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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0308699F: <i>Shared Early Warning (SEW)</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	1.663	1.175	1.079	-	1.079	1.228	1.235	1.237	1.259	Continuing	Continuing
674838: <i>Shared Early Warning System</i>	-	1.663	1.175	1.079	-	1.079	1.228	1.235	1.237	1.259	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Shared Early Warning System (SEWS) is the result of Presidential foreign policy initiatives beginning in 1996. The SEWS continues to provide Theater Combatant Commanders and foreign nation customers direct operational benefit by improving the architectural design and equipment thereby providing enhanced mission capabilities (i.e., expanding coverage, integration with active defense systems, and radar integration). Foreign customer arrangements are negotiated with individual countries on a bilateral basis to provide selected region-specific missile warning information. To enhance mission capability the SEWS program tests: the Integrated Broadcast Service (IBS) migration to Common Interactive Broadcast (CIB), mandatory crypto upgrades, SEWS integration with various radar systems, and the transition to "coalition-based" warning. SEWS uses Federally Funded Research and Development Centers (FFRDC), Engineering and Technology Acquisition Support Services (ETASS), and Advisory and Assistance Services (A&AS) contractors to support design, development, and acquisition of a common SEWS architecture to enhance mission capability of existing and future partners.

Activities also include studies and analysis to support both current program planning and execution and future program planning.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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B. Program Change Summary (\$ in Millions)		FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget		1.663	1.175	1.167	-	1.167
Current President's Budget		1.663	1.175	1.079	-	1.079
Total Adjustments		0.000	0.000	-0.088	-	-0.088
• 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		0.000	0.000	-0.088	-	-0.088
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2012	FY 2013	FY 2014
Title: Shared Early Warning System (SEWS)				1.423	0.947	0.845
Description: Development of SEWS common architecture and SEWS initiatives as identified by theater commanders.						
FY 2012 Accomplishments: Continued to investigate and integrate combatant command (COCOM) validated requirements and external system enhancements; evaluated alternative solutions and approaches for integrated infrared/radar architectures. Tasks included continued development of SEW-Radar (SEW-R) Integration, began development and testing of the Air Defense System Integrator (ADSI) data Global Command and Control System-Joint (GCCS-J) Integration, and updated the rule set in the Cross Domain Solution (CDS) to comply with data disclosure. Continued SEW-R development work, including bringing tactical data link channel into GCCS-J. Deployed radios designed to handle CIB and have accommodations to handle Common Message Format (CMF) in the future. Began development of design to accommodate generic CMF across the SEWS architecture. Continued ongoing efforts to improve the accuracy of the SEWS system. To include development and testing of improved capabilities. Continued effort to design an architecture to accommodate the Central Command (CENTCOM) Partner Network (CPN).						

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
Continued development of Force Protection Tiered Notification System (FPTNS), formerly known as WebWarn Secondary Notification Capability and began to test the solution.				
FY 2013 Plans: Continuing to investigate and integrate COCOM validated requirements and system enhancements (e.g., Radiant Mercury), evaluating alternative solutions and approaches for integrated infrared/radar architectures. Tasks include but not be limited to: SEW-R test and fielding; integration and test of redesign to improve and increase performance capabilities; and updating the rule set in the CDS to comply with data disclosure. Continuing SEW-R development work. Finishing development, then testing and beginning to field design to accommodate generic CMF across the SEWS architecture. Continuing to improve accuracy of the SEWS system with development, testing and fielding efforts. Finishing test and beginning to field updated communication links. Additionally, starting development work to design and prepare requirements for changes as CPN is deployed by CENTCOM. Continuing to test and then field the one-to-one FPTNS solution. Additionally, designing the next phase of FPTNS with one-to-many capability to the CENTCOM requirements. This will involve the development of a CDS with the Radiant Mercury (RDM) developer. Beginning to design and develop capabilities specific to SEWS from the generic Defense Information Systems Agency (DISA) GCCS-J Agile Client capability.				
FY 2014 Plans: Will continue to investigate and integrate COCOM validated requirements and system enhancements (e.g., Radiant Mercury), will continue to evaluate alternative solutions and approaches for integrated infrared/radar architectures. Tasks will include but not be limited to: SEW-R test and fielding; integration and test of redesign to improve and increase performance capabilities; and updating the rule set in the CDS to comply with data disclosure. Will continue SEW-R development work, including conducting studies to evaluate upgrades to the SEW-R including the capability to send data from/to the Air Defense System Integrator (ADSI). Will begin next phase of development efforts to use Radiant Mercury (RDM) to monitor overseas systems for support purposes.				

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
Will begin to design the next phase of the CMF specification.				
Will continue development of new methods to increase system accuracy.				
Will continue to test and integrate new CPN, including Broadband Global Area Network (BGAN) router replacement.				
Will finalize fielding of FPTNS one-to-one. And continue one-to-many CDS design and being field testing of the complete capability in the CENTCOM architecture.				
Will continue development and design work on the new GCCS-J Agile Client capability.				
Will begin to incorporate new Information Assurance (IA) design, checks and validation requirements as directed by the Designated Approval Authority (DAA).				
Title: Systems Engineering Description: Systems Engineering FY 2012 Accomplishments: Provided systems engineering and technical support, including requirements analysis, for SEWS. FY 2013 Plans: Performing systems engineering and technical support, including requirements analysis, for SEWS. FY 2014 Plans: Will continue to perform systems engineering and technical support, including requirements analysis, for SEWS.		0.160	0.160	0.160
Title: Program Management Administration Description: Program Support Administration costs support management with engineering and technical support for development and implementation. FY 2012 Accomplishments: Program Support efforts included: Government contract oversight, technical expertise and program management office support associated with the SEWS activities. FY 2013 Plans:		0.080	0.068	0.074

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C. Accomplishments/Planned Programs (\$ in Millions)							FY 2012	FY 2013	FY 2014		
Program Support efforts include: Government contract oversight, technical expertise and program management office support associated with the SEWS activities.											
FY 2014 Plans: Program Support efforts will include: Government contract oversight, technical expertise and program management office support associated with the SEWS activities.											
Accomplishments/Planned Programs Subtotals							1.663	1.175	1.079		
D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA07: Line Item # 838010: <i>Shared Early Warning Acquisition</i>	0.313	0.322	0.328		0.328	0.332	0.338	0.344	0.350	Continuing	Continuing
Remarks											
E. Acquisition Strategy The acquisition strategy builds on existing capabilities using evolutionary acquisition to modernize and sustain SEWS.											
F. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NOMENCLATURE				PROJECT					
3600: Research, Development, Test & Evaluation, Air Force						PE 0308699F: Shared Early Warning (SEW)				674838: Shared Early Warning System					
BA 7: Operational Systems Development															
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Development	C/CPIF	Lockheed Martin:Colorado Springs, CO	-	0.823	Oct 2011	0.545	Oct 2012	0.556	Oct 2013	-		0.556	Continuing	Continuing	TBD
Integration & Modernization	MIPR	US Navy:San Diego, CA	-	0.373	Mar 2012	0.326	Mar 2013	0.211	Mar 2014	-		0.211	Continuing	Continuing	TBD
Additional Product Development	MIPR	Various:Colorado Springs, CO	-	0.227	Sep 2012	0.076	Sep 2013	0.078	Sep 2014	-		0.078	Continuing	Continuing	TBD
Subtotal			0.000	1.423		0.947		0.845		0.000		0.845			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	SS/CPFF	MITRE:Colorado Springs, CO	-	0.160	Nov 2011	0.160	Nov 2012	0.160	Nov 2013	-		0.160	Continuing	Continuing	TBD
Program Management Administration	C/Various	Various:Colorado Springs, CO	-	0.080	May 2012	0.068	May 2013	0.074	May 2014	-		0.074	Continuing	Continuing	TBD
Subtotal			0.000	0.240		0.228		0.234		0.000		0.234			

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0308699F: Shared Early Warning (SEW)					PROJECT 674838: Shared Early Warning System				
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	0.000	1.663		1.175		1.079		0.000		1.079				

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

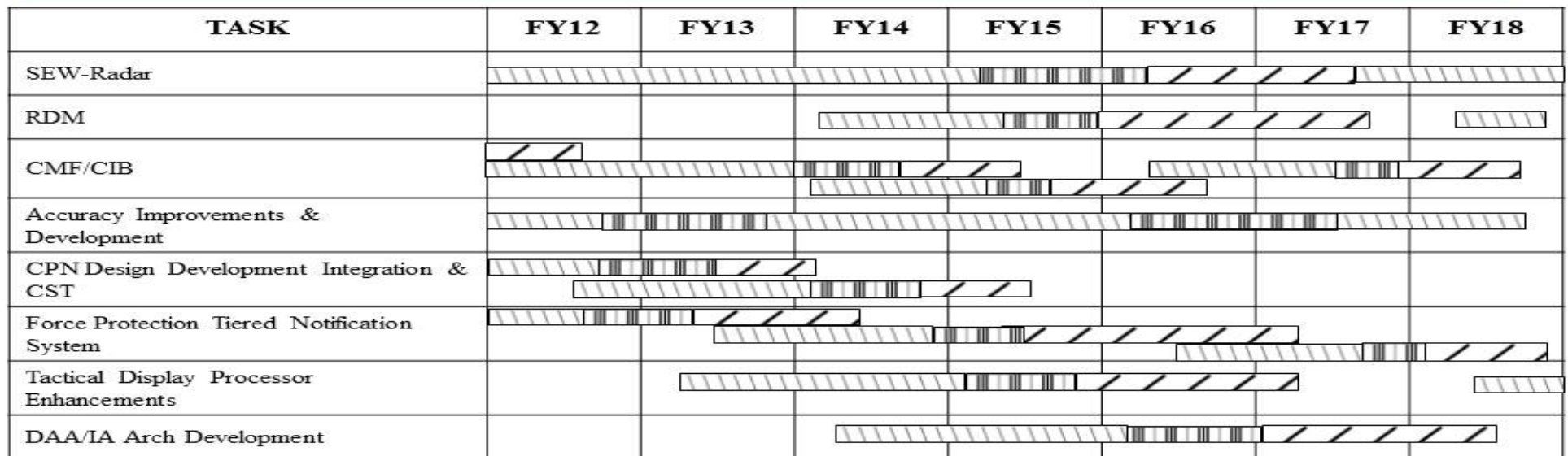
R-1 ITEM NOMENCLATURE

PE 0308699F: Shared Early Warning (SEW)

PROJECT

674838: Shared Early Warning System

SEWS Program Schedule



Note: All acronyms listed on R-4A



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0308699F: <i>Shared Early Warning (SEW)</i>	PROJECT 674838: <i>Shared Early Warning System</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
SEW-Radar Design/Development	1	2012	1	2015
SEW-Radar Integration/Test	2	2015	1	2016
SEW-Radar Follow On Design/Development	3	2017	4	2018
Radiant Mercury (RDM) Design/Development	1	2014	2	2015
RDM Testing	2	2015	4	2015
RDM Follow On Design/Development	2	2018	4	2018
Common Interactive Broadcast (CIB)/Common Message Format (CMF) Design/Development	1	2012	1	2014
CMF/CIB Intergration/Test	1	2014	3	2014
CMF/CIB Follow On Design/Development	2	2016	2	2017
CMF/CIB Follow On Integration/Test	3	2017	4	2017
Accuracy Improvements & Development	4	2013	1	2016
Accuracy Improvements & Development Testing	4	2012	3	2013
Accuracy Improvements & Development Testing (1)	2	2016	3	2017
CENTCOM Partner Network (CPN) Design/Development	1	2012	1	2014
CENTCOM Partner Network (CPN) Intergration/Test	1	2014	4	2014
Force Protection Tiered Notification System (FPTNS) Design/Development	2	2013	4	2014
FPTNS Intergration/Test	4	2014	2	2015
FPTNS Follow On Design/Development	2	2016	3	2017
FPTNS Follow on Intergration/Test	4	2017	1	2018
Tactical Display Processor Design/Development	2	2013	1	2015
Tactical Display Processor Intergration/Testing	1	2015	4	2015

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force			DATE: April 2013	
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		Start		End
Events		Quarter	Year	Quarter
				Year
Tactical Display Processor Follow On Design/Development		2	2018	4 2018
Designated Approval Authority (DAA)/Information Assurance (IA) Arch Design/Development		2	2014	1 2016
DAA/IA Integration/Testing		1	2016	4 2016