

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 0207455F: Three Dimensional Long-Range Radar (3DELRR)							
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	0.000	0.000	70.160	-	70.160	69.533	57.985	54.000	15.100	Continuing	Continuing
646002: Three Dimensional Expeditionary Long Range Radar	0.000	0.000	0.000	70.160	-	70.160	69.533	57.985	54.000	15.100	Continuing	Continuing
Quantity of RDT&E Articles	0	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 2014, Project 6002, Three Dimensional Expeditionary Long Range Radar (3DELRR), efforts were transferred from PE 0604283F, Battle Management Command and Control (BMC2) Sensor Development, Project 6002, in order to provide this program its own Program Element.												
Totals include funding for PRCP Program Number (PNO) 393, 3DELRR.												
A. Mission Description and Budget Item Justification												
Beginning in FY14, PE 0207455F 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 area. 3DELRR will contribute to the Air Force's critically important role in the United States Govenment/DOD efforts to build partnership capacity via the Defense Exportability Features (DEF) pilot program. This new radar will provide the USAF Control and Reporting Center (CRC) and, if purchased by the USMC, the Composite Tracking Network (CTN), with real-time data to display air activity.												

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 0207455F: Three Dimensional Long-Range Radar (3DELRR)				
FY14 completes the Pre-EMD period of the TD phase, including completion of three competing contracts. The EMD phase of the 3DELRR Program will begin after a MS-B decision in FY14. Acquisition activities for the EMD phase within the FY14 timeframe include, but are not limited to, a competitive source selection to award a single contract for the EMD Phase with contract options for Low Rate Initial Production (LRIP) and Full Rate Production (FRP), MS-B preparation, MS-B decision, Integrated Baseline Review (IBR), Critical Design Review (CDR), test planning/preparation and fabrication/test of system components/subsystems. A Critical Design Review (CDR) will be conducted during this timeframe to ensure the program has properly matured the system design and is postured for successful development of three Production Representative Units (PRUs). Activities will also include studies and analyses to support both current program planning and execution and future program planning.						
This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment. Transition to Budget Activity 05 will occur after Milestone B decision approval to enter EMD Phase.						
B. Program Change Summary (\$ in Millions)		FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget		0.000	0.000	70.160	-	70.160
Current President's Budget		0.000	0.000	70.160	-	70.160
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)/EMD Phases				0.000	0.000	57.939
Description: Technology Development (TD)/EMD efforts associated with delivering a new long-range ground-based sensor.						
FY 2014 Plans: The 3DELRR TD Phase will conclude in FY14 with a competitive source selection to award a single contract for the EMD Phase with contract options for Low Rate Initial Production (LRIP) and Full Rate Production (FRP), MS-B preparation, and MS-B decision. The EMD Phase of the 3DELRR Program will begin after the MS-B decision in FY 14. Acquisition activities for the EMD phase within the FY 14 timeframe will include, but are not limited to, Integrated Baseline Review (IBR), Critical Design Review						

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 0207455F: Three Dimensional Long-Range Radar (3DELRR)						
C. Accomplishments/Planned Programs (\$ in Millions)									FY 2012	FY 2013	FY 2014
(CDR), test planning /preparation and fabrication/test of system components /subsystems. A Critical Design Review (CDR) will be conducted during this timeframe to ensure the program has properly matured the system design and is postured for successful development of 3 Production Representative Units (PRUs). Activities will also include studies and analyses to support both current program planning and execution and future program planning.											
Title: Test and Evaluation Support Description: Test and Evaluation Support FY 2014 Plans: Will continue 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, supporting contractor testing, and participation in technical and test-related working groups.									0.000	0.000	2.229
Title: Systems Engineering/Technical Support Description: Systems Engineering/Technical Support FY 2014 Plans: Systems Engineering/Technical Support									0.000	0.000	3.428
Title: Management Services Description: Management Services FY 2014 Plans: Management Services									0.000	0.000	6.564
Accomplishments/Planned Programs Subtotals									0.000	0.000	70.160
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 0604283F: Three Dimensional Long Range Radar	30.362	114.417	0.000		0.000	0.000	0.000	0.000	0.000	0.000	144.779
• OPAF: BA04: Line Item # 646002: Three Dimensional Long Range Radar	0.000	0.000	0.000		0.000	0.000	0.000	0.000	63.800	Continuing	Continuing

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 0207455F: <i>Three Dimensional Long-Range Radar (3DELRR)</i>						
D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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 C2 capabilities supporting battlefield command and control.											
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 0207455F: Three Dimensional Long-Range Radar (3DELRR)						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
EMD Phase	C/FPIF	TBD:TBD,	0.000	0.000		0.000		57.939	Mar 2014	-		57.939	Continuing	Continuing	TBD
Subtotal			0.000	0.000		0.000		57.939		0.000		57.939			
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	0.000		0.000		1.266	Jan 2014	-		1.266	Continuing	Continuing	TBD
System Engineering - C	SS/CPFF	Carnegie Mellon University:Pittsburgh, PA	0.000	0.000		0.000		0.575	Dec 2013	-		0.575	Continuing	Continuing	TBD
Government Furnished Equipment (GFE)	TBD	Various:TBD,	0.000	0.000		0.000		1.587	Sep 2014	-		1.587	Continuing	Continuing	TBD
Subtotal			0.000	0.000		0.000		3.428		0.000		3.428			
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/Other Test Agencies	Various	Various:Various,	0.000	0.000		0.000		2.229	Oct 2013	-		2.229	Continuing	Continuing	TBD
Subtotal			0.000	0.000		0.000		2.229		0.000		2.229			
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
Program Management Administration	Various	Various:Various,	0.000	0.000		0.000		6.564	Oct 2013	-		6.564	Continuing	Continuing	TBD

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 0207455F: <i>Three Dimensional Long-Range Radar (3DELRR)</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
Subtotal			0.000	0.000		0.000		6.564		0.000		6.564				

	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	0.000	0.000	70.160	0.000	70.160			

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)

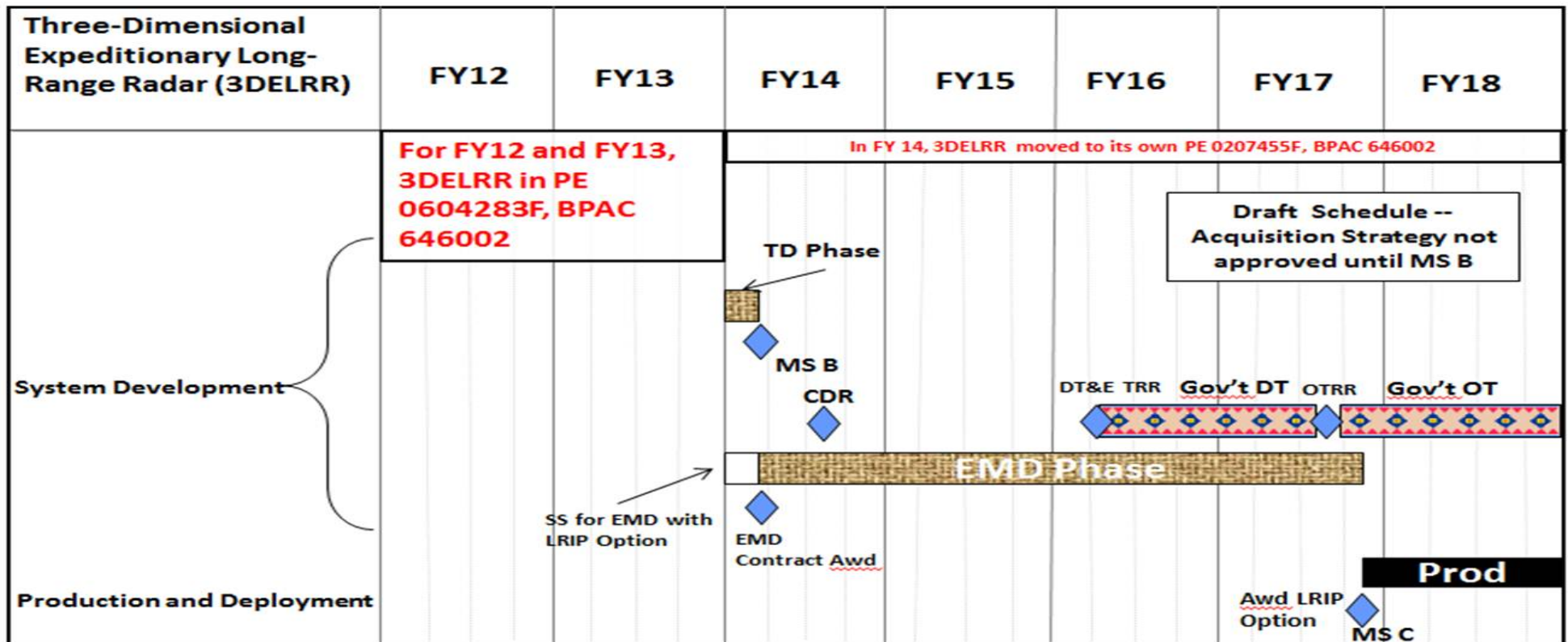
R-1 ITEM NOMENCLATURE

PE 0207455F: Three Dimensional Long-Range Radar (3DELRR)

PROJECT

646002: Three Dimensional Expeditionary Long Range Radar

3DELRR Program Schedule



CDR: Critical Design Review DT: Developmental Test DT&E TRR: Development Test and Evaluation Test Readiness Review
LRIP: Low Rate Initial Production MS: Milestone OT: Operational Test OTRR: Operational Test Readiness Review SS: Source Selection
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 0207455F: <i>Three Dimensional Long-Range Radar (3DELRR)</i>	PROJECT 646002: <i>Three Dimensional Expeditionary Long Range Radar</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Tech Development (TD) Phase	1	2014	2	2014
Source Selection for EMD and LRIP Contract	4	2013	1	2014
Milestone B	1	2014	1	2014
EMD Contract Award	1	2014	1	2014
EMD Phase	1	2014	4	2017
Critical Design Review (CDR)	3	2014	3	2014
Developmental Test & Evaluation Test Readiness Review	2	2016	2	2016
Government Developmental Test	2	2016	3	2017
Operational Test Readiness Review (OTRR)	3	2017	3	2017
Government Operational Test	3	2017	4	2018
Milestone C	4	2017	4	2017
Production Phase (LRIP)	4	2017	4	2018