

DATA ITEM DESCRIPTION			Form Approved OMB No 0704-018	
1 TITLE		2 IDENTIFICATION NUMBER		
Design-to-Cost/Life Cycle Cost and Variance Analysis Report		DI-FNCL-80449		
3 DESCRIPTION/PURPOSE				
3.1 Report conveys to the government the contractor Design-to-Cost (DTC)/Life Cycle Cost (LCC) estimates. The data will be used to evaluate and establish design-to-unit production cost and Life Cycle Cost (LCC) goals; measure contractor performance toward meeting established DTC and LCC goals; identify and record DTC/LCC problems; and provide timely, reliable DTC information for use in evaluating proposed design, design-to-cost, and LCC changes.				
4 APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6a. DTC APPLICABLE	6b. GIDEP APPLICABLE	
870930	F/AD/ACC			
7. APPLICATION/INTERRELATIONSHIP				
7.1 This data item description contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.				
7.2 These reports are applicable for use on contracts of any size when the unit production and/or operational support costs are an important criteria in the cost effectiveness of the weapon system. These reports can be required at various levels of detail depending on the potential dollar savings to the Government in relation to the cost of data collection and analysis. (Continued on Page 2)				
8 APPROVAL LIMITATION		9a. APPLICABLE FORMS		9b. AMSC NUMBER
				F4225
10. PREPARATION INSTRUCTIONS				
10.1 <u>Reference Documents.</u> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, and reissues, shall be as specified in the contract.				
10.2 <u>Content.</u> The Design-to-Cost/Life Cycle Cost and Variance Analysis Report shall include the following sections:				
10.2.1 <u>Executive Summary.</u> The executive summary shall be limited to one page, briefly describing the program and stating the results and conclusions of the report.				
10.2.2 <u>Table of Contents, List of Figures and List of Tables.</u>				
10.2.3 <u>Introduction.</u> Brief description of the weapon system in terms of schedule phase, program requirements, etc.				
10.2.4 <u>Groundrules and Assumptions.</u> This section shall describe key assumptions made in the costing of the system including quantities, schedule production rates, state of technology, program base year, inflation rates, hardware and software configuration. Also listed shall be: (1) items that are not included in the estimate, such as Government Furnished Equipment (GFE) or other items that make up the weapon system but are not under the contractor's control and (2) General and Administrative (G&A) and fee percentages.				
(Continued on Page 2)				
11 DISTRIBUTION STATEMENT				
DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.				

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**7. APPLICATION/INTERRELATIONSHIP (Cont'd)**

7.3 This DID supersedes DI-F-30211.

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**10. PREPARATION INSTRUCTIONS (Cont'd)**

**10.2.5 Contract Work Breakdown Structure.** This section shall list the Contract Work Breakdown Structure (WBS) down to the level as specified in the Statement of Work. If the WBS is not specified, the WBS used shall conform to the guidelines in MIL-STD-881.

**10.2.6 Methodology.** The methodology section shall include a discussion of the methods used to generate the cost estimate for each WBS element. Learning curve first unit cost, slopes and type of curve (unit or cumulative average) shall be stated along with backup information used to determine these parameters. This section shall make up the bulk of the report containing enough information to substantiate the entire estimate. Included shall be discussions of any analogies, why they are used, and how the actual costs were modified to fit the new components. If manhour buildups are used, discussions shall center on the rationale used for manloading levels.

**10.2.7 Results.** The results section shall contain the contractor's DTC estimate in base year dollars by the WBS listed in the assumption section. All costs should be fully burdened with overhead, G&A and fee in base year dollars. The costs shall be shown for all phases of the program, i.e., Validation, Full-Scale Engineering Development (FSED), Production, and Operations and Support (O&S) unless otherwise specified. Actual cost shall be used upon phase completion. In addition, a summary level time phased estimate shall be submitted for Research and Development (R&D) and production.

**10.2.8 Conclusion.** This section shall include cost of alternative designs, trade studies, pending engineering changes, and accuracy or confidence levels of the results section.

**10.2.9 Variance.** This section shall identify changes from the previous report using the same WBS as the remainder of the report and discussing the reason for each change. Categories of changes include changes in program due to design, updates of estimates, quantity changes, and schedule updates. Identify specifically what changed since the last report and why. An example would be an estimating change in learning curve slope from 90% to 92% based on actual data for the first several lots of this program.

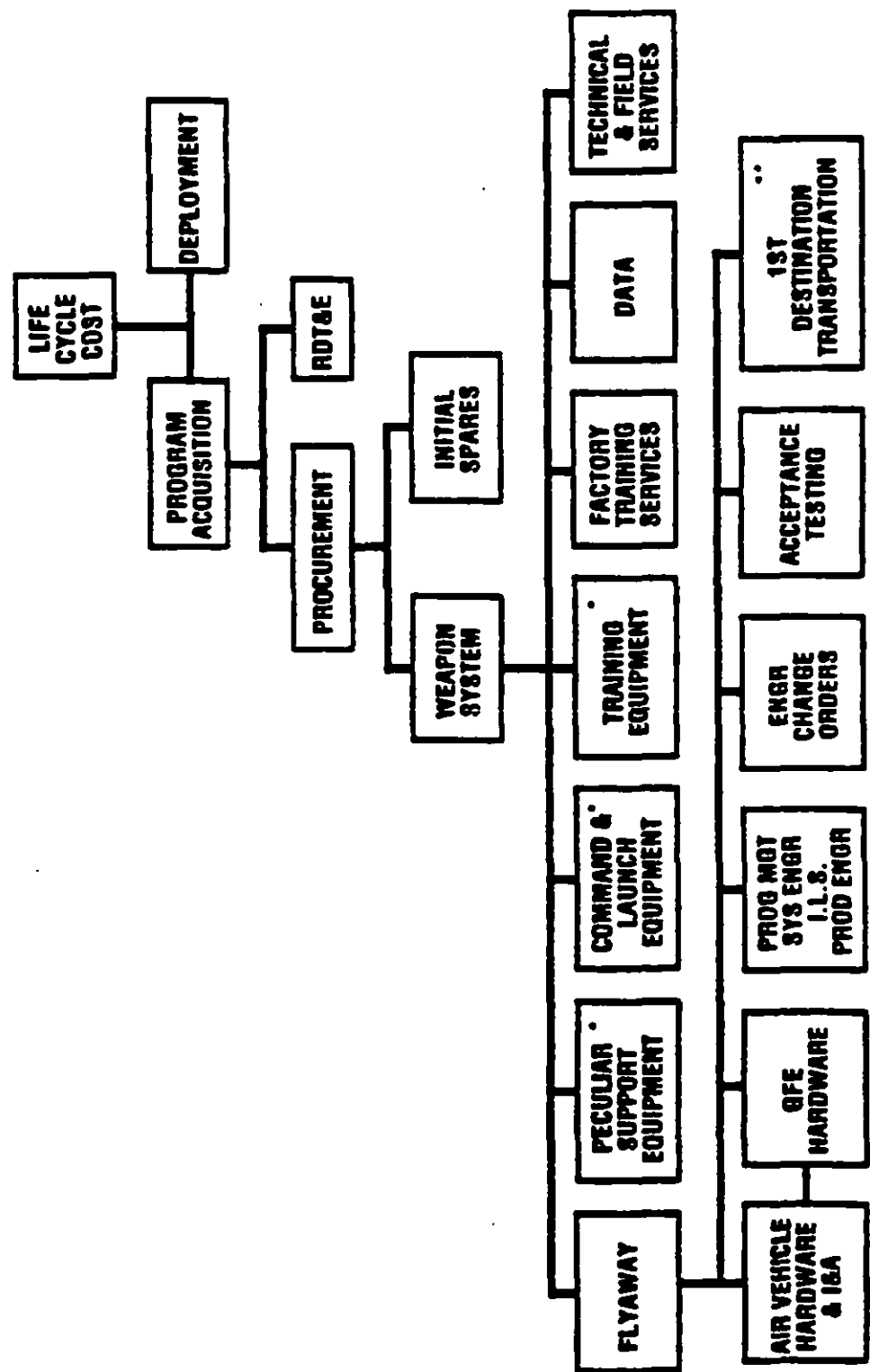
**10.3 Breakout of LCC and Variance Report Example.** A breakout of LCC is provided in figure 1 and an example of variance report is presented in Figure 2.

**10.4 Security Classification.** Report is to be unclassified where possible. If classified information must be included, it shall be placed in a separate annex. Exception would be those cases where the report would make no sense if the classified information were removed.

**10.5 Format.** Reports shall be of reproducible quality on either 8"x10 1/2" or 8 1/2"x11" bond paper. Foldouts shall be kept to a minimum, but are desired for schedule and funding spread diagrams where the larger size is needed for readability.

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10. PREPARATION INSTRUCTIONS (Cont'd)



\* INCLUDES DESIGN, TOOLING, TEST EQUIPMENT, HARDWARE FABRICATION, UNIT ACCEPTANCE, AND I&A.

\*\*INCLUDED UNLESS A SEPARATE BUDGET LINE ITEM.

FIGURE 1. LCC BREAKOUT

## 10. PREPARATION INSTRUCTIONS (Cont'd)

## DESIGN-TO-COST VARIANCE REPORT

[illegible]

**NOTES:**

- (g) ORIGINAL DTC GOAL: BASELINE DESIGN-TO-COST GOAL AT INCEPTION OF FSD CONTRACT
- (h) CURRENT DTC GOAL: BASELINE DESIGN-TO-COST GOAL UPDATED FOR SUCH THINGS AS ENGINEERING CHANGES, REALLOCATION DUE TO DESIGN, SCHEDULE, ETC.
- (i) PREVIOUS DTC ESTIMATE: CONTRACTOR'S LAST REPORTED ESTIMATE REFLECTING "THEN" CURRENT DESIGN STUDIES
- (j) LATEST DTC ESTIMATE: CONTRACTOR'S LATEST DESIGN TO ESTIMATE BASED ON CURRENT DESIGN, LOGISTICS REQUIREMENTS, SCHEDULE, ETC
- (k) DTC VARIANCE: COST DIFFERENCE BETWEEN PREVIOUS DTC ESTIMATE (h) AND CONTRACTOR'S LATEST DTC ESTIMATE
- (l) DESIGN GOAL VARIANCE: INDICATE VARIANCE IN THOSE ELEMENTS AFFECTED BY DESIGN CHANGES FROM PREVIOUSLY REPORTED DESIGN REPORTS HAVING AN EFFECT (+/-) ON WEIGHT, RELIABILITY, MAINTAINABILITY, AND/OR LIFE CYCLE COST

FIGURE 2. Sample Variance Report