PROJECT MAC

Computer Systems Research Division

June 20, 1974

Request for Comments No. 54

LIST OF DOCUMENTATION IN MULTICS HISTORICAL FILES IN ROOM 540

by D. L. Jones

This note describes briefly the contents of the Multics historical files. There are three parts to this document:

1. A list, by file drawer, of the major items in Room 540
2. A listing of series on file, and of missing items in these series
3. A list of hardware specifications for the GE 645 and the HISI 6180, organized in 26 loose leaf books.

Contents of files in Room 540

File No. 1		
	1a	BOO Originals (Surplus Folders)
	1b	GOO and MOO (Originals)
	1c	MHDM and MPL (Originals)
	1d	(Surplus folders)
File No. 2		
	2a	Empty
	2b	"
	2c	"
	2d	"
File No. 3		
	3a	Empty
	3b	"
	3c	"
	3d	"
File No. 4		
	4a	MCB-560-1140 (Originals)
	4b	MCB-1-559
	4c	MSB-1-113
	4d	(Surplus black binders)
File No. 5		
	5a	Protection Library
	5b	MAB MOSN (Originals)
	5c	MIB MTB "
	5d	RFC "
File No. 6		
	6a	MPM (Originals)
	6b	SPS "
	6c	GUS, SWG and SWS (Originals)
	6d	Archives -- MPM, SPS, SWG and GUS
File No. 7		
	7a	Empty
	7b	"
	7c	"
	7d	"
File No. 8		
	8a	GE and HISI Hardware Specifications I
	8b	" II
	8c	" III
	8d	SPS Revision 1-44
File No. 9		
	9a	MSPM BTABLE-BD.8
	9b	" BD.9-BF.9
	9c	" BF.20-BK
	9d	" BK-BQ

Contents of files in Room 540 (Continued)

File No. 10		
	10a	MSPM BQ-BS
	10b	" BT-BX
	10c	" BX-BZ
	10d	MSB
File No. 11		
	11a	MIB
	11b	MTB-001-059
	11c	MTB-60-
	11d	MOSN-34-272
File No. 12		
	12a	RFC-1-39
	12b	" -40-
	12c	MOSN-1.0-99.
	12d	" 34-272
File No. 13		
	13a	Empty
	13b	"
	13c	"
	13d	"
File No. 14		
	14a	Empty
	14b	"
	14c	"
	14d	"
File No. 15		
	a**	h**
	b**	i**
	c*	j*
	d*	k*
	e*	l*
	f*	m*
	g*	n*
File No. 16		
	SUPPLY CABINET	

* Empty
** Obsolete Microfiche

Multics Series On File in Room 540 June 18, 1974

1. B0001 - B0100 **
   Missing: B0006, 7, 11, 40, 87, 90, 91, 96, 98 *

2. G0001 - G0102 **
   Missing: G0001, 8*, 11, 35, 48, 64*, 79

3. M0001 - M0131 **
   Missing: M0027, 44, 78

4. MCB - 1 - 1140 **
   Missing: MCB 179, 217, 529, 775, 953 - 956

5. MSB - 1 - 113 **
   Missing: 80

6. MOSN - 1 - 273
   Missing: 131, 143, 144, 152, 203, 254, 260

7. MAB - 1 to date
   Missing: None

8. MIB - 1 to date
   Missing: None

9. MTB - 1 to date
   Missing: None

10. RFC - 1 to date
    Missing: None

11. MPL - 1-70
    Missing: None

12. MHDM - 1 - 22
    Missing: None

** Discontinued with last number in series
* Number never used for a published document

GE and HISI HARDWARE SPECIFICATIONS

BOOK 1

MAC Processor Design memo 1 - Operation Code Assignment for Additional Codes used in 636

MAC Processor Design memo 3 - Memory Addressing, configuration and Interlace Control on GE636

MAC Processor Design memo 5 - Notes regarding address modification

MAC Processor Design memo 6 - Additional Maintenance Panel features fault logic

MAC Design memo 2 -- Active unit memory hogging

MAC Design memo 3 -- 645 System Interrupt Concept

MAC Design Memo 4 -- Status Safestore and Restore following page faults during the normal mode of operation

MAC Design Memo 5 -- Status Safestore and Restore following address faults during the transfer mode of operation
*(See below)

MAC System Design Memo 8 -- Summary of memory topology switches

MAC Design Memo 8 -- Store control unit (SCU) instruction

MAC Design Memo 9 -- Status Safestore and Restore following Address faults during the XEC mode of operation

MAC Design memo 10 -- Status Safestore and Restore following address faults during the Repeat link mode of operation

MAC Design Memo 11 -- Status Safestore and Restore following Address faults during the repeat mode of operation

MAC Design Memo 12 -- Status Safestore and Restore following address faults during the repeat double mode of operation

MAC Design Memo 14 -- The Appending Mechanism

MAC Design Memo 15 -- The Associative Memory Cycles

MAC Design Memo 16 -- The Memory Interface Logic

MAC Design Memo 17 -- Status Safestore and Restore for Interrupts during the execute double mode of operation

MAC Design Memo 18 -- the GE 645 Fault Repertoire

MAC Design Memo 19 -- The modes of execution (Master/Slave) and the modes of address (Absolute/Append)

MAC Design Memo 20 -- The SCU-RCU catalog

MAC Design Memo 22 -- Interrupt Recognition and Servicing in the GE645 Processor

MAC Design Memo 23 -- 645 System Clocks

MAC Design Memo 24 -- Sequence Character Reverse

645 Specifications (600 Series GE Specifications)

*MAC Design Memo No. 6 -- System Initialization and Bootload

BOOK 1 (Continued)

GE Systems Design and Analysis Memorandum 6A
Analysis of memory allocation to the GE 645 processor as derived from load factors and delay probabilities

GE Systems Design and Analysis Memorandum 16
Notes towards modeling paging and segmentation in the 645

GE Systems Design and Analysis Memorandum 18
Some mathematical considerations of time-sharing scheduling algorithm s

GE System Design and Analysis Memorandum 19
A proposal for modeling associative memory performance

GE Systems Design and Analysis Memorandum 21
Timings Pertinent to utilization of MAP Command on DS-25

GE Systems Design and Analysis Memorandum 24
Proposal for stage 1 simulation of the GE 645-Multics Systems

BOOK 2

GE Systems Design and Analysis Memorandum 25
Simulation of i/o and secondary storage in a Multics File System Model

GE System Design and Analysis Memorandum 28
Description of a multiprogramming simulator written in simscript

GE Systems Design and Analysis Memorandum 29
Proposal for on-line performance monitoring of GE 645

GE Systems Design and Analysis Memorandum 31
625/635 Memory Analysis

GE Systems Design and Analysis Memorandum 32
DS-25/Proposed Multics DIM simulation

GE Systems Design and Analysis Memorandum 33
IOC-B simulation model

GE Systems Design and Analysis Memorandum 35
The basic GIOC model

GE Systems Design and Analysis Memorandum 37
SIMULA II - General concepts

GE Systems Design and Analysis Memorandum 38
Development of a tool for use by marketing in timing and configuring the 625/635 system

GE Systems Design and Analysis Memorandum 39
Simulation approach for GE 645 processor model

GE Systems Design and Analysis Memorandum 40
High-traffic analysis of a general compiler configuration

GE Systems Design and Analysis Memorandum 54
Extensions to SIMULA

BOOK 3

43A140648	Product Performance Spec -- 635 Memory Module
M50EB00087	Engineering Product spec - MSC388 Mass Storage Controller (NOT-ISSUED)
43A140738	Product Performance spec - GE-635 Processor
M50EB00013	Engineering Product Spec -- Channel ASA Magnetic Tape Unit
M50EB00006	Engineering Product Spec - MTH211 and MTH311 Magnetic Tape Units

BOOK 4

M50EB00349	Operation and Maintenance Instruction - Extended memory subsystem fixed head disk (Librascope 3800)
M50EB00354	Operation and Maitenance Instruction - DSC302 Data Storage Controller - Vol. 1
M50EB00156	Egnineering Product Spec - GE-645 Model B System Clock
M50EB00113	GE-645 Software Performance Spec - B -- GE-645 Basic

BOOK 5

M50EB00134	Engineering Product Spec - Input/Output Controller (IOC) (DC8030) Extended Character Set Printer PRT202
M50EB00098	Engineering Product Spec - Mass Storage Unit (MSU) Extended Memory Modu
M50EB00102	Product Design Spec - GE-115 system

BOOK 6

M50EB00105	Engineering System Spec - GE-645 Prototype System

BOOK 7

M50EB00035	Engineering Product Spec - ASA Magnetic Tape Controller to Magnetic Tape Unit Interface
M50EB00041	Engineering Product Spec - MDS300 Magnetic Drum Subsystem (Fairchild)
M50EB00070	Engineering Product Spec - Extended Character Set Printer Subsystem PRT.
M50EB00044	Engineering Product Spec - DS-15 Interchangeable Media Disc File

BOOK 8

M50EB00029	Engineering Product Spec - Common Peripheral High Speed Card Punch Subsystem (CP-21)
M50EB00003	Engineering Product Spec - 300 CPM High Speed Card Punch

BOOK 9

M50EB00125	Engineering Product Spec - GE-645 Prototype System Clock
M50EB00112	GE-645 Software Performance Spec - B -- General Implementation Specs.
M50EB00114	GE-645 Software Performance Spec - B -- GE-645 Fortran IV
M50EB00310	Engineering Product Spec -- MSU388 Mass Storage Unit

BOOK 10

M50EB00410	Unit Test Spec - GE-645 Prototype System Clock
M50EB00446	GE-645 System Test Specification
43A138524	Product Performance Spec - Operator Console Subsystem 600 line
M50EB00449	Software Performance Spec - GIOC/IOC Compatibility Processor (K2)
M50EB00474	Design Description - Adaptor Maintenance Aid
43A122030	Product Performance Spec - Limited Crossbar Magnetic Tape Subsystem (30/120) KC
43A126642	Product Performance Spec - for the High Speed Printer Subsystem Common Peripheral
43A127567	Standard Terminology - Time and Failures
43A130459	Product Performance Spec - Low Speed Card Punch Subsystem
43A130523	Product Performance Spec - High Speed Card Reader Subsystem
43A133369	Product Performance Spec - Disk Storage Unit Subsystem

BOOK 11

M50EB00001	Common Design Requirement for Computer Department Products
M50EB00405	Software Performance Spec - C -- Multics

BOOK 12

M50EB00023	Engineering Product Spec - High Speed Card Reader CRZ201
	GE-645 System Manual -- The Compatibles/600
	Memo 1 - Revision 6 -- Segmentation in the 636

BOOK 13

43A160277	Product Performance Spec - GIOC

Book 14 a and b

MISCELLANEOUS

Book 15

43A155839	Drum Storage Unit - Purchase Specs.
43A130934	Product Design Spec - Bit Buffer Unit (BBU) - Class B
M50EB00124	Product Performance Spec - Custom Direct Word Channel Adaptor
43A163648	Product Design Spec - GIOC Controller
43A160017	Product Performance Spec - DSU-250 Mass Memory System
43A177856	Engineering Product Spec - PRT300 High Speed Line Printer Subsystem
43A181700	Product Design Spec - GIOC Appendix A-GIOC Adapter
43A181701	Product Design Spec - GIOC Appendix B-GIOC Brute Force
43A181702	Product Design Spec - GIOC Appendix C-Field changeable

Book 16

43A181703 Product Design Spec. - GIOC Appendix D-AC and DC Power

43A181704 Product Design Spec - GIOC Appendix E-High Performance

43A181705 Product Design Spec - GIOC Appendix F-IPA 600

43A181706 Product Design Spec - GIOC Appendix G-Teletypewriter

43A181707 Product Design Spec - GIOC Appendix H-Character

43A181708 Product Design Spec - GIOC Appendix J-Character

43A181709 Product Design Spec - GIOC Appendix K-Dialing Adapter

GIOC Design Memo 1 Definition of Terms

GIOC Design Memo 2 Buffer Interface Expansion

GIOC Design Memo 3 Status Storage for Direct Channels

GIOC Design Memo 17 Average Sustained Throughput-Direct Channels

GIOC Design Memo 18 Adapter Interface

GIOC Design Memo 21 Adapter Interface Parity Errors

43A137918 Product Performance Spec - 300 Card Per Minute Punch

43A142393 Product Performance Spec - Magnetic Drum Subsystem

43A143085 Product Performance Spec - 7/9 Channel ASA Compatible Magnetic Tape Subsystem

43A143619 Product Performance Spec - Dual Channel Adapter

43A144025 Product Performance Spec - Common Peripheral Printer Model PRT201

43A144455 Product Design Spec - 625/635 Processor

BOOK 17

43A145284 Definition and Classification of Equipment Malfunctions Component Engineering

43A145285 Definition of Mean Time to Repair

43A15918Q Test Spec - 7/9 Channel Magnetic Tape Controller

M50EB00175 GE-645 Software Performance Spec - B: GE-645 PL/I Compiler

M50EB00171 Software Performance Spec - B: 645 Free-standing Simulator

M50EB00167 Software Performance Spec: GE-645 GECOS - IOC Version

M50EB00188 Software Performance Spec - C: Multics/GECOS Monitor

GE-645 Software Performance Spec - B: GE-645 BASIC

GE-645 Software Performance Spec - B: GE-645 FORTRAN IV

GE-625/635 Software Performance Spec - B: ALGOL

BOOKS 18 and 19

M50EB00107 Engineering Product Spec - GE-645 Prototype Processor

Book 20

M50EB00517 Engineering Product Spec - DSU270 Fixed Head Magnetic Disc Subsystem

43A177855 Engineering Product Spec, Part I: Basic High Speed File Channel for the GE-400/600 Computer Systems

DSU270 Disc Storage System

BOOK 21

M50EB00131 Performance Spec - B: Multics Assembler

43A143120 Product Design Spec - 625/635 Memory Controller

Preliminary Product Performance Spec - Custom Direct Adapter

43A177853 Engineering Product Spec, Part I, -- High Speed file channel DSS170 for the 400/600 computer systems

Book 22

43A177737 Engineering Product Spec - 2 6000 Core Storage Unit Power System

43A177741 Engineering Performance Spec (EPS-1) 645 Follow-On CPU

43A177742 Engineering Product Spec, Part I Extended Address Direct Channel

43A177744 Engineering Product Spec Bulk Core Storage Unit Modular Power System

43A177750 Engineering Product Spec Bulk Storage Unit Modular Power System

43A177851 Engineering Product Spec, General Design Requirements for GE-655 and GE-355 Systems

43A177856 Engineering Product Spec, Part I PRT300 High Speed Line Printer Subsystem

43A177857 Engineering Product Spec, Part I Card Reader for MQX Board Tester

43A177861 Engineering Product Spec, Part I DSS175/180 Subsystems

Book 23

43A177862 Engineering Product Spec, Part I Device Channel Adapter (DCA)

43A177874 Engineering Product Spec, Part I Peripheral Subsystem Interface (PSI)

43A177875 Engineering Product Spec - 1 Microprogrammed Peripheral Controller

43A177879 Engineering Product Spec, Part I MPC - PSI Link Adapter

43A177880 Engineering Product Spec, Part I 655 IOM Peripheral Subsystem Interface Adapter

BOOK 23 (Continued)

43A177886	Engineering Product Spec (EPS) Document Handler Software for the DES6000

BOOK 24

43A219601	Engineering Product Spec, Part I GE-655 Processor
43A219602	Engineering Product Spec, Part I 655 System Controller
43A219603	Engineering Product Spec, Part I 655/6000 Core Storage Unit
43A219604	645X IOM EPS-I Draft
43A219613	Engineering Product Spec, Part I DEC-6000 Data Entry Controller
43A232215	MTC-500 Controller, EPS-1 Engineering Product Spec, Part I

BOOK 25

43A232230	Engineering Product Spec - 1 DSC181/DSC190 Controller
43A232273	Engineering Product Spec, Part I Datanet 305 Subsystems
43A232439	Engineering Product Spec, Part I for DHC601 Document Handler Channel (DRD236 Reader/Sorter)
43A232499	Engineering Product Spec, Part I H-6000 System Control Center
43A232719	Engineering Product Spec, Part I 655 Extended Instruction Set Processor
43A238300	645F/6100 SCU EPS I Draft

BOOK 26

43A239623	Engineering Product Spec, Part I MTS500 Magnetic Tape Subsystem
43A239851	Engineering Product Spec - 1 DSS181 and DSS190 Removable Media Disk Storage Subsystems
43A239854	Engineering Product Spec, Part I 6000B Input/Output Multiplexer (IOM) Central
58001001	Engineering Product Spec Bulk Core Storage Unit Modular Power System
58001105	Engineering Product Spec, Part I Remote Line Printer, RLP 300
58001110	Engineering Product Spec, Part I Computer Monitor Adapter
58001112	Engineering Product Spec, Part I Input/Output Controller Type I (IOC)

BOOK 26 (Continued)

43A17734	Engineering Product Spec Series 6000 Low Cost Core Storage Unit Modular Power System
43A17735	Engineering Product Spec Series 6000 MOS Memory Modular Power System