

EXHIBIT R-2, RDT&E Budget Item Justification						DATE: February 2007		
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7						R-1 ITEM NOMENCLATURE 0702207N DEPOT MAINTENANCE (NON-IF)		
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	12.051	6.137	19.402	21.295	9.654			
3030 F/A-18 SLAP	9.488	2.949	18.410	17.314	8.659			
3182 T-45 SLAP			.992	3.981	.995			
9999 Portable Laser Depainting System	2.563	3.188						

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The F/A-18A-F Service Life Assessment Program (SLAP) is assessing the structural condition of the F/A-18 fleet in order to determine what modifications are necessary to extend the aircraft designed life limits to allow it to achieve CNO inventory requirements. The goal of the SLAP program is to identify critical structures and components that can achieve the extended service life limit goals for all models. An increase in total landings and flight hours would allow the F/A-18A/B/C/D/E/F to meet OPNAV inventory requirements, to include planning for the announced one year JSF slide. This effort is required to be conducted for these airframes to ascertain what actions and modifications must be taken to safely operate each system beyond its designed life until the targeted end of service life.

The T-45 Service Life Assessment Program (SLAP) is assessing the structural condition of the T-45 Fleet in order to determine structural modifications necessary to extend the aircraft designed service life to support Pilot Training Requirements (PTR) and Naval Flight Officer Training Requirements (NTR) until 2026. The T-45 aircraft structure is currently fatigue limited to 14,400 flight hours based on initial full-scale fatigue tests conducted from 1992-1996. This service life limit prevents the T-45 fleet from meeting PTR/NTR requirements past 2016. Recent studies have determined that the fleet squadrons have not been flying the T-45 aircraft as aggressively as the initial fatigue studies predicted. These studies demonstrate that the 14,400 flight hour service life can likely be extended to 21,600 flight hours, which will support meeting PTR/NTR until 2026. A T-45 Service Life Assessment Program (SLAP) is required to assess the critical areas within the structure that require modifications to achieve a 21,600 flight hour service life. This assessment will be based on the updated fleet aircraft usage spectrum and future predicted training missions of the T-45 aircraft. The assessment will address critical structural areas that are either

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget:	12.461	2.960		
Current President's Budget:	12.051	6.137	19.402	21.295
Total Adjustments	-0.410	3.177	19.402	21.295
Summary of Adjustments				
Congressional Reductions	-0.020			
Congressional Rescissions				
Congressional Undistributed Reductions	-0.290	-0.023		
Congressional Increases		3.200		
Economic Assumptions			0.147	0.165
Miscellaneous Adjustments	-0.100		19.255	21.130
	-0.410	3.177	19.402	21.295

Schedule: The schedule change in FY08 thru FY09 is due to an increase in funding for F/A-18E/F SLAP and T-45 SLAP.

Technical: Added the requirement to assess the F/A-18E/F airframe.

EXHIBIT R-2a, RDT&E Project Justification							DATE:			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME				
RDT&E,N / BA-7			0702207N DEPOT MAINTENANCE (NON-IF)			3030 F/A-18 SLAP				
COST (\$ in Millions)			FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
3030 F/A-18 SLAP			9.488	2.949	18.410	17.314	8.659			
RDT&E Articles Qty										

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The F/A-18A-F Service Life Assessment Program (SLAP) is assessing the structural condition of the F/A-18 fleet in order to determine what modifications are necessary to extend the aircraft designed life limits to allow it to achieve CNO inventory requirements. The goal of the SLAP program is to identify critical structures and components that can achieve the extended service life limit goals for all models. An increase in total landings and flight hours would allow the F/A-18A/B/C/D/E/F to meet OPNAV inventory requirements, to include planning for the announced one year JSF slide. This effort is required to be conducted for these airframes to ascertain what actions and modifications must be taken to safely operate each system beyond its designed life until the targeted end of service life.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

F/A-18A-D SLAP	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	9.488	2.949		
RDT&E Articles Qty				

Continue to conduct analysis of aircraft structures and complete Landings/Cat/Trap/Flight Hour analysis and technical support.

F/A-18E-F SLAP	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost			18.410	17.314
RDT&E Articles Qty				

Begin analysis of numerous data points to provide exploitation of complete structural fatigue testing with the expectation of extending the current service life of F/A-18E/F flight hours from 6,000 to 9,000 hours.

C. OTHER PROGRAM FUNDING SUMMARY:	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
APN-5 P.E. 0204136N F/A-18 OSIP (11-99)	82.735	111.285	112.020	115.984	123.820	123.828	130.803	184.479	145.320	1,353.119

D. ACQUISITION STRATEGY:

The SLAP program employs sole source contracts with Boeing, the aircraft prime manufacturer. SLAP consists of structural analyses of the main landing gear, arresting hook and catapult back-up structures, vertical tails, wings and fuselage. These analyses will provide for the development of aircraft modifications necessary to extend total aircraft landings, catapults /arrestments, and flight hours. Engineering Change Proposals (ECPs) generated by the SLAP analyses will be incorporated into Service Life Management Program (SLMP) under OSIP (11-99). F/A-18E/F Service Life Assessment Program (SLAP) will employ sole source contracts with Boeing, the aircraft prime manufacturer. The program will consist of exploitation of complete structural fatigue testing with the expectation of extending the current service life of the F/A-18E/F. Conducting F/A-18E/F SLAP to study the aircraft lifetime will provide a better estimate of aircraft service life and a follow on Service Life Extension Program (SLEP).

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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-7		PROGRAM ELEMENT 0702207N DEPOT MAINTENANCE (NON-IF)				PROJECT NUMBER AND NAME 3030 F/A-18 SLAP						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PRODUCT DEVELOPMENT												
SLAP - F/A-18A-D	SS/CPFF	MCDONNELL DOUGLAS CORP, SAINT LOUIS	26.005	2.949	01/07						28.954	28.954
SLAP - F/A-18E/F	TBD	MCDONNELL DOUGLAS CORP, SAINT LOUIS				18.410	12/07	17.314	12/08	8.659	44.383	44.383
SUBTOTAL PRODUCT DEVELOPMENT			26.005	2.949		18.410		17.314		8.659	73.337	

Remarks:

SUPPORT												
SUBTOTAL SUPPORT											.000	

Remarks:

TEST & EVALUATION												
SUBTOTAL TEST & EVALUATION											.000	

Remarks:

MANAGEMENT												
SUBTOTAL MANAGEMENT											.000	

Remarks:

Total Cost			26.005	2.949		18.410		17.314		8.659	73.337	.000
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Remarks:

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE:								
APPROPRIATION/BUDGET ACTIVITY																								PROGRAM ELEMENT NUMBER AND NAME				PROJECT NUMBER AND NAME				
RDT&E,N / BA-7																								0702207N DEPOT MAINTENANCE (NON-IF)				3030 F/A-18 SLAP				
Fiscal Year	FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	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	1	2	3	4
1.1 Flight Load Structure Crack Growth Analysis Using Design Loads	██████████																															
1.2 Flight Load Structure Usage Flight Spectrum Development	██████████				██████████																											
1.3 Flight Load Structure Fatigue Loads Development	██████████				██████████																											
1.4 Flight Load Structure Crack Initiation Life for 90% Spectrum Assessment					██████████																											
2.1 Ground Load Structure Crack Growth Analysis Using 90% Loads	██████████																															
2.2 Ground Load Structure Fatigue Life Assessment for 90% Spectrum	██████████																															
3.0 Fleet Aircraft Teardown	██████████				██████████																											

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-7		PROGRAM ELEMENT NUMBER AND NAME 0702207N, DEPOT MAINTENANCE (NON-IF)			PROJECT NUMBER AND NAME 3182, T-45 SLAP				
COST (\$ in Millions)		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
3182 T-45 SLAP				.992	3.981	.995			
RDT&E Articles Qty									

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The T-45 Service Life Assessment Program (SLAP) is assessing the structural condition of the T-45 fleet in order to determine structural modifications necessary to extend the aircraft designed service live to support Pilot Training Requirements (PTR) and Naval Flight Officer Training Requirements (NTR) until 2026. The T-45 aircraft structure is currently fatigue limited to 14,400 flight hours based on initial full-scale fatigue tests conducted from 1992-1996. This service life limit prevents the T-45 fleet from meeting PTR/NTR requirements past 2016. Recent studies have determined that the fleet squadrons have not been flying the T-45 aircraft as aggressively as the initial fatigue studies predicted. These studies demonstrate that the 14,400 flight hour service life can likely be extended to 21,600 flight hours, which will support meeting PTR/NTR until 2026. A T-45 Service Life Assessment Program (SLAP) is required to assess the critical areas within the structure that require modifications to achieve a 21,600 flight hour service life. This assessment will be based on the updated fleet aircraft usage spectrum and future predicted training missions of the T-45 aircraft. The assessment will address critical structural areas that are either landing and/or flight hour limited.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Analysis of T-45 structural condition	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost			.992	3.981
RDT&E Articles Qty				

The T-45 Service Lift Assessment Program will analyze structural critical areas requiring modification to increase service life from 14,400 flight hours to 21,600 flight hours, publishing results in three separate reports (Updated Finited Element Model report, SLAP Internal Loads Methodology report, and SLAP Fatigue Analysis report).

C. OTHER PROGRAM FUNDING SUMMARY:

FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 FY 2012 FY 2013 To Complete Total Cost

Not applicable

D. ACQUISITION STRATEGY:

The SLAP is a sole source contract with Boeing, the aircraft prime contractor. SLAP consists of structural analyses of landing gear, arresting hook and catapult back-up structure, vertical tail, wings and fuselage. These analyses will facilitate the development of aircraft modifications necessary to extend total aircraft service life from 14,400 to 21,600 flight hours.

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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-7		PROGRAM ELEMENT 0702207N, DEPOT MAINTENANCE (NON-IF)				PROJECT NUMBER AND NAME 3182, T-45 SLAP						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PRODUCT DEVELOPMENT												
SLAP - T -45	SS/FFP	BOEING, SAINT LOUIS, MO				.992	Jan 2008	3.981	Jan 2009	.995	5.968	5.968
SUBTOTAL PRODUCT DEVELOPMENT						.992		3.981		.995	5.968	

Remarks:

SUPPORT												
SUBTOTAL SUPPORT												.000

Remarks:

TEST & EVALUATION												
SUBTOTAL TEST & EVALUATION												.000

Remarks:

MANAGEMENT												
SUBTOTAL MANAGEMENT												.000

Remarks:

Total Cost						.992		3.981		.995	5.968	.000
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Remarks:

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EXHIBIT R4, Schedule Profile																					DATE: February 2007																
APPROPRIATION/BUDGET ACTIVITY								PROGRAM ELEMENT NUMBER AND NAME								PROJECT NUMBER AND NAME																					
RDT&E,N / BA-7								0702207N, DEPOT MAINTENANCE (NON-IF)								3182, T-45 SLAP																					
Fiscal Year	FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013								
	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	1	2	3	4	1	2	3	4	
SLAP Phase I																																					
Flight Loads Definition																▲————▲																					
Ground Loads Definition																▲————▲																					
Update Finite Element Model (FEM)																				▲————▲																	
Preliminary Critical Area Selection																				▲————▲																	
Phase I Report Delivery																				▲																	
SLAP Phase II																																					
Run Update FEM																				▲————▲																	
Fatigue Life Assessment Rebaseline																				▲————▲																	
Identify Areas for Modification																								▲————▲													
Phase II Report Delivery																												▲									
SLEP Decision Review																																▲					

EXHIBIT R-2a, RDT&E Project Justification						DATE:							
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-7						PROGRAM ELEMENT NUMBER AND NAME 0702207N DEPOT MAINTENANCE (NON-IF)			PROJECT NUMBER AND NAME 9999 Congressional Adds				
COST (\$ in Millions)						FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
9785 Portable Laser Depainting System						2.563	3.188						
RDT&E Articles Qty													

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Congressional Adds

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

9785-Portable Laser Depainting System	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	2.563	3.188		
RDT&E Articles Qty				

Portable Laser Depainting System