## MULTICS STAFF BULLETIN-4

To: Multics Staff

From: J. H. Saltzer

Date: December 15, 1971

Subject: MPM Table of Contents

Enclosed is the current "target" table of contents for the Multics Programmers' Manual. Update 9 converted the MPM part of the way towards this target. Since the MPM organization will be temporarily a mixture of old and new reference sections, the enclosed target may be of some help in figuring out where suggested additions might be placed.

PREFACE		iii
FOREWARD:	Plan of the Multics Programmers' Manual	V
PART I: I	NTRODUCTION TO MULTICS	
Chapter l	Overview of Multics	
	Highlights of the Multics system A Multics bibliography	1- 1 1-15
Chapter 2	Introduction to the Concepts of Multics	
	The Multics virtual memory The GE-645 processor Use of the virtual memory Intersegment linking and addressing Program synthesis Access control Secondary storage reliability measures Protection rings Input and output Calendar clock	2-1
Chapter 3	Beginner's Guide to the Use of Multics The mechanics of console usage A Multics console session Typing and editing information Using the Multics storage system Access control in Multics	3- 1 3- 5 3-11 3-19 3-29
Chapter 4	Programming in the Multics Environment Addressing on-line storage Input and output programming Some sample programs	4-1

vii--11/26/71

## MULTICS PROGRAMMERS' MANUAL

contents

Page viii

PART II: REFERENCE GUIDE TO MULTICS

Section 1 The Multics Command Language Environment

- 1.1 The Multics command repertoire
- 1.2 Protocol for logging in
- 1.3 Typing conventions
- 1.4 The command language
- 1.5 Naming conventions
- 1.6 The Limited Service System
- 1.7 Absentee use of Multics
- 1.8 The Multics Dartmouth System

Section 2 The Multics Programming Environment

- 2.1 The Multics subroutine repertoire
- 2.2 Programming languages
- 2.3 The usual contents of an address space
- 2.4 Error handling
- 2.5 Constructing commands
- 2.6 Standards for system programming
- 2.7 The use of interprocess communication
- 2.8 Clock services

Section 3 Using the Multics Storage System

- 3.1 The storage system directory hierarchy
- 3.2 The system libraries and search rules
- 3.3 Dynamic linking and unlinking
- 3.4 The use of protection rings
- 3.5 Multi-segment files
- 3.6 The file manager

Section 4 Input and Output Facilities

- 4.1 Use of the input and output facilities
- 4.2 Use of the input and output system
- 4.3 Available input and output facilities
- 4.4 Bulk input and output
- 4.5 Graphics support on Multics
- 4.6 Writing an I/O system interface module

## MULTICS PROGRAMMERS' MANUAL

Contents

Page ix 11/26/71

Section 5 Standard Data Formats and Codes

- 5.1 ASCII character set
- 5.2 Punched card codes
- 5.3 Multics standard magnetic tape format
- 5.4 Multics standard data type formats
- 5.5 Standard segment formats
  5.6 Standard object segments
  5.7 Standard stack formats

Section 6 Other Standards and Conventions

- 6.1 Reserved names
- 6.2 Standard subroutine calling sequence
- 6.3 Short calling sequence6.4 Standard checksum
- 6.5 System conditions and default handlers
- 6.6 Control argument conventions
- Section 7 Miscellaneous Reference Data
  - 7.1 System error codes and meanings
  - 7.2 List of error messages
  - 7.3 Hardware fault assignments
  - 7.4 Simulated fault assignments

  - 7.5 Compatibility with future hardware7.6 List of names in the system libraries7.7 Obsolete Procedures

Section 8 Commands and Active Functions

Section 9 Subroutine Calls

Reference Guide Index