
Vortex Data Links/PALS/DBOS	SS/FPIF	L3COMM,:Warner Robins AFB	-	1.470		-		-		-	Continuing	Continuing	Continuing
Other GFE/COMSEC Equipment	SS/FFP	TBD:TBD	-	0.250		-		-		-	Continuing	Continuing	Continuing
Airborne Precision Geo0Location (APG) System	C/FFP	NSA:NSA	-	0.500		-		-		-	Continuing	Continuing	Continuing
Subtotal			-	170.132		-		-		-			

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Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
DCGS-A & Orion S/W processing on Board	C/FP	Various:Various	-	6.200		-		-		-	Continuing	Continuing	Continuing
PM Support SETA	MIPR	Various:Various	-	7.010		3.995		-		3.995	0.000	11.005	0.000
Subtotal			-	13.210		3.995		-		3.995			
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Gov't DT/OT	Various	Gov't/various:Various	-	5.200		3.600		-		3.600	Continuing	Continuing	Continuing
Test Flight Ranges	Various	Gov't/various:Various	-	6.000		5.800		-		5.800	Continuing	Continuing	Continuing
Live Fire Test & Evaluation (LFTE)	MIPR	Gov't/various:various	-	-		6.100		-		6.100	0.000	6.100	0.000
Forward Operational Assessment (FOA)	MIPR	Various:Various	-	-		5.000		-		5.000	0.000	5.000	0.000
Subtotal			-	11.200		20.500		-		20.500			
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	211.500		31.465		-		31.465			
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>		PROJECT AC5: <i>Enhanced Medium Alt Recon Surv Sys (EMARSS) (MIP)</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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
Material Development Decision (MDD)	■																											
Milestone B				■																								
Engineering Manufacturing & Development					■	■	■	■	■	■	■	■																
SRR/SFR						■	■																					
System Design Review							■	■																				
CT/DT									■	■	■																	
LUT/FOA										■	■	■																
MS C											■	■																
LRIP											■	■	■	■	■													
IOT&E													■	■														
Full Rate Production															■	■												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>	PROJECT AC5: <i>Enhanced Medium Alt Recon Surv Sys (EMARSS) (MIP)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Material Development Decision (MDD)	1	2010	1	2010
Milestone B	4	2010	4	2010
Engineering Manufacturing & Development	1	2011	3	2012
SRR/SFR	2	2011	2	2011
System Design Review	3	2011	3	2011
CT/DT	1	2012	2	2012
LUT/FOA	2	2012	3	2012
MS C	3	2012	3	2012
LRIP	3	2012	3	2013
IOT&E	2	2013	2	2013
Full Rate Production	3	2013	3	2013

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