

CLASSIFICATION:

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A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

TADIRCM is a Tactical Aircraft Directed InfraRed Countermeasure system. TADIRCM provides the warfighter with protection against surface and air to air missiles. This project looks at the infrared (IR) MANPAD & surface to air (SAM) threat. FY 2004 Congressional language directed the TADIRCM project to perform an initial suitability assessment for tactical fighters through an Early Operational Assessment (EOA) and provide a report back to Congress within 60 days of completion. FY 2005 Congressional language provided funding for the completion of that project into flight test. The completion is scheduled for 2006.

Assault Directed Infrared Countermeasure System Development and Demonstration (DIRCM SDD) designed for Rotary wing aircraft is scheduled to start in late 2006. The Assault DIRCM will leverage work accomplished during the EOA with investment by the Army to develop and field a DIRCM system for Naval assault aircraft by 2011. Assault DIRCM is an advanced capability against the IR SAM threat. Recent losses to assault aircraft as a result of IR SAMs requires an advanced DIRCM solution.

The TADIRCM Strike DIRCM SDD for fast jets commences in 2008. Strike DIRCM is a podded DIRCM system suited for carrier environments. Strike DIRCM is needed for protection against Surface to air and air to air IR threats. Strike DIRCM regains airspace below 20K feet. DIRCM neutralizes the IR threat.

R-1 SHOPPING LIST - Item No. 80

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Exhibit R-2, RD TEN Budget Item Justification
(Exhibit R-2, page 1 of 10)

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4		PROGRAM ELEMENT NUMBER AND NAME 0604272N TADIRCM			PROJECT NUMBER AND NAME 3040 TADIRCM			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost	11.575	7.133	9.956	22.003	47.008	64.984	40.066	44.000
RDT&E Articles Qty	1							

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Exhibit R-2a, RDTE Project Justification
(Exhibit R-2a, page 2 of 10)

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2005																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0604272N TADIRCM	PROJECT NUMBER AND NAME 3040 TADIRCM																	
B. Accomplishments/Planned Program																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">11.575</td><td style="text-align: center;">7.133</td><td></td><td></td></tr><tr><td>RDT&E Articles Quantity</td><td style="text-align: center;">1 partially populated pod</td><td></td><td></td><td></td></tr></tbody></table>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	11.575	7.133			RDT&E Articles Quantity	1 partially populated pod			
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RDT&E Articles Quantity	1 partially populated pod																		
<div style="border: 1px solid black; padding: 5px; min-height: 80px;">The objective of this Tactical Aircraft Directed InfraRed Countermeasure (TADIRCM) Initial Suitability project is to take science and technology components and configure into an airborne pod and perform limited effectiveness testing. The output will be test articles consisting of a 2-color missile warning sensor or sensors to detect and declare the threat; an off-the-shelf Advanced Technology Demonstration laser coupled to a new miniature pointer/tracker which takes the declared threat from the missile warning and passes to a fine track sensor in the pointer/tracker, subsequently slewing and applying laser energy to counter the threat. All this will be contained within a newly designed wing-mounted pod. With the FY 2005 Congressional add, the POD will be flight tested to provide an assessment of the advanced technology in simulated operational flight test conditions.</div>																			
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R-1 SHOPPING LIST - Item No. 80

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0604272N TADIRCM	PROJECT NUMBER AND NAME 3040 TADIRCM		

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget:	11.866	0.000	0.000	0.000
Current BES/President's Budget	11.575	7.133	9.956	22.003
Total Adjustments	-0.291	7.133	9.956	22.003
Summary of Adjustments				
Congressional program reductions		-0.065		
Congressional undistributed reductions				
Congressional rescissions				
SBIR/STTR Transfer	-0.280			
Other adjustments		-0.002	9.859	21.686
Economic Assumptions	-0.011		0.097	0.317
Reprogrammings				
Congressional increases		7.200		
Subtotal	-0.291	7.133	9.956	22.003

Schedule:

Schedule changes reflect program restructure due to receipt of FY2005 Congressional Add.

Technical: Not Applicable.

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EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4			PROGRAM ELEMENT NUMBER AND NAME 0604272N TADIRCM			PROJECT NUMBER AND NAME 3040 TADIRCM	

D. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>
APN-5 Line 52 Common ECM (OSIP XX-11)								37.000		

E. ACQUISITION STRATEGY:

The management and acquisition strategy for the Tactical Aircraft Directed InfraRed Countermeasure (TADIRCM) Initial Suitability assessment entails a competitive phased approach to reduce risk to cost and schedule through viable competition. The project will initially award two contracts for pointer/tracker/laser development, one contract for pod development, and one contract for missile warning sensors. The Naval Research Lab will be the technical lead in integration of these pointer/trackers, lasers, and sensors within the pod utilizing government furnished processors and ancillary data recording equipment. There will be a down select to one pointer/tracker/laser contract at the fabrication point to ensure the project does not exceed budget and can be executed as described here.

The Assault Directed Infrared Countermeasure (DIRCM) program will be a joint Army/Navy program whereas the Army will be the lead. The Army and Navy will pursue a common solution on a joint set of requirements. The approach will be to upgrade the DIRCM capability that was initially developed by the Army and develop an advanced DIRCM solution to address the more advanced IR SAMs.

The TADIRCM Strike DIRCM program will maximize use of technology developed under the Assault DIRCM program. The program will accomplish component redesign/repackaging necessary to survive the tactical aircraft environment. The program will conduct test to verify system performance meets the tactical environment.

R-1 SHOPPING LIST - Item No. 80

UNCLASSIFIED

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Exhibit R-3 Cost Analysis (page 1)								DATE:				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-4			0604272N TADIRCM			3040 TADIRCM						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPFF	Northrop Grumman, IL	1.000	1.000	04/05						2.000	2.000
Primary Hardware Development	C/CPFF	BAE, NH	1.000	1.000	04/05						2.000	2.000
Primary Hardware Development	C/CPFF	Raytheon, IN	1.500	1.500	05/05						3.000	3.000
Primary Hardware Development	C/CPFF	DRS, TX	0.600								0.600	0.600
Primary Hardware Development	C/CPFF	Raven, Arlington VA	0.800	0.380	03/05						1.180	1.180
Primary Hardware Development	C/CPFF	ATK, Tampa FL	0.200								0.200	0.200
Primary Hardware Development	C/CPFF	Assault Prime Contract TBD				5.056	07/06	18.853	03/07	46.650	70.559	70.559
Primary Hardware Development	C/CPFF	Fixed Wing Contract TBD								129.400	129.400	129.400
Aircraft Integration												
Ship Integration												
Ship Suitability												
Systems Engineering			0.678								0.678	
Training Development												
Licenses												
Tooling												
GFE												
Award Fees			0.100	0.100	Various						0.200	
Primary Hardware Development	C/CPFF	Raytheon, Tucson	2.300	2.200	06/05						4.500	4.500
Subtotal Product Development			8.178	6.180		5.056		18.853		176.050	214.317	

R-1 SHOPPING LIST - Item No. 80

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 6 of 10)

UNCLASSIFIED

February 2005

R-1 SHOPPING LIST - Item No. 80

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 7 of 10)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 3)										DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDTE, N / BA-4			0604272N TADIRCM			3040 TADIRCM						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NAWCAD, MD	0.365	0.078	03/05	0.200	06/06	0.250	03/07	5.100	5.993	
Operational Test & Evaluation	WX	OPTEVFOR, VA	0.015	0.135	03/05					7.700	7.850	
Live Fire Test & Evaluation	WX	NAWCWD, China Lake, CA				2.900	06/06	1.250	06/07	21.200	25.350	
Test Assets	WX	NAWCWD, China Lake, CA						0.250	06/07	6.925	7.175	
Tooling												
GFE												
Award Fees												
Subtotal T&E			0.380	0.213		3.100		1.750		40.925	46.368	
Remarks:												
Contractor Engineering Support	C/CPFF	TEKLA, VA	1.950			0.400	06/06	0.200	06/07	3.200	5.750	5.750
Government Engineering Support	WX	NRL, Washington DC	0.215			0.400	06/06	0.200	06/07	3.300	4.115	
Program Management Support	WX	NAWCAD, MD	0.530	0.215	11/04	0.300	06/06	0.300	06/07	6.800	8.145	
Travel	WX	NAWCAD, MD	0.032	0.025	11/04						0.057	
Transportation												
SBIR Assessment											0.000	
Subtotal Management			2.727	0.240		1.100		0.700		13.300	18.067	
Total Cost			11.575	7.133		9.956		22.003		246.225	296.892	
Remarks:												

R-1 SHOPPING LIST - Item No. 80

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 8 of 10)

UNCLASSIFIED

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EXHIBIT R4, Schedule Profile																								DATE:											
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME											
RDT&E, N / BA-4												0604272N TADIRCM												3040 TADIRCM											
Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011						
	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							
EOA Study Contract Awards (BAE and/or NG)			■																																
EOA Contract			▲																																
Pod Contract			■	■	■	■	■																												
MWS Contract			■	■	■	■	■																												
Software Development and Test		■	■	■	■	■	■	■																											
Flight Test									■	■																									
EOA Report												△																							
Assault DIRCM Contracts											△																								
PDR														△																					
CDR															△					△															
DT/OT																				△	■	■	■	■	■	■	■	■							
Strike DIRCM Contract Award																																			
PDR																																			
CDR																																			

R-1 SHOPPING LIST - Item No. 80

* Not required for Budget Activities 1, 2, 3, and 6

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 9 of 10)

UNCLASSIFIED

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R-1 SHOPPING LIST - Item No. 80

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 10 of 10)