

FILE COPY

1

DATE 9/26/89

TO: Information Services Branch

FROM: Computer Products Support Group

Init: KT LY (Init) (Init) (Init)

RE: DOD/SW/DK-89/027 (REPORT NO.)

ANNOUNCE IN GRA 6 I

AD-A213 984

PRIORITY ACTION IS REQUIRED

Attached

Form NTIS 231

Form 277/FCPC-01

NTIS 79

RDP (OF 272)

Consigned Inventory Acquisition Form (Interagency Agreement Number and Split)

Process for:	
	<input type="checkbox"/> Documentation
X File (Data)	<input type="checkbox"/> Mag Tape
	<input type="checkbox"/> Diskette
-----	
	<input type="checkbox"/> Documentation
H File (Software)	<input type="checkbox"/> Mag Tape
	<input checked="" type="checkbox"/> Diskette

DTIC ELECTE OCT 06 1989 DCS

Approved for public release; Distribution Unlimited

Action:

- Defense Sponsored: Acquire ADA Number
- Order Pending. Return immediately after copying necessary pages.
- Forward processing pages for documentation to Document Control Section.
- Subscription request \_\_\_\_\_ copies
- Shelf Stock request \_\_\_\_\_ copies
- Regular Processing. Do not send to Document Control Section.

Remarks:

Highlight / related documentation ANA 190024



15. COMPUTER PRODUCT ABSTRACT

The objective of the "Space System Cost Study", Contract MDA972-87C005, was to a methodology and automated database/model that would enable DARPA to evaluate "low cost satellite" programs and appropriate cost reduction approaches. The initial step in this cost study was to derive an estimate for developing and producing a "light" satellite under "business as usual" conditions. These conditions include a "start from scratch" philosophy and all the traditional operating procedures and documentation associated with building a reliable spacecraft.

The significance of the baseline cost modeling effort was to determine a cost estimate that would represent the current culture of the satellite industry. This culture generally follows a "business as usual", "start from scratch" development approach. The baseline program emulates a typical Space Division (U.S. Air Force) Space Division, Mil-Std 1450B-type spacecraft. The vehicle mission type used for the analysis is a communications-radio relay spacecraft. The cost estimates and trades to the baseline developed as a result of this study, are applicable to any spacecraft that contains a similar functional mix of structure, payload, and electronics.

The modeling process included evaluating three phases of hardware and software activities: the Development Phase, the Produceability Engineering Phase (PEP), and the Production Phase. The baseline program included cost values for each discrete item (up to 112) for the three phases of effort: Development, PEP, and Production. The 112 discrete items modeled and their costs were contained in the automated database/model. Each item carried through the PEP and Production Phases, if appropriate.

After the baseline program cost values were established (modeled), a list of candidate cost variables was established. These variables represent cost reduction approaches that address virtually all elements comprising the total program cost. The cost variables were targeted as items that could be controlled by the contracting agency or contractor. This control could be exerted either by specifications or special instructions to exclude/include the activity from a normal spacecraft development approach. All of the investigated candidate variables had a potential for program cost savings. Each had three options or degrees of sensitivity. This implied that the activities associated with candidate variables could be implemented completely or as a subset. The automated database/model (DARPASS) contains the cost results for each item/task for each candidate variable (Primary and Secondary) and the three options for each. The total number of results derived as a product of this study exceeds 45,000. See continuation sheet -

16. DATA FILE TECHNICAL DESCRIPTION

The model is contained on 5 1/4 - inch diskette(s), double density (360K), compatible with the IBM PC microcomputer. The diskettes are in the ASCII format.

17. SOFTWARE TECHNICAL DESCRIPTION

Software is written in;

Fortran \_\_\_\_\_ Cobol \_\_\_\_\_ Basic \_\_\_\_\_ Assembly \_\_\_\_\_ Other PASCAL \_\_\_\_\_

CPR Mr. IBM \_\_\_\_\_ Model(s) \_\_\_\_\_ Operating system(s) MS DOS \_\_\_\_\_

2.1 or GREATER \_\_\_\_\_

Minimum of 256 K bytes core. The following special features and/or additional requirements in hardware:

SIGNATURE OF AGENCY REPRESENTATIVE, PHONE NO., AND DATE DATE FORM

SIGNATURE OF NTIS REPRESENTATIVE AND PREPARED

Computer Product Abstract Continuation

The RCA PRICE H Hardware model was selected as the cost estimating tool for all items except software, which was estimated using Martin Marietta's in-house model, PCEM (software Parametric Cost Estimating Model). Software Description: The model is written in the PASCAL programming language for implementation on an IBM PC or compatible.

Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By <b>MT-SS, NTIS</b>	
Distribution/	
Availability Codes	
Dist	Avail and/or special
<b>A-1 21</b>	

# COMPUTER DISKETTE FILE PROPERTIES

<b>01. Completion Date</b> <table border="1" style="width: 100%; text-align: center;"> <tr> <th colspan="2">Year</th> <th colspan="2">Month</th> <th colspan="2">Day</th> </tr> <tr> <td>8</td><td>8</td> <td>0</td><td>3</td> <td>0</td><td>1</td> </tr> </table>			Year		Month		Day		8	8	0	3	0	1	<b>02. Long Title</b> DARPA - Space Systems Cost Study Automated Database			<b>03. Short Title</b> DARPA		
Year		Month		Day																
8	8	0	3	0	1															
<b>04. Copying Date</b> <table border="1" style="width: 100%; text-align: center;"> <tr> <th colspan="2">Year</th> <th colspan="2">Month</th> <th colspan="2">Day</th> </tr> <tr> <td> </td><td> </td> <td> </td><td> </td> <td> </td><td> </td> </tr> </table>			Year		Month		Day								<b>05. Subscription</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>06.</b> <input checked="" type="checkbox"/> New Product <input type="checkbox"/> Replacement		<b>07. Number of Diskettes</b> 2	
Year		Month		Day																
<b>08. Submitting Organization and Address</b> Martin Marietta Astronautics Estimating Systems Dept. MP DC 2800 P.O. Box 179 Denver, CO 80201				<b>09. Technical Contact(s) and Phone</b> Doug Dilts 303) 971-5104 Craig Mogensen (303) 971-4548																
<b>10. Host Computer/Model</b> IBM PC or compatible		<b>11. Memory Requirement</b> 256K or greater		<b>12. Language/Format</b> PASCAL/EXECUTABLE																
<b>13. Diskette Size</b> <input type="checkbox"/> 3 1/2 <input checked="" type="checkbox"/> 5 1/4 <input type="checkbox"/> Other _____		<b>14. Diskette Capacity</b> <input checked="" type="checkbox"/> 360K <input type="checkbox"/> 1.2M <input type="checkbox"/> 720K <input type="checkbox"/> 1.44M <input type="checkbox"/> 800K <input type="checkbox"/> Other		<b>15. Operating System/Version</b> DOS 2.1 or Greater																
<b>16. Number of Files</b> Disk 1 - 11 Disk 2 - 15		<b>17. Number of Records</b>		<b>18. Record Length</b>																
<b>19. Documentation</b> <input type="checkbox"/> on Diskette (File # _____) <input checked="" type="checkbox"/> Paper Copy																				
<b>20. Supplemental Information</b>																				
<b>21. For Submitting Organization Use</b>																				