

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0604283F: Battle Mgmt Com & Ctrl Sensor Development							
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	0.000	30.362	114.417	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
646002: Three Dimensional Expeditionary Long Range Radar	0.000	30.362	114.417	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		
MDAP/MAIS Code(s): 393												
[#] 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												
Note												
In FY 2012, Project 6002, Three Dimensional Expeditionary Long Range Radar (3DELRR), efforts transferred from PE 0207412F, Control and Reporting Center, Project 5294, Theater Air Control System Improvement - Radar, in order to provide this pre-Major Defense Acquisition Program its own Program Element.												
In FY 2014, Project 6002, Three Dimensional Expeditionary Long Range Radar (3DELRR), transferred to PE 0207455F, Three Dimensional Expeditionary Long Range Radar (3DELRR), Project 6002, in order to provide this pre-Major Defense Acquisition Program its own Program Element.												
Totals include funding for PRCP Program Number (PNO) 393, 3DELRR												
A. Mission Description and Budget Item Justification												
Beginning in FY12, PE 0604283F funds the development of the Three-Dimensional Expeditionary Long-Range Radar (3DELRR) which will replace the current legacy AN/TPS-75 radar. 3DELRR will be the principal United States Air Force (USAF) long-range, ground-based sensor for detecting, identifying, tracking, and reporting aerial targets for the USAF Joint Force Air Component Commander (JFACC) through the Theater Air Control System (TACS). The 3DELRR will respond to the operational need to detect and report highly maneuverable, small radar cross section targets to enable battlefield awareness while at the same time mitigating the reliability, maintainability, and sustainability issues plaguing the AN/TPS-75 radar system. The 3DELRR will provide air controllers with a precise, real-time air picture of sufficient quality to conduct close control of individual aircraft under a wide range of environmental and operational conditions. It will replace the aging USAF AN/TPS-75 radar system as the AN/TPS-75 is incapable of detecting some current and emerging threats. In addition, as the AN/TPS-75 is reaching the end of its service life, it is more difficult and costly to maintain. The United States Marine Corps (USMC) is considering 3DELRR as a potential replacement for the AN/TPS-59, at the end of its service life, to support the Marine Air-Ground Task Force (MAGTF) Commander through the Marine Air Command and Control System (MACCS).												
3DELRR will address system sustainability, transportability and operational availability shortfalls while providing long-range surveillance, detection, and tracking of Air Breathing Targets (ABTs) and, potentially, Theater Ballistic Missiles (TBMs). This capability will support the Air Force's contribution to the primary roles of the Airspace Control Authority (ACA) and the Area Air Defense Commander (AADC) and enhance the USAF contributions to the Integrated Air and Missile Defense (IAMD) mission												

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force				DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE				
3600: Research, Development, Test & Evaluation, Air Force		PE 0604283F: Battle Mgmt Com & Ctrl Sensor Development				
BA 4: Advanced Component Development & Prototypes (ACD&P)						
area. This new radar will provide the USAF Control and Reporting Center (CRC) and, if purchased by the USMC, the Tactical Air Operations Center (TAOC), with real-time data to display air activity.						
The Pre-Engineering & Manufacturing Development (Pre-EMD) efforts of the 3DELRR Program begin in FY12 and continue through FY13. Acquisition activities during this Pre-EMD period include, but are not limited to: full and open source selection to award up to three competing contracts; requirements refinement; completion of the preliminary design development; continued software and hardware subsystem-level development; modeling and simulation to support the system development; implementation of mitigation techniques to combat existing and emerging system threats (including cyber warfare), test planning, and implementation of the program protection plan. A Preliminary Design Review (PDR) and Capability Demonstration C Event will be conducted during this timeframe to ensure the program is successful in the development of a preliminary system design. Activities will also include studies and analyses to support both current program planning and execution, and future program planning, as well as finalization of Milestone (MS) B documentation and preparation for a MS B review.						
This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.						
B. Program Change Summary (\$ in Millions)		FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget		30.362	114.417	0.000	-	0.000
Current President's Budget		30.362	114.417	0.000	-	0.000
Total Adjustments		0.000	0.000	0.000	-	0.000
• 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	0.000	-	0.000
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2012	FY 2013	FY 2014
Title: Technology Development (TD); Pre-EMD Period				23.533	102.901	0.000
Description: TD phase and Pre-EMD efforts associated with delivering a new long-range ground-based sensor.						
FY 2012 Accomplishments:						
Continued the TD phase efforts of the 3DELRR Program with the start of the pre-EMD period and developed a system design. Acquisition activities during FY12 included full and open source selection, preliminary design development, software and hardware subsystem level development, to support system development, implementation of mitigation techniques to combat existing and						

UNCLASSIFIED

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 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0604283F: <i>Battle Mgmt Com & Ctrl Sensor Development</i>		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
emerging system threats (including cyber warfare), test planning, and implementation of the program protection plan. Activities also include continuing development of Milestone (MS) B documentation as well as studies and analyses to support both current program planning and execution and future program planning. FY 2013 Plans: The pre-EMD period of the 3DELRR Program continues through FY13. Acquisition activities during FY13 include, but are not limited to, a full and open source selection, managing up to three concurrent prime contracts, completion of the preliminary design development, continuing software and hardware subsystem-level development to support the system development, implementation of mitigation techniques to combat existing and emerging system threats (including cyber warfare), test planning, and implementation of the program protection plan. A combined System Requirements and Function Review (SRFR), Preliminary Design Review (PDR), and Capability Demonstration C Event ensures the program achieves a preliminary system design. Activities also include studies and analyses to support both current program planning and execution and future program planning as well as finalization of MS B documentation.				
Title: Test and Evaluation Support Description: Test and Evaluation Support FY 2012 Accomplishments: Test and evaluation support activities for continued development of the test strategy and test-related documentation, planning of future developmental test and evaluation events, information assurance planning, and participation in technical and test-related working groups. FY 2013 Plans: Continues test and evaluation support activities for development of the test strategy and test-related documentation, planning of future developmental test and evaluation events, information assurance planning, and participation in technical and test related working groups.		0.100	0.300	0.000
Title: Systems Engineering/ Technical Support Description: Systems Engineering/Technical Support FY 2012 Accomplishments: Systems Engineering/Technical Support FY 2013 Plans: Systems Engineering/Technical Support		0.945	3.617	0.000

UNCLASSIFIED

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 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>					R-1 ITEM NOMENCLATURE PE 0604283F: <i>Battle Mgmt Com & Ctrl Sensor Development</i>						
C. Accomplishments/Planned Programs (\$ in Millions)								FY 2012	FY 2013	FY 2014	
N/A											
Title: Management Services								5.784	7.599	0.000	
Description: Management Services											
FY 2012 Accomplishments: Management Services											
FY 2013 Plans: Management Services											
N/A											
Accomplishments/Planned Programs Subtotals								30.362	114.417	0.000	
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
• RDTE: BA04: PE 0207455F: <i>Three Dimensional Long Range Radar</i>	0.000	0.000	70.160		70.160	69.533	57.985	54.000	15.100	Continuing	Continuing
• OPAF: BA04: Line Item # 646002: <i>Three Dimensional Long Range Radar</i>	0.000	0.000	0.000		0.000	0.000	0.000	0.000	63.800	Continuing	Continuing
Remarks											
E. Acquisition Strategy The Three-Dimensional Expeditionary Long-Range Radar (3DELRR) Project will provide full capability via full and open competition to further advance command and control (C2) capabilities supporting battlefield C2.											
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.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0604283F: Battle Mgmt Com & Ctrl Sensor Development						PROJECT 646002: Three Dimensional Expeditionary Long Range Radar			
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
Modeling & Simulation	SS/CPFF	MIT/Lincoln Laboratory:Lexington, MA	0.000	3.220	Oct 2011	2.055	Dec 2012	0.000		-		0.000	0.000	5.275	5.275
System Threat Assessment	SS/CPFF	MITRE:Bedford, MA	0.000	0.318	Nov 2011	0.408	Nov 2012	0.000		-		0.000	0.000	0.726	0.636
Pre-EMD Period	C/FFP	Various:Various,	0.000	19.995	Sep 2012	100.438	Oct 2012	0.000		-		0.000	0.000	120.433	122.157
Subtotal			0.000	23.533		102.901		0.000		0.000		0.000	0.000	126.434	128.068
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
System Engineering - A	SS/CPFF	MIT/Lincoln Laboratory:Lexington, MA	0.000	0.929	Jan 2012	2.898	Jan 2013	0.000		-		0.000	0.000	3.827	3.827
System Engineering - B	MIPR	Naval Research Laboratory:Washington, DC	0.000	0.016	Aug 2012	0.181	Oct 2012	0.000		-		0.000	0.000	0.197	0.181
System Engineering - C	SS/CPFF	Carnegie Mellon University:Pittsburgh, PA	0.000	0.000		0.538	Dec 2012	0.000		-		0.000	0.000	0.538	0.538
Subtotal			0.000	0.945		3.617		0.000		0.000		0.000	0.000	4.562	4.546
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
46th Test Wing	PO	46th TW:Ft Walton Beach, FL	0.000	0.100	Oct 2011	0.250	Oct 2012	0.000		-		0.000	0.000	0.350	0.400
Joint Interoperability Test Command	MIPR	JITC:Ft. Huachuca, AZ	0.000	0.000		0.050	Apr 2013	0.000		-		0.000	0.000	0.050	
Subtotal			0.000	0.100		0.300		0.000		0.000		0.000	0.000	0.400	

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>						R-1 ITEM NOMENCLATURE PE 0604283F: <i>Battle Mgmt Com & Ctrl Sensor Development</i>				PROJECT 646002: <i>Three Dimensional Expeditionary Long Range Radar</i>					

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	Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	Various	Various:Various,	0.000	5.784	Oct 2011	7.599	Oct 2012	0.000		-		0.000		0.000	13.383	11.765
Subtotal			0.000	5.784		7.599		0.000		0.000		0.000		0.000	13.383	11.765

	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	30.362	114.417	0.000	0.000	0.000	0.000	144.779	

Remarks

UNCLASSIFIED

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 4: Advanced Component Development & Prototypes (ACD&P)

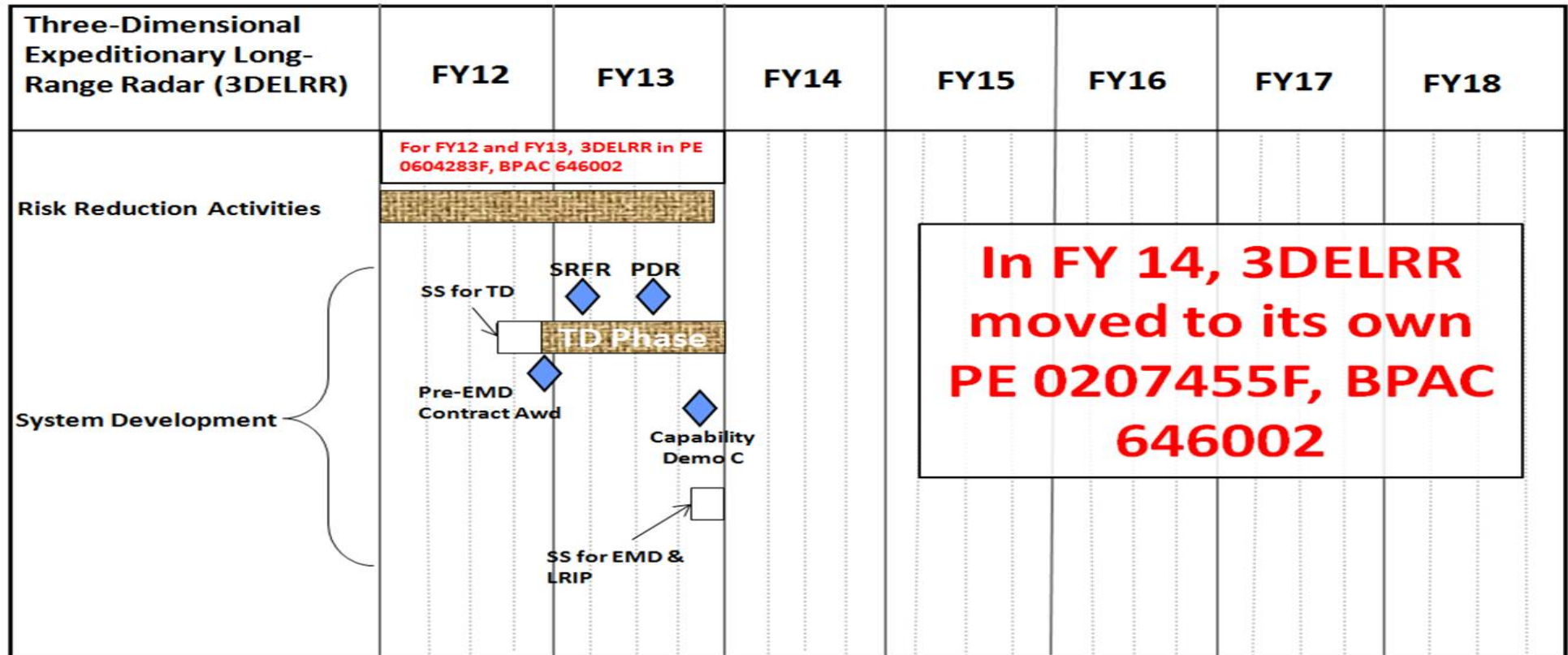
R-1 ITEM NOMENCLATURE

PE 0604283F: Battle Mgmt Com & Ctrl
Sensor Development

PROJECT

646002: Three Dimensional Expeditionary
Long Range Radar

3DELRR Program Schedule



Design / development



Key events

EMD: Engineering & Manufacturing Development

LRIP: Low Rate Initial Production

PDR: Preliminary Design Review

SS: Source Selection

SRFR: System Requirements Functional Review TD: Technology Development

UNCLASSIFIED

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 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604283F: <i>Battle Mgmt Com & Ctrl</i> <i>Sensor Development</i>	PROJECT 646002: <i>Three Dimensional Expeditionary</i> <i>Long Range Radar</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Risk Reduction Activities	1	2012	4	2013
TD Phase Source Selection	3	2012	4	2012
Pre-EMD Contract Award	4	2012	4	2012
Tech Development (TD) Phase	4	2012	4	2013
System Requirement Functional Review	2	2013	2	2013
Preliminary Design Review	3	2013	3	2013
Capability Demonstration C	4	2013	4	2013
Source Selection for EMD and LRIP Contract	4	2013	4	2013