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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE June 2001	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/BA 7						R-1 ITEM NOMENCLATURE Commercial O&S Savings Initiative PE 0604805D8Z				
COST (<i>In Millions</i>)	FY2000	FY2001	FY2002						Cost to Complete	Total Cost
Total Program Element (PE) Cost	11.554	9.541	10.805						Continuing	Continuing
Commercial O&S Savings Initiative/P805	11.554	9.541*	10.805						Continuing	Continuing

*Beginning in FY 2001, this pe transfers BA 5 to BA 7.

(U) A. Mission Description and Budget Item Justification

(U) BRIEF DESCRIPTION OF ELEMENT

The purpose of the Commercial Operations and Support Savings Initiative (COSSI) is to reduce weapon system life cycle costs, especially operating and support (O&S) costs, by inserting commercial products into military systems. COSSI is a crucial element in DoD's strategy to reduce the operations and support (O&S) costs of fielded equipment and supports the DoD goal of reducing logistics costs by 20 percent. As legacy systems age, O&S costs increase. COSSI uses technology insertions to lower these costs. COSSI also allows DoD to capitalize on the commercial innovation cycle so equipment can be modernized faster. Adapting commercial technologies for use in military equipment typically requires non-recurring engineering, testing and qualification. If the testing is successful and the cost savings validated, the items are purchased as retrofits. All COSSI projects must have an endorsement by a military customer and be linked to an existing military system. The benefits include: improved mean time between failure, improved logistics support by reducing parts obsolescence, reduced software reprogramming time and costs, improved performance, and the promotion of open system designs making future upgrades easier and less costly. COSSI promotes the use of Other Transaction Authority rather than FAR procurement contracts so companies that do not normally do business with DOD are given the opportunity to provide cost saving ideas that would otherwise go unnoticed. OSD funding provides an incentive to structure joint projects with pervasive impact across weapon systems, and to institutionalize the use of Other Transaction Agreements.

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(U) **Project Number and Title: P805 Commercial O&S Savings Initiative**

(U) **PROGRAM ACCOMPLISHMENTS AND PLANS**

(U) **FY 2000 Accomplishments:**

(U) COSSI provided funds to develop and install an Integrated Mechanical Diagnostic/Health and Usage Management System on AH-1, CH-53 and SH-60 helicopters. The system collects real time data on helicopter performance including continuous rotor track and balance, vibration monitoring of the gearbox, drivetrain, and engine, and structural usage. The project is expected to reduce operation and support costs for the AH-1, CH-53, and SH-60 by over \$1 billion by eliminating rotor track and balance flights, improving the efficiency of maintenance operations, enhancing operational readiness, and extending the period between depot maintenance. COSSI funding is also being used to develop a propeller control unit for P-3 aircraft. The project will replace the current analog/mechanical system with one that is digital/electromechanical. The benefits include higher reliability, elimination of control system adjustments requiring ground operation and flight checks, a built in test capability to improve trouble shooting, and elimination of parts obsolescence. The new propeller control unit is expected to reduce P-3 propeller maintenance costs from \$20/flight hour to less than \$4/flight hour.(\$ 11.554 million)

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(U) FY 2001 Plans:

(U) COSSI funds are being used to support three projects: an electronic propeller control system for C-130 aircraft, an advanced symbol generator for the AN/AVS-7 night vision imaging system/heads-up-display, and a new propeller deicing system for P-3 and C-130 aircraft. The electronic propeller control system for the C-130 is a spin-off of a similar COSSI project for the P-3 started in FY 2000. The project will modify the propeller control system currently used on ATR 42 and ATR 72 regional civil aircraft for use on the C-130. An electronic propeller control and electronic valve housing will replace the mechanical valve housing and synchrophaser. The project is expected to reduce propeller maintenance costs from approximately \$19/flight hour to approximately \$2/flight hour. The advanced symbol generator project is a follow-on to a previous COSSI project that developed active matrix electroluminescent flat panel displays for Army aviator night vision goggles. The project will replace the current signal data converter (SDC) with a new one that is smaller, lighter, and less expensive to buy and maintain. The new SDC will be almost \$10,000 less expensive to buy than the one being replaced. The propeller deicing project will develop a propeller mounted generator similar to the one designed for the Beech 1900D civil aircraft. The new design eliminates the carbon brushes currently used to transfer electrical power to the propellers. Having a generator mounted directly on the propeller will eliminate the need to clean and replace the brushes every 50 flight hours. Maintenance costs will be reduced by approximately \$5 million/year. (\$ 9.541 million)

(U) FY 2002 Plans:

(U) DoD will issue a project call for the FY2002 program. Lessons learned during previous COSSI solicitations will be used to further refine the program. Based on previous experience, most cost saving projects are expected to pertain to upgrading electronics and computers on legacy aircraft.(\$ 10.805 million)

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(U) <u>B. Program Change Summary</u>	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>Total Cost</u>
Previous President's Budget Submit	11.878	9.629	10.744	Continuing
Appropriated Value	0.000	9.629	0.000	Continuing
Adjustments to Appropriated Value				
a. Congressionally Directed Undistributed Reduction	0.000	-0.067	0.000	
b. Rescission/Below-threshold Reprogramming, Inflation Adjustment	-0.324	-0.021	0.000	
c. Other	0.000	0.000	0.061	
President's Budget Submission	11.554	9.541	10.805	Continuing

Change Summary Explanation

(U) **Funding:** FY 2000 funding was reflected as a source on the FY 2000 Omnibus reprogramming. FY 2001 reductions reflect Section 8086 reductions.

(U) **Schedule:** N/A

(U) **Technical:** N/A

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(U) C. Other Program Funding Summary Cost N/A

(U) D. Acquisition Strategy: N/A

(U) E. Schedule Profile: N/A

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