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TECHNICAL MEMORANDUM

(TM Series)

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1604 Simulation Program Descriptions Milestone 11	SYSTEM
Octal Dump for Simulation Augmentation Messages (SOCT)	DEVELOPMENT
by	CORPORATION
J. D. Solomon	2500 COLORADO AV
15 March 1963	SANTA MONICA
Approved	CALIFORNIA
J. B. Munson	

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1.0 SUBROUTINE IDENTIFICATION

1.1 Title

SOCT - Ident: K22, Mod. 01

1.2 Programmed

January 1963, J. D. Solomon, System Development Corporation

1.3 Documented

February 1963, J. D. Solomon, System Development Corporation

2.0 PURPOSE

This routine is used to output messages which have been previously generated and recorded on magnetic tape by the SIPSA* system, or recorded by the SIMSTN* program.

3.0 USAGE

3.1 Calling Sequence

L	RTJ		SOCT
	A		B
L+1	C		D
	ZRØ		
L+2	01	CN	TN
	00	UN	O
L+3	NORMAL RETURN		

*A description of SIPSA and SIMSTN is contained in the reference listed in Section 9.1.

where:

- A = Relative position of the first 160-A word
- B = Start address of data
- If C = 13, the output is on Tape Unit 3 and on the 1612 printer
- If C = 0, the output is on Tape Unit specified in L+2
- D = Data blocklength
- CN = Tape channel number
- TN = Logical tape unit
- UN = 1607 cabinet number

3.2 Tape Assignments

A COPII augmentation master tape is used on logical Tape Unit 1. A blank tape is used on the unit specified in L+2 of the calling sequence.

3.3 Output Data Format

The data format for on-line and off-line output is presented in Appendix B.

4.0 METHOD

SOCT is entered from the control program, DROPSA, and initializations are performed. The data block specified in the calling sequence is extracted, separated into 160-A format (12 bits per word), and stored in an output buffer. The message is then output on-line and/or on tape, and control is returned to DROPSA. (A data flow is presented in Appendix A, and the output format is presented in Appendix B.)

5.0 RESTRICTIONS

5.1 Hardware Requirement

A 1604 computer, two tape units on a 1607 cabinet, and a 1612 printer are required.

5.2 Required Subroutines

The control program, DROPSA, and the subroutines OUTPUT, OUTERR, and OCTBCD are required.

5.3 Index Register Requirements

Index registers 1-6 are used. The contents of index register 6 are not saved.

6.0 TIMING

The time required to dump a 6 word message is 100 m.s.

7.0 STORAGE REQUIREMENTS

Program	153 ₈ Cells
Temporary and Constants	<u>50₈</u> Cells
Total	223 ₈ Cells

8.0 VALIDATION TEST

8.1 Test Inputs

8.1.2 Binary Tape

A binary tape, containing augmentation messages, was generated by the SIPSA System*.

8.1.3 Control Deck

The structure of the card deck used in the test is presented in Appendix C.

8.2 Procedure

- A COPII augmentation master tape was mounted on logical Tape Unit 1. The input tape was mounted on logical Tape Unit 2.

The card deck shown in Appendix C was read into the 533 reader and the test was executed.

Data was output on logical Tape Unit 3 and the test was terminated.

8.3 Test Outputs

A partial listing of the output tape is presented in Appendix B.

The data on the input tape and output tape was compared and found to be identical.

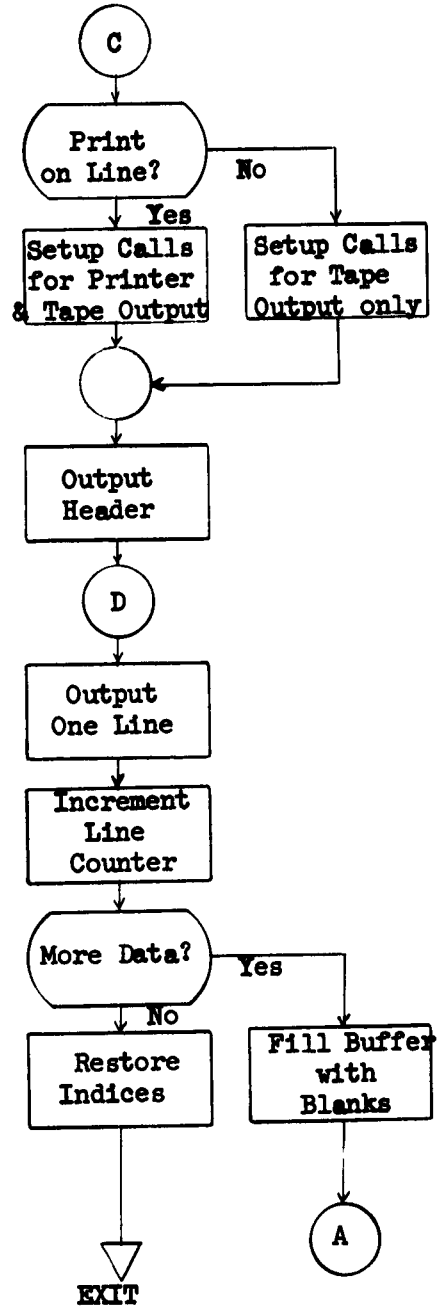
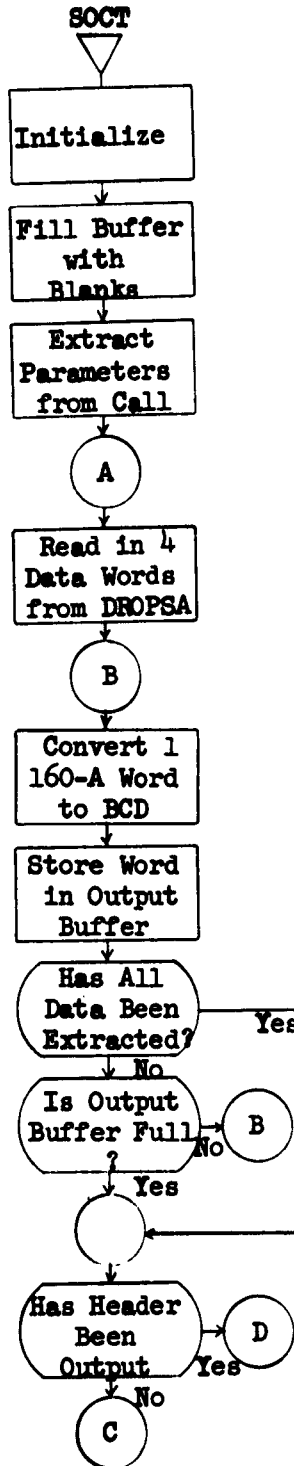
9.0 REFERENCES

9.1 TM-(L)-734/015/00, Computer Program Design Specifications for the Simulation of the Augmented SCF Environment at the STA and CPDC, System Development Corporation, 21 November 1962.

9.2 TM-(L)-734/017/00, Data Reduction and Output Preparation System for Augmentation (DROPSA), System Development Corporation, 15 March 1963.

9.3 CPL Catalogue No. 75922.

APPENDIX A



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APPENDIX B

OCTAL DUMP OF MESSAGE CONTAINING 6 WORDS

1.	2.	3.	4.	5.	6.
7777	0113	0012	4000	0000	3652

OCTAL DUMP OF MESSAGE CONTAINING 4 WORDS

1.	2.	3.	4.
7777	0405	0503	6667

OCTAL DUMP OF MESSAGE CONTAINING 6 WORDS

1.	2.	3.	4.	5.	6.
7777	0113	0012	4000	0001	3651

OCTAL DUMP OF MESSAGE CONTAINING 4 WORDS

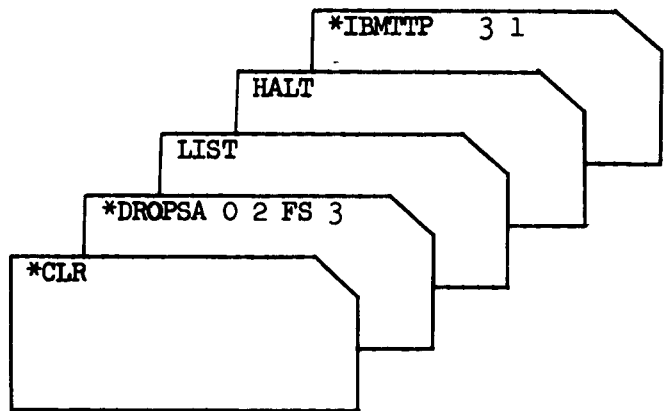
1.	2.	3.	4.
7777	0405	0503	6667

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APPENDIX C



CONTROL DECK

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R. Dugas	22125	J. McKeown	23013
		J. Milanese	22155
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I. Greenwald	22094	D. Persico	24083
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System Development Corporation,
Santa Monica, California
1604 SIMULATION PROGRAM DESCRIPTIONS
MILESTONE 11 OCTAL-DUMP FOR SIMULATION
AUGMENTATION MESSAGES (SOCT).

Scientific rept., TM(L)-734/020/00,
by J. D. Solomon. 15 March 1963, 7p.
3 refs.

(Contract AF 19(628)-1648, Space Systems
Division Program, for Space Systems
Division, AFSC)

Unclassified report

DESCRIPTORS: Programming (Computers).
Satellite Networks.

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Reports that SOCT (Octal Dump for
Simulation Augmentation Messages)
is used to output messages which
have been previously generated and
recorded on magnetic tape by the
SIPSA (Simulated Input Preparation
System for Augmentation) system, or
recorded by SIMSTN (Augmented Tracking
Station Simulation Program).

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