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Technical Report
for the
Cargo Movement Operations System (CMOS)
Software Design Document



Science Applications International Corporation
An Employee-Owned Company

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Technical Report
for the
Cargo Movement Operations System (CMOS)
Software Design Document

29 APRIL 1990

Prepared under
Contract Number F11624-88-D-0001/6K12
CDRL A004-27

Prepared for
Standard Systems Center (SSC)
Deputy Chief of Staff for Acquisition
Cargo Movement Operations System Division
Gunter AFB, AL 36114

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MAY 3 1990
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Prepared by
Science Applications International Corporation (SAIC)
6 Eagle Center, Suite 2,
O'Fallon, IL 62269

DISTRIBUTION STATEMENT A
Approved for public release
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STATEMENT "A" per Walt Dzialo
 Standard Systems Center/Cargo Movement
 Operations Systems Division-SSC/AQFT,
 Gunter AFB, AL 36114
 TELECON 5/3/90

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SECTION I.

INTRODUCTION. The purpose of this Technical Report is to review the Software Design Document, CDRL A006-01, which was produced for the Government by Evaluation Research Corporation. The results are provided in the form of Data Item Discrepancy worksheets as requested by the CMOS Program Office.

SUMMARY. Not Used.

CONCLUSION. Not Used.

Handwritten notes:
Reviewed by [unclear]
Approved by [unclear]

SECTION II.

RESULTS.

Our analysis is provided in the attached Data Item
Discrepancy worksheets.

APPLICATIONS CSCI

The following comments are related to the
Applications CSCI:

ORIGINATOR CONTROL NUMBER: SDD1-0001
PROGRAM OFFICE CONTROL NUMBER:

DATA ITEM DISCREPANCY WORKSHEET

CDRL NUMBER: A006-01

DATE: 04/23/90

ORIGINATOR NAME: Ronald J. Lacour

OFFICE SYMBOL: SAIC

TELEPHONE NUMBER: 272-2999

SUBSTANTIVE: EDITORIAL: X

PAGE NUMBER: PARA. NUMBER:

COMMENT OR RECOMMENDED CHANGE:

All editorial comments for the Applications CSCI have been collected on this worksheet and are arranged in page number order.

RATIONALE:

N/A

CMOS PMO ACCEPTS COMMENT: YES [] NO []

ERCI ACCEPTS COMMENT: YES [] NO []

COMMENT DISPOSITION: ACCEPT [] REJECT []

COMMENT STATUS: OPEN [] CLOSED []

Cmnt No.	Page No.	Paragraph Number	Comment
1.	3	Fig. 1.2b	Delete reference to SBSS.
2.	14	Table 3.1.1	Change "CS 10000" to "CS 11000".
3.	15	Table 3.1.1	Change "CS 11245" to "CS 11250" and "CS 11250" to "CS 11260".
4.	16	Table 3.1.1	Change "IDS's" in CS 16430 to "IDC's".
5.	23	3.2.1	Change "workstations" to "processors" in the fourth sentence.

- | | | | |
|----|----|-----------|---|
| 6. | 32 | 3.2.1.7.1 | Change "estimated time of arrival" to "estimated date of delivery" in the Description subparagraph, line two. |
| 7. | 63 | 3.2.3.1.2 | Change "ETA" to "EDD" in sentences two and five of the Description subparagraph. |
| 8. | 68 | 3.2.3.2.2 | Change "ETA" to "EDD" in sentence two of the Description subparagraph. |

ORIGINATOR CONTROL NUMBER: SDD1-0002
PROGRAM OFFICE CONTROL NUMBER:

DATA ITEM DISCREPANCY WORKSHEET

CDRL NUMBER: A006-01

DATE: 04/23/90

ORIGINATOR NAME: Ronald J. Lacour

OFFICE SYMBOL: SAIC

TELEPHONE NUMBER: 272-2999

SUBSTANTIVE: X EDITORIAL:

PAGE NUMBER: 11

PARA NUMBER: 3.1.1

COMMENT OR RECOMMENDED CHANGE:

Add descriptions of CSC-to-CSC interfaces.

RATIONALE:

Paragraph 10.1.5.1.1 of DI-MCCR-80012A requires that interfaces among CSCs be documented and fully described. No such descriptions are evident in the SDD. Because of the large number of CSCs within the Applications CSCI, valid and pertinent interfaces should and do exist. In this regard, use of the ORACLE data base for storing data elements that may be transferred between CSCs and CSCIs should not be considered, particularly when determining whether an interface does or does not exist. To be more specific, if one module writes data to a file (or data base table) and another module reads that same data, a bonafide interface does exist between these two modules.

CMOS PMO ACCEPTS COMMENT: YES [] NO []

ERCI ACCEPTS COMMENT: YES [] NO []

COMMENT DISPOSITION:

COMMENT STATUS: OPEN [] CLOSED []

ORIGINATOR CONTROL NUMBER: SDD1-0003
PROGRAM OFFICE CONTROL NUMBER:

DATA ITEM DISCREPANCY WORKSHEET

CDRL NUMBER: A006-01

DATE: 04/23/90

ORIGINATOR NAME: Ronald J. Lacour

OFFICE SYMBOL: SAIC

TELEPHONE NUMBER: 272-2999

SUBSTANTIVE: X EDITORIAL:

PAGE NUMBER: 12

PARA NUMBER: Table 3.1.1

COMMENT OR RECOMMENDED CHANGE:

Add CS 13390 "DDN Status Notices" to this table.

RATIONALE:

This CSC was inadvertently omitted from the table.

CMOS PMO ACCEPTS COMMENT: YES [] NO []

ERCI ACCEPTS COMMENT: YES [] NO []

COMMENT DISPOSITION:

COMMENT STATUS: OPEN [] CLOSED []

ORIGINATOR CONTROL NUMBER: SDD1-0004
PROGRAM OFFICE CONTROL NUMBER:

DATA ITEM DISCREPANCY WORKSHEET

CDRL NUMBER: A006-01

DATE: 04/23/90

ORIGINATOR NAME: Ronald J. Lacour

OFFICE SYMBOL: SAIC

TELEPHONE NUMBER: 272-2999

SUBSTANTIVE: X EDITORIAL:

PAGE NUMBER: 41

PARA NUMBER: 3.2.2.2.9.1

COMMENT OR RECOMMENDED CHANGE:

Change "190 K bytes" to "200 K bytes" in the Design Constraints subparagraph.

RATIONALE:

The SSDD, page 63, Figure 5.3.2, allocates 200 K bytes to functional processors and data structures of the HHT. The same condition exists in the following paragraphs:

Page Number	Paragraph Number
42	3.2.2.2.11
45	3.2.2.3.3.1
46	3.2.2.3.3.2
54	3.2.2.4.3.1
57	3.2.2.4.10.1

CMOS PMO ACCEPTS COMMENT: YES [] NO []

ERCI ACCEPTS COMMENT: YES [] NO []

COMMENT DISPOSITION:

COMMENT STATUS: OPEN [] CLOSED []

ORIGINATOR CONTROL NUMBER: SDD1-0005
PROGRAM OFFICE CONTROL NUMBER:

DATA ITEM DISCREPANCY WORKSHEET

CDRL NUMBER: A006-01

DATE: 04/23/90

ORIGINATOR NAME: Ronald J. Lacour

OFFICE SYMBOL: SAIC

TELEPHONE NUMBER: 272-2999

SUBSTANTIVE: X EDITORIAL:

PAGE NUMBER: 43

PARA NUMBER: 3.2.2.2.14

COMMENT OR RECOMMENDED CHANGE:

Change the last sentence in the Description subparagraph to read, "All other shipments shall be displayed in green."

RATIONALE:

This is necessary to accurately describe the requirement in SS0519. The same condition exists in paragraph 3.2.2.4.9 on page 56.

CMOS PMO ACCEPTS COMMENT: YES [] NO []

ERCI ACCEPTS COMMENT: YES [] NO []

COMMENT DISPOSITION:

COMMENT STATUS: OPEN [] CLOSED []

ORIGINATOR CONTROL NUMBER: SDD1-0006
PROGRAM OFFICE CONTROL NUMBER:

DATA ITEM DISCREPANCY WORKSHEET

CDRL NUMBER: A006-01

DATE: 04/23/90

ORIGINATOR NAME: Ronald J. Lacour

OFFICE SYMBOL: SAIC

TELEPHONE NUMBER: 272-2999

SUBSTANTIVE: X EDITORIAL:

PAGE NUMBER: 49

PARA NUMBER: 3.2.2.3.14

COMMENT OR RECOMMENDED CHANGE:

Combine CS 10800 "UMMIPS" on page 49 with CS 11180 "UMMIPS" on page 56.

RATIONALE:

These two CSCs are identical and should be combined to eliminate possible design confusion.

CMOS PMO ACCEPTS COMMENT: YES [] NO []

ERCI ACCEPTS COMMENT: YES [] NO []

COMMENT DISPOSITION:

COMMENT STATUS: OPEN [] CLOSED []

ORIGINATOR CONTROL NUMBER: SDD1-0007
PROGRAM OFFICE CONTROL NUMBER:

DATA ITEM DISCREPANCY WORKSHEET

CDRL NUMBER: A006-01

DATE: 04/23/90

ORIGINATOR NAME: Ronald J. Lacour

OFFICE SYMBOL: SAIC

TELEPHONE NUMBER: 272-2999

SUBSTANTIVE: X EDITORIAL:

PAGE NUMBER: 64, 69

PARA NUMBER: 3.2.3.1.5.1, 3.2.3.2.5.2

COMMENT OR RECOMMENDED CHANGE:

Add the HHT constraint to the Design Constraints subparagraph.

RATIONALE:

HHTs have a constraint of 200 K bytes in the SSDD.

CMOS PMO ACCEPTS COMMENT: YES [] NO []

ERCI ACCEPTS COMMENT: YES [] NO []

COMMENT DISPOSITION:

COMMENT STATUS: OPEN [] CLOSED []

ORIGINATOR CONTROL NUMBER: SDD1-0008
PROGRAM OFFICE CONTROL NUMBER:

DATA ITEM DISCREPANCY WORKSHEET

CDRL NUMBER: A006-01

DATE: 04/23/90

ORIGINATOR NAME: Ronald J. Lacour

OFFICE SYMBOL: SAIC

TELEPHONE NUMBER: 272-2999

SUBSTANTIVE: X EDITORIAL:

PAGE NUMBER: Multi

PARA NUMBER: Multi

COMMENT OR RECOMMENDED CHANGE:

Combine the following CSCs into a single CSC: CS 10150 - page 40; CS 10720 - page 47; CS 11140 - page 55; CS 16050 - page 64; and CS 16350 - page 68.

RATIONALE:

Each of these CSCs are identical in that each has the identical shall statement (SS0783) allocated. A single CSC would streamline the design and reduce redundant software.

CMOS PMO ACCEPTS COMMENT: YES [] NO []

ERCI ACCEPTS COMMENT: YES [] NO []

COMMENT DISPOSITION:

COMMENT STATUS: OPEN [] CLOSED []

COMMUNICATIONS CSCI

The following comments are related to the
Communications CSCI:

ORIGINATOR CONTROL NUMBER: SDD2-0001
PROGRAM OFFICE CONTROL NUMBER:

DATA ITEM DISCREPANCY WORKSHEET

CDRL NUMBER: A006-01

DATE: 04/23/90

ORIGINATOR NAME: John J. Brassil

OFFICE SYMBOL: SAIC

TELEPHONE NUMBER: 272-2999

SUBSTANTIVE: EDITORIAL: X

PAGE NUMBER: PARA. NUMBER:

COMMENT OR RECOMMENDED CHANGE:

All editorial comments for the Communications CSCI have been collected on this worksheet and are arranged in page number order.

RATIONALE:

N/A

CMOS PMO ACCEPTS COMMENT: YES [] NO []

ERCI ACCEPTS COMMENT: YES [] NO []

COMMENT DISPOSITION: ACCEPT [] REJECT []

COMMENT STATUS: OPEN [] CLOSED []

Cmnt No.	Page No.	Paragraph Number	Comment
1.	1	1	Delete the period following the single digit section numbers (e.g., 1, 2, 3, etc.) to comply with the format required by the DID. The Table of Contents should also be updated to reflect this change.
2.	11	3.1.1	Revise Figure 3.1.1 so that it more accurately identifies the flow and storage of data. The data stores (e.g., RDBMS and DATA LOGs) should be depicted differently from the Communications CSCs. In addition, the "IMM" box should be expanded to its full name, i.e., "INCOMING MESSAGE MANAGER". Finally, the double arrows between the RDBMS and the OMM and the RDBMS and the DATA DISTRIBUTORS

make it appear that information is written to the RDBMS in the first case, and read from it in the second case. Neither of these actions agree with the applicable subparagraphs in this section.

ORIGINATOR CONTROL NUMBER: SDD2-0002
PROGRAM OFFICE CONTROL NUMBER:

DATA ITEM DISCREPANCY WORKSHEET

CDRL NUMBER: A006-01

DATE: 04/23/90

ORIGINATOR NAME: John J. Brassil

OFFICE SYMBOL: SAIC

TELEPHONE NUMBER: 272-2999

SUBSTANTIVE: X EDITORIAL:

PAGE NUMBER: 13

PARA NUMBER: 3.1.1

COMMENT OR RECOMMENDED CHANGE:

Add descriptions of CSC-to-CSC interfaces.

RATIONALE:

Paragraph 10.1.5.1.1 of DI-MCCR-80012A states: "The relationships among the CSCs shall be described. The relationship description shall identify and state the purpose of each CSC-to-CSC interface and shall summarize the data transmitted via the interface." Regardless of how data and/or control information is passed among the CSCs, any transmission of data elements constitutes an interface which must be described in this paragraph. The division of interfaces into "logical" and "physical" does not affect this requirement.

CMOS PMO ACCEPTS COMMENT: YES [] NO []

ERCI ACCEPTS COMMENT: YES [] NO []

COMMENT DISPOSITION:

COMMENT STATUS: OPEN [] CLOSED []