

## TOPS-20 Documentation Directory

### Electronic Distribution

This document describes the manuals for  
the TOPS-20 Notebook Set.

This is a new manual.

OPERATING SYSTEM: TOPS-20 V7

Software Update Tape 2, April 1990

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The postage-prepaid READER'S COMMENTS form on the last page of this document requests the user's critical evaluation to assist us in preparing future documentation.

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INDEX

## **PREFACE**

The TOPS-20 Documentation Directory describes the manuals of the TOPS-20 Software Notebook set. The Notebook set consists of 24 notebooks of manuals. Some manuals serve a general purpose while others are highly specialized. To get the most from each manual, it is important to know where to look for the particular information of interest to you. The purpose of this manual is to make the information in the TOPS-20 Notebook Set easier to find.

Chapter 1, What Each Manual Contains, lists what manuals are in which notebooks, and give a brief synopsis of each manual.

Chapter 2, Where to Find Information on Specific Topics, describes which manuals or chapters to refer to for information on various topics about TOPS-20.

## CHAPTER 1

### WHAT EACH MANUAL CONTAINS

#### 1.1 NOTEBOOK 1

##### 1.1.1 DECSYSTEM-20 Technical Summary

The technical summary is a detailed introduction to all aspects of the DECSYSTEM-20 - from the processors and peripheral devices to the TOPS-20 software and DIGITAL's support services. The technical summary is primarily intended for system programmers and computer system specialist already familiar with computer hardware and software. However, it contains useful information for application programmers, system managers, and system operators.

##### 1.1.2 TOPS-20 User's Guide

The TOPS-20 User's Guide describes the functions that you can perform with the TOPS-20 operating system. It contains descriptions of how to use the system, obtain system information, enter programs, run programs, and modify programs. The audience for this manual ranges from the entry level first-time user to the experienced higher level language programmer.

This manual is the first document of two user-oriented manuals. Once you learn about the functions described in this manual, you can refer to the second and more advanced manual, the TOPS-20 Commands Reference Manual, for complete descriptions of all of the TOPS-20 commands and how to use them.

##### 1.1.3 TOPS-20 User Utilities Guide

The TOPS-20 User Utilities Guide is intended for both the privileged and the nonprivileged user who needs information on utility programs that run on the TOPS-20 operating. This document provides detailed information on the following TOPS-20 utility programs: MAIL, RDMAIL,

## WHAT EACH MANUAL CONTAINS

FILCOM, CREF, MAKLIB, DUMPER, and PLEASE. The manual contains tutorial and reference material in each chapter to accommodate both the novice and experienced user.

Before you use this manual, you should be familiar with the information contained in the TOPS-20 User's Guide, and the TOPS-20 Commands Reference Manual.

### 1.2 NOTEBOOK 2

#### 1.2.1 TOPS-20 Commands Reference Manual

The TOPS-20 Commands Reference Manual is an alphabetically-arranged description of all operating system commands (EXEC commands) available to the nonprivileged timesharing user of TOPS-20.

In addition, there are two appendixes for quick reference - a list of commands grouped by function, and an alphabetical summary of commands showing what variety of argument each uses and whether it calls a program or otherwise affects memory.

To use this manual properly, you should first read and understand the TOPS-20 User's Guide.

#### 1.2.2 Batch Reference Manual

The TOPS-10/TOPS-20 Batch Reference Manual describes the commands for controlling jobs operating under the batch system. As a reader of this manual, you are expected to be familiar with the operating system commands available to timesharing jobs and with the commands to the various system programs that you will use. That reference material is not included in this manual. Therefore, it is recommended that you use this manual with the system commands manual for your particular operating system.

#### 1.2.3 TOPS-20 EXEC Message Manual

This manual contains detailed explanations of the TOPS-20 EXEC, or Command Processor, messages. Use this manual if you need more detailed information than is provided in a TOPS-20 message.

This manual documents messages that a nonprivileged user can get while using the TOPS-20 Command Language. Many of the messages that a user can receive come from TOPS-20 monitor calls. These messages are documented in this manual, along with any information added to the messages by the EXEC, if you can get them as a direct result of an

## WHAT EACH MANUAL CONTAINS

EXEC command. For a more complete listing of the messages that can come from TOPS-20 monitor calls, see the TOPS-20 Monitor Calls Reference Manual.

### 1.3 NOTEBOOK 3

#### 1.3.1 EDIT User's Guide

This manual is written for both the beginner and the experienced DECSYSTEM-20 users who are starting to learn EDIT. The manual describes files and the programs that create, edit and use them.

#### 1.3.2 EDIT Reference Manual

The DECSYSTEM-20 EDIT Reference Manual is a complete reference manual describing the entire EDIT environment. It is designed primarily for use by the beginner who has used and is familiar with other editors, as well as the experienced user referencing the EDIT program.

This manual assumes that you have access to a DECSYSTEM-20 and know how to login. This manual also assumes you know how to create a file, do simple edits, and close a file.

#### 1.3.3 TOPS-20 TV Editor Manual

This manual describes the TV editor. TV is a character-oriented editor; you can modify one or more characters in a line without retyping the rest of the line. Most editing can be done using a few simple commands; these basic commands and concepts make up Section 1, which is written for the first-time user. The more experienced user can select any of a large set of sophisticated commands; these commands are explained in Section 2, which is intended to be a complete reference manual for the experienced TV user.

This manual assumes you are familiar with an editor, and are familiar with the TOPS-20 User's Guide.

#### 1.3.4 Introduction to DIGITAL Standard RUNOFF

This manual gives step-by-step instruction in the use of the DIGITAL Standard Runoff (DSR) text-formatting program. DSR is a program that formats documents according to certain special commands that you put into an input file along with the text. You do not need extensive experience with computers to use this manual. However, you should be

## WHAT EACH MANUAL CONTAINS

familiar with the basic concepts of your operating system, and you should know how to create and edit files.

### **1.3.5 TOPS-20 DIGITAL Standard RUNOFF User's Guide**

This manual describes the text-formatting program, DIGITAL Standard Runoff (DSR), and provides usages and reference information on the program. This manual is intended for users of the TOPS-20 operating system who need to format documents. Users are expected to have some familiarity with TOPS-20 system concepts and to know how to use a text editor.

### **1.3.6 TOPS-10/TOPS-20 DECmail/MS Manual**

This manual describes the commands for the DECmail/MS system. The DECmail/MS mail system allows TOPS-10 and TOPS-20 users to send messages to, and receive them from, other users. The mail system also provides users with facilities for filing, retrieving, editing and discarding these messages. This manual addresses users at all levels of expertise, introducing the beginner to the DECmail/MS system, then describing the DECmail commands in functional groupings.

## **1.4 NOTEBOOK 4**

### **1.4.1 TOPS-20 DDT Manual**

This manual describes the use of TOPS-20 DDT, the Dynamic Debugging Tool for MACRO-20 programs. Although TOPS-20 DDT can be used to debug the compiled code of programs written in higher-level languages, this manual illustrates the use of TOPS-20 DDT to debug programs written in MACRO-20 only.

This manual is both an introduction to the basic functions of TOPS-20 DDT and a reference guide to all TOPS-20 DDT commands and functions. It assumes that the reader is familiar with using TOPS-20, has done some programming in MACRO-20, and is familiar with the format of MACRO-20 instructions.

### **1.4.2 DECsystem-10/DECSYSTEM-20 Processor Reference Manual**

This document explains the machine language programming of the central processors used in the DECsystem-10 and DECSYSTEM-20. The manual defines how each processor functions, exactly what instructions do, how it handles data, what control and status information means, and

## WHAT EACH MANUAL CONTAINS

what programming techniques and procedures must be employed to utilize it effectively.

The text of the manual is devoted entirely to functional description and programming. The programming is given in machine language, in that it uses only the basic instruction and device mnemonics and symbolic addressing defined by the assembler.

### 1.5 NOTEBOOK 5

#### 1.5.1 MACRO Assembler Reference Manual

This manual is a reference for the programmer with some knowledge of assemblers and assembly languages. MACRO is the symbolic assembler program for the DECSYSTEM-20. The assembler reads a file of MACRO statements and composes relocatable binary machine instruction code suitable for loading by LINK, the system's linking loader.

#### 1.5.2 TOPS-20 LINK Reference Manual

This document describes LINK-20, the linking loader for TOPS-20. LINK merges independently compiled or assembled modules into a single executable program. The manual describes how to load programs with the DEBUG, EXECUTE, and LOAD commands, how to load programs that use overlays, how to load programs with PSECTS, and how to load extended addressing programs.

#### 1.5.3 TOPS-20 Monitor Calls User's Guide

This manual describes the use of TOPS-20 monitor calls, which provide user programs with system services such as input/output, process control, file handling, and device control. The TOPS-20 Monitor Calls User's Guide is written for the assembly language user who is unfamiliar with the DECSYSTEM-20 monitor calls. The manual introduces the user to the functions that can be requested of the monitor from within the assembly language programs. The manual also teaches the user how to use the basic monitor calls for performing these functions.

This manual is not a reference document, nor is it complete documentation of the entire set of monitor calls. It is organized according to functions, starting with the simple and proceeding to the more advanced.

## WHAT EACH MANUAL CONTAINS

### 1.6 NOTEBOOK 6

#### 1.6.1 TOPS-20 Monitor Calls Reference Manual

This manual describes all the monitor calls that exist in the TOPS-20 operating system. For easy reference, the monitor call descriptions are arranged alphabetically and presented concisely. This manual is written for the assembly language programmer who is already familiar with TOPS-20 monitor calls. For an introductory discussion of some basic monitor calls, see the TOPS-20 Monitor Calls User's Guide.

### 1.7 NOTEBOOK 7

#### 1.7.1 TOPS-20 IBM Emulation/Termination

This manual provides information on the installation, operation, and use of TOPS-20 IBM communications software. Installers will need to use the entire document; others can ignore the installation procedure and the installer's appendixes.

TOPS-20 IBM communications software products permit communication between TOPS-20 host and IBM-type remote stations or hosts. This manual describes the following IBM communications products:

- TOPS-20 2780/3780 E/T
- TOPS-20 2780/3780/HASP
- TOPS-20 2780/3780/HASP for 2020

#### 1.7.2 Introduction to DECnet Phase IV

This document is an overview of the concepts and capabilities of DECnet networks. It defines DECnet terms and describes the network functions that DECnet implementations can perform. Readers are expected to be familiar with operating system concepts, but not with DECnet.

Typical readers include the personnel at the site of a newly installed DECnet system, who can read this manual to learn about the kind of work DECnet enables them to perform. Another group of readers will include system managers and designers who are thinking about using DECnet to expand their existing DIGITAL computer systems. Also, this manual is intended for system managers and designers who do not yet use DIGITAL systems, but who are considering the implementation of a computer network. This manual will inform them about the network capabilities that DECnet provides.



## WHAT EACH MANUAL CONTAINS

### 1.7.3 DECnet-20 User's Guide

This manual contains user information for DECnet-20 Version 4.0, a product that, together with the TOPS-20 operating system, provides the DECSYSTEM-20 family of computers with a communications interface to DIGITAL's corporate network DECnet.

This manual includes information about using and programming DECnet-20 and should be used by:

- o The application programmer responsible for writing the programs that will be exchanging data with programs on other systems in the network. This person should be an experienced MACRO programmer with some knowledge of network applications.
- o The terminal user, using the network utilities that do not require privileges. Such a user, like all timesharing users, should be familiar with the TOPS-20 Command Language.

### 1.7.4 DECnet-20/PSI-20 System Manager's Guide

This manual describes the operational, control, and monitoring functions of DECnet-20 and the TOPS-20 PSI products. These products together with TOPS-20, provide the DECSYSTEM-2060 computers with a communications interface to DIGITAL's corporate network, DECnet, and to Public Packet Switching Networks, PPSNs.

The manual contains both tutorial and reference information. The audience addressed is the DECnet-20 System Manager and the user with OPERATOR privileges who is engaged in network management and operational tasks under the direction of the system manager.

Readers are assumed to be experienced in TOPS-20 operations and familiar with computer networks. Previous experience with DECnet is not assumed.

### 1.7.5 DECnet-20 Network Generation and Installation Guide

This manual describes the procedures for generating and installing DECnet-20 software on a DECSYSTEM-20 Model 2060/2065. The manual describes the configuration of DECnet-20 nodes in a DECnet network and details all generation, verification, and installation steps. It describes the DECnet-20 configuration tools, and the procedures to downline load target nodes and to generate an Ethernet or CI network, as well as a DN20 subsystem.

## WHAT EACH MANUAL CONTAINS

### 1.8 NOTEBOOK 8

#### 1.8.1 TOPS-20 PSI User's Guide

This manual contains information on:

- o Writing a FORTRAN-20 or MACRO-20 program that uses the TOPS-20 X.25 software to access a PPSN (Public Packet Switching Network)
- o Using the TOPS-20 X.29 Software to connect a terminal - through a PPSN - to a TOPS-20 host

The reader of this manual should:

- o Be an experienced FORTRAN-20 or MACRO-20 programmer.
- o Have read all user documentation published by the user's PPSN.
- o Have access to CCITT publications that describe the X.3, X.25, and X.29 recommendations.

#### 1.8.2 TOPS-20 PSI Installation Guide

This manual describes the configuration of TOPS-20 PSI nodes in a DECnet network and details all generation, verification, and installation steps. It describes configuration tools, the procedures to generate DN20 subsystems, the X25GEN (X.25 GENERation) program commands and parameters, and illustrates a sample system configuration.

#### 1.8.3 FTS-20 Reference Manual

The FTS-20 Reference Manual contains the information needed to use, operate, and install FTS-20, a file transfer spooler that together with DECnet-20 network software and the TOPS-20 operating system provides spooled and immediate network file transfer capabilities.

This manual is directed to a wide range of users from the terminal user to the system programmer. To guide the reader, the manual is organized into four parts plus appendixes. Depending on what action you wish to perform and what kind of user you are, you will concentrate on and use different parts of the manual. If you are a terminal user, read Part 1. If you are an applications programmer, a system manager, or a system programmer, read the entire manual.

## WHAT EACH MANUAL CONTAINS

### **1.8.4 TOPS-20 DECnet-20 Programmer's Guide and Operations Manual**

This manual describes DECnet-20, a product that together with TOPS-20 provides the DECSYSTEM-20 family of computers with a communications interface to DIGITAL's corporate network, DECnet. This manual is usable with both DECnet-20 Version 2 and DECnet-20 Version 2.1.

### **1.9 NOTEBOOK 9**

#### **1.9.1 TOPS-20 System Manager's Guide**

This manual is written for the person who is responsible for establishing policies and procedures for a timesharing or batch processing installation using the TOPS-20 Operating System. Usually, this person is responsible for setting up and maintaining both the system hardware and software.

This guide deals primarily with your system software. It contains general suggestions for planning the installation of your software and for setting up your computer room to begin operations. The guide contains hints and suggestions for your system's operation, including when, and many times why, particular functions or procedures should be considered. It assumes that your system operator is responsible for implementing many of the decisions you make.

#### **1.9.2 TOPS-20 KL Model B Installation Guide**

This manual describes the procedures for installing TOPS-20 Version 7.0 on a new system and updating TOPS-20 software on an existing KL10 Model B system. It also includes information on installing TCP/IP-20 (Transmission Control/Internet Protocol), and generating tailored GALAXY software.

This guide addresses TOPS-20 operators, system managers, and others who have the responsibility to:

- o Install the TOPS-20 software on a new DECSYSTEM-20
- o Update the TOPS-20 software on an existing DECSYSTEM-20
- o Install the TCP/IP-20 software
- o Generate a tailored batch and spooling (GALAXY) system

## WHAT EACH MANUAL CONTAINS

### **1.9.3 TOPS-20 KS/KL Model A Installation Guide**

This manual describes the procedures for installing TOPS-20, Version 4.1 software on a new DECSYSTEM 2020 or DECSYSTEM-20 Model A and for updating the TOPS-20 software on an existing DECSYSTEM 2020 or DECSYSTEM-20 Model A.

### **1.9.4 TOPS-10/TOPS-20 UETP Procedures/Reference Manual**

This manual describes Version 2 of the User Environment Test Package (UETP) developed for testing various elements of the TOPS-10/TOPS-20 software. This manual is organized into two parts. Part I, Standard Verification Procedures, describes the procedure for running UETP to verify the integrity of your newly installed operating system. Part II, UETP Reference Manual, describes the UETP system and its component parts.

## **1.10 NOTEBOOK 10**

### **1.10.1 TOPS-20 Operator's Guide**

This guide provides the operator an overview of the TOPS-20 operating system and serves as a task-oriented reference for operating the various hardware components that support the TOPS-20 software.

Although various installations may run their systems differently, this guide describes a general set of procedures for running the TOPS-20 software on the various hardware systems. Each installation should tailor these procedures to suit its needs and add procedures for specific applications.

### **1.10.2 TOPS-10/TOPS-20 Operator's Hardware Device and Maintenance Guide**

This manual describes the operation and maintenance of the major available peripheral devices that can be connected to the TOPS-10 and TOPS-20 series hardware systems. Each chapter describes a different peripheral line device. This guide is written for experienced TOPS-10 and TOPS-20 operators.

### **1.10.3 TOPS-10/TOPS-20 SPEAR Manual**

This manual describes Version 2.0 of SPEAR (Standard Package for Error Analysis and Reporting) on TOPS-10 and TOPS-20. The primary audience

## WHAT EACH MANUAL CONTAINS

for this manual is a person with experience in the following areas:

- o Fault isolation techniques
- o KL10 instruction set
- o All hardware connected to the various configurations of TOPS-10 or TOPS-20

This manual has three functions: it serves as a learning aid, a user's guide, and a reference tool for those who already have learned to use the SPEAR Library.

### **1.11 NOTEBOOK 11**

#### **1.11.1 TOPS-20 Operator's Command Language Reference Manual**

This manual describes all operator commands that use the Operator Interface Command Language (OPR), LCP Privileged Commands, and PTYCON commands. The commands are arranged in an alphabetical order within the command language being described.

This manual is designed primarily for the beginning operator as well as the experienced operator who needs additional information about the various TOPS-20 operator commands. It assumes that the reader has OPERATOR, SEMI-OPERATOR, or WHEEL privileges and knows how to login as operator.

#### **1.11.2 TOPS-10/TOPS-20 RSX-20F System Reference Manual**

This reference manual describes RSX-20F, the operating system that runs on the PDP-11/40 front-end processor of KL-based computers. RSX-20F loads the KL microcode, configures main and cache memory, loads the KL microcode, loads the boot program, and performs diagnostics.

The audience for this manual comprises Software Support Specialists, Field Service personnel, systems programmers, and system operators. It is assumed that the reader is familiar with the PDP-11 hardware, RSX-11 operating systems, and either TOPS-10 or TOPS-20.

This manual does not contain everything anyone would like to know about RSX-20F. The information contained here was included because it seemed to be especially important and useful to the largest part of the audience.

## WHAT EACH MANUAL CONTAINS

### **1.11.3 TOPS-10/TOPS-20 USAGE File Specification**

This document describes the format and use of USAGE files for TOPS-10 and TOPS-20 operating systems. USAGE files contain data used to account for computer resource utilization. The manual includes a brief discussion of downstream billing programs supplied with TOPS-20 systems.

The USAGE File Specification is written for the applications programmer who must write or modify a billing or accounting program that reads USAGE files as input.

### **1.11.4 TOPS-20 Tape Processing Manual**

This manual describes the types of labels that can be read from and written onto magnetic tapes by the TOPS-20 operating system. In addition, this manual describes label processing, file processing, and unlabeled tape organization and processing. The manual also contains various programming hints for the assembly, COBOL, and FORTRAN language programmers.

This manual is written for the person who must plan, generate, maintain, extend, and control the magnetic tape usage of the system to improve the overall productivity of an installation.

### **1.11.5 TOPS-20 WATCH: A Program for Measuring System Usage**

This document describes the WATCH program and defines the statistics that are output by the program. The WATCH program collects data about system usages and job performance. This document is intended to make the WATCH program a more useful tool for all TOPS-20 users and in particular, for system managers/analysts. To this end, the document describes some uses of the program and suggest ways of collecting and interpreting the data.

This document assumes that its readers are thoroughly familiar with the TOPS-20 operating system.

## **1.12 NOTEBOOK 12**

### **1.12.1 TOPS-20 Monitor Table Descriptions**

This document describes the internal tables of the TOPS-20 operating system. In addition to the tables themselves, this book also contains one appendix, which lists in alphabetical order the names of the monitor modules and tables defined in each.

## WHAT EACH MANUAL CONTAINS

### 1.12.2 TOPS-20 CHECKD Specification

This document describes the various uses of the CHECKD program. In addition, it describes all the available CHECKD commands and error messages.

The document is written for the user who is familiar with the TOPS-20 file system and must use CHECKD periodically to correct various programs in the file system. CHECKD is a program that is used to check the TOPS-20 file system and bit table for consistent data.

### 1.12.3 TOPS-20 MAKVFU Specification

This document is intended for users who will be creating a Direct Access Vertical Format Unit file to control the line printer's vertical spacing.

### 1.12.4 TOPS-20 BUGHLT Document

This document contains a listing of the TOPS-20 BUGINFs, BUGCHKs, and BUGHLTs, printed on the TOPS-20 console, and give an explanation of most of the error conditions. The list is in alphabetical order according to the name of the BUG.

## 1.13 NOTEBOOK 13

### 1.13.1 Introduction to DATATRIEVE-20

This book introduces you to DATATRIEVE-20. It begins with a brief overview of information management and the use of DATATRIEVE-20. It then guides you through the basic tasks you can perform with DATATRIEVE-20.

This manual assumes you can use your terminal to log in to your local computer system. It is intended for people who are unfamiliar with the basis elements of DATATRIEVE-20.

### 1.13.2 DATATRIEVE-20 User's Guide

This manual is a guide to the interactive use of DATATRIEVE-20. It explains the concepts of DATATRIEVE-20 and its terminology. This manual describes how to define domains, records, tables, and procedures; and how to catalog them in the Data Dictionary. This manual describes various ways of managing your data and retrieving

## WHAT EACH MANUAL CONTAINS

information from it.

The manual is intended for those who:

- o Have read and done the examples in the Introduction to DATATRIEVE-20 manual
- o Have experience using DATATRIEVE-11 or VAX DATATRIEVE
- o Have experience in applications programming but are unfamiliar with DATATRIEVE-20

### **1.13.3 DATATRIEVE-20 Reference Manual**

This manual describes DATATRIEVE-20 Version 1 and provides reference information on DATATRIEVE terms, concepts, syntax elements, commands, statements, and definition clauses.

The manual assumes you have working knowledge of DATATRIEVE or know the basic concepts of data processing and are familiar with the TOPS-20 operating system.

This book addresses people who are familiar with the basic elements of DATATRIEVE-20.

### **1.13.4 DATATRIEVE-20 Guide to Using Graphics**

This manual explains how to use DATATRIEVE to represent data in graphic format. All DATATRIEVE users who would like to represent their data in bar charts, line graphs, pie charts, or scattergraphs should use this manual. This manual assumes that you have a basic understanding of DATATRIEVE concepts.

### **1.13.5 DATATRIEVE-20 Guide to Writing Reports**

This manual describes how to write reports with DATATRIEVE-20. You should use this manual if you want to produce reports using data managed by DATATRIEVE-20. The manual assumes that you have read or are familiar with all of the material covered in the Introduction to DATATRIEVE-20.

## **1.14 NOTEBOOK 14**



## WHAT EACH MANUAL CONTAINS

### **1.14.1 Introduction to Interactive Query Language**

This manual contains introductory usage information about the query capability of the Interactive Query Language (IQL). It is written for the user who has never worked with the IQL. Users who have some experience with IQL but want to review its concepts should also find it useful. This manual contains examples showing how to use all the basic query statements, with explanations of how the statements are put together to form a complete query.

### **1.14.2 Interactive Query Language User's Guide**

This manual describes the features of IQL Release 3.0, which is a full data management system with comprehensive input, update, browse, and report capabilities.

This guide describes each function in detail. However, the guide is not intended to be a teaching manual. As a prerequisite of reading this guide, it is recommended that you read the companion manual, An Introduction to IQL, which presents a series of example sessions showing most of the features used in this guide.

This guide assumes that you are familiar with DBMS schemas and that you know how to read a DBMS data base through FIND and GET operations of IQL.

### **1.14.3 TOPS-20 RMS User's Guide**

This manual describes how to use the Record Management Services (RMS-20). RMS is the file and record access subsystem of the TOPS-20 operating system.

This manual is aimed at all levels of user. If you are a novice, you can use the manual as a steppingstone to a basic understanding of record and file management. Experienced users unfamiliar with DIGITAL software can use the manual to gain familiarity with DIGITAL terms and techniques. Experienced DIGITAL users should find the manual useful because it explains the Record Management Services of the TOPS-20 operating system.

### **1.14.4 RMS-20 Programmer's Reference Manual**

This document describes RMS-20 argument blocks and services for programmers. It is intended for the experienced user of TOPS-20 or RMS. The document consists of three parts. Part 1 introduces you to general mechanisms and conventions associated with TOPS-20 RMS. Part

## WHAT EACH MANUAL CONTAINS

II describes each RMS argument block, including a complete listing and description of each field. Part III lists the format of each RMS service and describes each service in detail.

### **1.14.5 DIU User's Guide**

This document contains information on DIU, a file transfer spooler that together with DECnet network software and the TOPS-20 operating system provides spooled and immediate network file transfer capabilities. This manual consists of the information needed to use, operate, and install DIU. It is directed to a wide range of users from the terminal user to the system programmer or manager.

### **1.15 NOTEBOOK 15**

#### **1.15.1 DECsystem-10/20 ALGOL Programmer's Guide**

This manual describes the language elements of ALGOL on both the TOPS-10 and TOPS-20 operating systems. This manual is written both for the user who is familiar with ALGOL implementations and for the user who has no knowledge of ALGOL but is reasonably fluent in a high-level scientific programming language. The manual is not a primer in high-level languages.

#### **1.15.2 APLSF Language Manual**

This manual describes the language elements of APL-Basic and APLSF on both the TOPS-10 and TOPS-20 operating systems. These are two implementations of APL on each system, APL-Basic and APLSF (System Functions). APLSF is a superset of APL-Basic.

This document is not an APL tutorial manual. Therefore, if you are unfamiliar with the APL language, you should read an APL primer before reading this manual.

#### **1.15.3 TOPS-20 BASIC-PLUS-2 Language Manual**

This manual is a complete reference to the the BASIC-PLUS-2 programming language as implemented on the TOPS-20 Operating System. This manual is neither a primer nor a user's guide.

For easy reference the first page of each chapter contains a listing of that chapter's major subsections. In addition, Appendix F contains a brief summary of the BASIC statements, functions, and operations.

## WHAT EACH MANUAL CONTAINS

### 1.16 NOTEBOOK 16

#### 1.16.1 DECsystem-10/20 Conversational Programming Language Manual

This manual describes how to use the CPL programming language for both the TOPS-10 and TOPS-20 operating systems. This manual is intended to be both a tutorial and a reference manual. Each chapter, and sometimes each section, will discuss features in a general way that the beginner should be able to understand. Later in the chapter or section there will follow more detailed and comprehensive technical coverage of the subject.

Therefore the reader should approach this manual as follows: at the first reading, read quickly, skimming over or skipping sections that you do not understand. Later, when you need more technical details, you can go back and read the more difficult sections.

#### 1.16.2 TOPS-10/TOPS-20 FORTRAN Language Manual

This manual describes the FORTRAN language as implemented for the TOPS-10 operating system (FORTRAN-10) and the TOPS-20 operating system (FORTRAN-20) Any differences between FORTRAN-10 and FORTRAN-20 are noted in this manual.

Since this is a reference manual, it assumes that you have used FORTRAN before. If you haven't, you should read one of the many introductory FORTRAN texts.

#### 1.16.3 TOPS-20 FORTRAN Installation Guide

This manual describes how to install the FORTRAN-20 Version 11 software.

### 1.17 NOTEBOOK 17

#### 1.17.1 TOPS-20 SORT/MERGE User's Guide

This manual is written for those who want to sort data using the SORT/MERGE utility program. As a user's guide, this manual provides user material for anyone with experience on a computer system to successfully sort any of the file formats supported by SORT/MERGE.

The intended audience can be composed of the users having one or more of the following:

## WHAT EACH MANUAL CONTAINS

- o User experience with a computer system
- o High-level language programming experience
- o Knowledge of data internal representations
- o Knowledge of data file formats

However, if you are a beginning user who has never used a sorting utility, Chapter 1 has been written to help you get started with the SORT/MERGE utility.

### **1.17.2 TOPS-20 COBOL Language Manual**

This manual describes COBOL as it has been implemented on the TOPS-20 operating system. Part 1 of this manual outlines the topics to be covered in each chapter. Part 2 describes the COBOL compiler and presents the vocabulary and the syntax of the language. Part 3 provides the information necessary to use the COBOL system, including performance improvement, utilities, and various features of COBOL. Part 4 contains four appendixes and a glossary of COBOL terms.

It is assumed that the reader has a knowledge of the COBOL language. This manual is intended primarily for reference and is not a tutorial guide for beginning COBOL programmers.

### **1.17.3 TOPS-20 COBOL Installation Guide**

This document describes the procedures for building and installing all supported COBOL system configurations. It assumes that your installation is licensed for COBOL and SORT/MERGE. If this is not the case, then the instructions are valid but certain save sets are empty, and certain files are missing from the first one or two save sets.

## **1.18 NOTEBOOK 18**

### **1.18.1 TOPS-10/TOPS-20 COBOL Conversion Utility Guide**

This manual describes the COBOL-68 to COBOL-74 converter utility program, 68274, as it has been implemented on the TOPS-10 and TOPS-20 operating systems.

It is assumed that the reader has a knowledge of COBOL-68 and COBOL-74 languages. This manual is intended as a guide and as a reference manual for COBOL programmers who wish to convert COBOL-68 programs to COBOL-74 programs.

## WHAT EACH MANUAL CONTAINS

### **1.18.2 TOPS-10/TOPS-20 COBOL-74 Language Manual**

This manual describes COBOL-74 as it has been implemented on the TOPS-10 and TOPS-20 operating systems. Part 1 of this manual outlines the topics to be covered in each chapter. Part 2 describes the COBOL-74 compiler and presents the vocabulary and syntax of the language. Part 3 provides the information necessary to use the COBOL system, including performance improvement, utilities, and various features of COBOL-74. Part 4 contains appended material.

It is assumed that the reader has a knowledge of the COBOL language. This manual is intended primarily for reference and is not a tutorial guide for beginning COBOL programmers.

### **1.18.3 DIL User Reference Manual**

This manual describes the Data Interchange Library (DIL) and explains how to use it. DIL is a set of callable subroutines that can be used by COBOL and FORTRAN programmers on TOPS-20, and TOPS-10, and VMS systems.

The manual consists of three basic parts: introductory material, reference sections and appendixes. The introductory chapters present the concepts and capabilities of each part of the Data Interchange Library. The reference portion of the manual is divided first into TOPS-10/TOPS-20 and VMS sections, and gives specific instructions for using the DIL subroutines from your operating system. The appendixes contain in-depth information about the DIL.

## **1.19 NOTEBOOK 19**

### **1.19.1 BLISS-36 User's Guide**

This manual is a user's guide for the BLISS-36 compiler, which runs on TOPS-10 and TOPS-20 operating systems. It provides three kinds of information: basic operating instructions, advanced material, and reference information. This manual is intended as a companion manual to the BLISS language Guide.

This guide is intended for users of the BLISS-36 programming language. It assumes the reader is familiar with the TOPS-10 or TOPS-20 operating system, its commands language, and file-system conventions.

### **1.19.2 BLISS Language Guide**

This document is a combined tutorial and reference manual for the

## WHAT EACH MANUAL CONTAINS

BLISS programming language, which consists of the dialects BLISS-16, BLISS-32, and BLISS-36. The manual is intended as a self teaching manual for experienced higher-level language users, and as a reference tool. It is primarily intended for system programmers.

It is also addressed to other programmers concerned with transferring programs between several BLISS target systems. The manual assumes that the reader is familiar with the basic architecture of one or more of the target system. The BLISS target systems are VAX, PDP-11, DECSYSTEM-10, and DECSYSTEM-20.

### **1.19.3 BLISS-36 Installation Notes**

This document describes how to install BLISS-36 on either a TOPS-20 or a TOPS-10 system.

## **1.20 NOTEBOOK 20**

### **1.20.1 TOPS-20 PASCAL Language Manual**

This manual describes the PASCAL language and the PASCAL debugger, PASDDT, as they are implemented on the TOPS-20 operating system. This document is designed primarily for reference; It is not a tutorial document.

This manual is intended for readers who know the PASCAL language. The reader need not have detailed understanding of the TOPS-20 operating system, but some familiarity with it is helpful.

### **1.20.2 TOPS-20 PASCAL Primer**

This document introduces the TOPS-20 PASCAL language. It is intended to be used by programmers who are new to TOPS-20 PASCAL. PASCAL-20 is an extended implementation of the standard proposed for the PASCAL language by the International Standardization Organization (ISO). This manual describes a subset of PASCAL-20, omitting some advanced features of the language.

This manual does not attempt to teach programming concepts. It is assumed that you have experience programming in a high-level language. However, prior knowledge of the PASCAL language is not necessary.

## WHAT EACH MANUAL CONTAINS

### **1.20.3 TOPS-20 PASCAL Installation Guide**

This document contains instructions for installing the TOPS-20 PASCAL compiler on the TOPS-20 operating system. It is a complete installation and verification package for TOPS-20 PASCAL.

The audience for this document is the system manager or operator, one who is familiar with the installation and operation of the system software.

### **1.20.4 TOPS-10/TOPS-20 Common Math Library Reference Manual**

This manual describes the mathematical routines that constitute the TOPS-10/TOPS-20 Math Library, which contains a set of routines that perform the various mathematical functions for several types of data.

## **1.21 NOTEBOOK 21**

### **1.21.1 DBMS-20 Documentation Directory**

This manual contains annotated lists of contents, reading paths, a master table of contents, and a master index to the DBMS-20 documentation set.

### **1.21.2 DBMS-20 User's Guide**

This manual is an introduction to data base management concepts and operations. It contains information to aid the user in designing and implementing a data base management system using DBMS-20.

### **1.21.3 DBMS-20 Data Description Language Reference Manual**

This manual describes the syntax and usages of the statements of the Data Description Language (DDL). In addition, this manual documents the SCHEMA program.

The user of this manual should be familiar with data base concepts. DBMS-20 is a CODASYL-type network-model data base management system.

### **1.21.4 DBMS-20 Installation Guide**

This manual details the installation procedure for DBMS-20 Version

## WHAT EACH MANUAL CONTAINS

6.1. It also discusses how to maintain DBMS-20, by individually applying published edits and by using Autopatch. Before reading this manual, you should be familiar with basic DBMS concepts.

### **1.22 NOTEBOOK 22**

#### **1.22.1 DBMS-20 Data Manipulation Language Reference Manual**

This reference guide describes the syntax and usage of the statements of the Data Manipulation Language (DML) of DBMS-20. In addition, this manual documents the FORDML program, which is the FORTRAN preprocessor.

This manual is written for the programmer who works with the data base. The DML can be used with either FORTRAN or COBOL. The languages themselves are not described, only the interface with the DML is described. The programmer should be familiar with data base concepts. However, some introductory information can be found in Chapter 1.

#### **1.22.2 DBMS-20 Utilities Manual**

This manual describes the Data Base Mend (DBMEND) utility, the Data Base Information (DBINFO) utility, the Extended Data Manipulation Language (XDML) utility, and the Statistics (STATS) subroutine. These utilities help you access, manipulate, maintain and tune data bases. This manual also documents the formats of the journal file and the .LOK file.

This manual is written for the knowledgeable DBMS-20 user. It does not explain all the DBMS-20 concepts, although it does provide background information on the utilities themselves.

#### **1.22.3 DBMS-20 DBCS Error Message Manual**

This manual describes all the exceptions and run-time messages that are generated by DBCS, the Data Base Control System. Almost all DBCS problems are reported directly to your run unit, in the form of a SYSCOM report. Some DBCS problems are reported to the user directly in the form of a message printed on the terminal. This manual documents all of the information that DBCS gives you, whether it is in the form of a SYSCOM report or a run-time message.



## WHAT EACH MANUAL CONTAINS

### **1.22.4 TRAFFIC-20 Programmer's Manual**

This document is for the programmer who is going to develop an application program with TRAFFIC-20 using COBOL, FORTRAN, or MACRO. The reader of this document should also be familiar with the TOPS-20 operating system and a TOPS-20 text editor.

### **1.23 NOTEBOOK 23**

#### **1.23.1 EDT-20 Primer**

This manual describes how to use EDT to create and edit text files interactively on the TOPS-20 operating system. It consists of explanations and examples of EDT editing operations and tasks. The manual is intended for all levels of users; beginners through experienced.

EDT, DIGITAL's standard text editor, is designed to use on these operating systems: VAX/VMS, RSTS/E, RSX-11M, RSX-11M-PLUS, and TOPS-20.

#### **1.23.2 EDT-20 Reference Manual**

This manual contains reference information for using the EDT-20 editor. EDT-20 is similar to EDT Version 3, available on other DIGITAL operating systems.

### **1.24 NOTEBOOK 24**

#### **1.24.1 DECnet/SNA TOPS-20 Gateway Management Guide**

This manual is directed to DECnet-20 system managers or users experienced in DECnet-20 management concepts. It explains how to install DECnet/SNA TOPS-20 Gateway concepts. It explains how to install DECnet/SNA TOPS-20 Gateway Management software that will reside on the DECnet-20 node. The manual also describes management tasks such as how to control and monitor the running DECnet/SNA network.

#### **1.24.2 DECnet/SNA TOPS-20 Remote Job Entry User's and Operator's Guide**

This guide provides information on the installation, operation, and use of DECnet/SNA TOPS-20 Remote Job Entry software. With this

## WHAT EACH MANUAL CONTAINS

software, you can define, initialize, control, and use DECnet/SNA TOPS-20 Remote Job Entry workstations.

This manual addresses the following readers:

- o TOPS-20 users who will submit jobs to IBM host
- o Operators at the TOPS-20 host where the DECnet/SNA TOPS-20 Remote Job Entry software is running
- o System programmers or managers installing the DECnet/SNA TOPS-20 Remote Job Entry Software

### **1.24.3 DECnet/SNA TOPS-20 Application Interface Programmer's Guide**

This manual contains information on writing MACRO-20 programs that use the DECnet/SNA TOPS-20 Application Interface to access an IBM system through the DECnet/SNA Gateway.

The reader of this manual should:

- o Be an experienced MACRO-20 programmer.
- o Have indepth knowledge of IBM's System Network Architecture (SNA).
- o Have access to DIGITAL and IBM publications.

## CHAPTER 2

### WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

#### 2.1 OVERVIEW OF DECSYSTEM-20

To find an overview of the DECSYSTEM-20, see the following manual:

NOTEBOOK 1

- o DECSYSTEM-20 Technical Summary
- o Chapter 2, Overview

#### 2.2 TECHNICAL INTRODUCTION TO DECSYSTEM-20

To find a technical introduction to DECSYSTEM-20, see the following manual:

NOTEBOOK 4

- o DECSYSTEM-10/DECSYSTEM-20 Processor Reference Manual
- o Chapter 1, Introduction

#### 2.3 THE OPERATING SYSTEM

The following sections describe where to find information on the TOPS-20 operating system.

##### 2.3.1 TOPS-20 COMMAND LANGUAGE PROCESSOR, THE EXEC

The following sections describe where to find information on the TOPS-20 Command Language Processor, called the EXEC.

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

**2.3.1.1 Overview of the EXEC** - To find an overview of the EXEC, see the following manual:

NOTEBOOK 1

- o DECSYSTEM-20 Technical Summary
  - o Chapter 2, Overview
  - o Chapter 4, The Operating System

**2.3.1.2 EXEC commands** - To find a complete description of all the EXEC commands, see the following manual:

NOTEBOOK 2

- o TOPS-20 Commands Reference Manual

### **2.3.2 GALAXY: THE BATCH AND SPOOLING SYSTEM**

The following sections describe where to find information on the batch and spooling subsystem, called GALAXY.

**2.3.2.1 Overview of GALAXY** - To find an overview of the GALAXY subsystem, see the following manual:

NOTEBOOK 1

- o DECSYSTEM-20 Technical Summary
  - o Chapter 4, The Operating System

**2.3.2.2 GALAXY Components** - To find information on GALAXY components, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 6, BATCH Software Tasks

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

**2.3.2.3 The OPR Interface** - To find information on the OPR interface, see the following manuals:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 5, The Operator Interface, OPR

NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual
  - o Chapter 2, The Operator Interface, OPR

### **2.3.3 JOBS AND PROCESSES**

To find information on jobs and processes, see the following manuals:

NOTEBOOK 1

- o DECSYSTEM-20 Technical Summary
  - o Chapter 4, The Operating System
- o TOPS-20 User's Guide
  - o Chapter 1, Getting on and off the System

### **2.3.4 PROCESS COMMUNICATION**

The following sections describe where to find information on process communication.

**2.3.4.1 Direct Process Control** - To find information on direct process control, see the following manual:

NOTEBOOK 5

- o TOPS-20 Monitor Calls User's Guide
  - o Chapter 5, Process Structure

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

**2.3.4.2 Interprocess Communication Facility** - To find information on the Interprocess Communication Facility, see the following manual:

NOTEBOOK 5

- o TOPS-20 Monitor Calls User's Guide
  - o Chapter 5, Process Structure
  - o Chapter 7, Inter-process Communication Facility

**2.3.4.3 Software Interrupt System** - To find information on the Software Interrupt System, see the following manual:

NOTEBOOK 5

- o TOPS-20 Monitor Calls User's Guide
  - o Chapter 4, Using the Software Interrupt System

**2.3.4.4 Enqueue/Dequeue (ENQ/DEQ)** - To find information on Enqueue/Dequeue, see the following manual:

NOTEBOOK 5

- o TOPS-20 Monitor Calls User's Guide
  - o Chapter 5, Processor Structure
  - o Chapter 6, Enqueue/Dequeue Facility

**2.3.4.5 Memory Sharing** - To find information on memory sharing, see the following manual:

NOTEBOOK 5

- o TOPS-20 Monitor Calls User's Guide
  - o Chapter 5, Process Structure

## **2.3.5 THE TOPS-20 MONITOR**

To find information on the TOPS-20 monitor, see the following manuals:

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### NOTEBOOK 1

- o DECSYSTEM-20 Technical Summary
  - o Chapter 2, The Operating System

### NOTEBOOK 5

- o TOPS-20 Monitor Calls User's Guide

### NOTEBOOK 6

- o TOPS-20 Monitor Calls Reference Manual

### NOTEBOOK 9

- o TOPS-20 KL Model B Installation Guide
  - o Chapter 1, Introduction
  - o Chapter 3, Tailoring the System
  - o Appendix A, Updating the DECSYSTEM-20 Software

### **2.3.6 VIRTUAL MEMORY**

To find information on virtual memory, see the following manuals:

### NOTEBOOK 1

- o DECSYSTEM-20 Technical Summary
  - o Chapter 4, The Operating System

### NOTEBOOK 4

- o DECSYSTEM-10/DECSYSTEM-20 Processor Reference Manual
  - o Chapter 3, KL10 System Operations

### **2.3.7 THE FILE SYSTEM**

The following sections describe where to find information on the file system.

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

**2.3.7.1 Files** - To find information on files, see the following manual:

NOTEBOOK 1

- o TOPS-20 User's Guide
  - o Chapter 5, Creating and Editing Files
  - o Chapter 6, Using Disk Files
  - o Chapter 9, Producing and Running Your Own Programs

**2.3.7.2 File Protection** - To find information on the file protection, see the following manuals:

NOTEBOOK 2

- o TOPS-20 User's Guide
  - o Chapter 6, Using Disk Files

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 5, Creating Directories

**2.3.7.3 File Directories** - To find information on the file directories, see the following manuals:

NOTEBOOK 2

- o TOPS-20 User's Guide
  - o Chapter 6, Using Disk Files

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 5, Creating Directories

**2.3.7.4 System Files and Directories** - To find information on system files and directories, see the following manuals:



WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 3, After Software Installation

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 8, Scheduled Software Tasks

**2.3.7.5 Groups** - To find information on file groups, see the following manual:

NOTEBOOK 1

- o TOPS-20 User's Guide
  - o Chapter 6, Using Disk Files

**2.3.7.6 Archiving Files** - To find information on archiving files, see the following manuals:

NOTEBOOK 1

- o TOPS-20 User's Guide
  - o Chapter 6, Using Disk Files

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks

**2.3.7.7 Tape Labelling** - To find information on tape labelling, see the following manuals:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 8, Tape Storage

NOTEBOOK 11

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 Tape Processing Manual

### **2.3.8 CONSOLE FRONT-END PROCESSOR AND SOFTWARE**

The following sections describe where to find information on the console front-end processor and software.

**2.3.8.1 Console Functions** - To find information on console functions, see the following manuals:

NOTEBOOK 11

- o TOPS-10/TOPS-20 RSX-20F System Reference Manual
  - o Chapter 6, RSX-20F Utilities

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 3, After Software Installation

**2.3.8.2 Command Terminal Functions** - To find information on command terminal functions, see the following manual:

NOTEBOOK 11

- o TOPS-10/TOPS-20 RSX-20F System Reference Manual
  - o Chapter 7, RSX-20F Monitor

**2.3.8.3 Diagnostic/Maintenance Functions** - To find information on diagnostic/maintenance functions, see the following manual:

NOTEBOOK 11

- o TOPS-10/TOPS-20 RSX-20F System Reference Manual
  - o Chapter 8, DTE20 Operation

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### **2.4 KL10-E PROCESSOR**

The following sections describe where to find information on the KL10-E processor.

#### **2.4.1 KL10 PHYSICAL DESCRIPTION AND SWITCHES**

To find information on the KL10 physical description and switches, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 4, Starting the Hardware System

#### **2.4.2 Overview of KL10 CPU**

To find an overview of the KL10 CPU, see the following manual:

NOTEBOOK 1

- o DECSYSTEM-20 Technical Summary
  - o Chapter 5, KL10-E Processor

#### **2.4.3 TECHNICAL EXPLANATION OF KL10 CPU**

To find a technical explanation of the KL10 CPU, see the following manual:

NOTEBOOK 4

- o DECSYSTEM-10/DECSYSTEM-20 Processor Reference Manual
  - o Chapter 1, Introduction

#### **2.4.4 KL10 MEMORY SUBSYSTEM**

The following sections describe where to find information on memory subsystems.

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

**2.4.4.1 Overview of DECSYSTEM-20 Memory** - To find an overview of DECSYSTEM-20 memory, see the following manual:

NOTEBOOK 1

- o DECSYSTEM-20 Technical Summary
  - o Chapter 5, KL10-E Processor

**2.4.4.2 Technical Explanation of KL10 Memory** - To find a technical explanation of KL10 memory, see the following manual:

NOTEBOOK 4

- o Decsystem-10/DECSYSTEM-20 Processor Reference Manual
  - o Chapter 1, Introduction
  - o Chapter 3, KL10 System Operations
  - o Appendix G, Handling Memory

**2.4.4.3 Memory Options** - To find information about memory options, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 2, Hardware

## **2.4.5 FRONT-END SUBSYSTEM**

To find information on the front-end subsystem, see the following manuals:

NOTEBOOK 4

- o DECSYSTEM-10/DECSYSTEM-20 Processor Reference Manual
  - o Chapter 3, KL10 System Operations

NOTEBOOK 11

- o TOPS-10/TOPS-20 RSX-20F System Reference Manual

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### **2.4.6 INPUT/OUTPUT SUBSYSTEM**

To find information on the input/output subsystem, see the following manual:

NOTEBOOK 11

- o TOPS-10/TOPS-20 RSX-20F Reference Manual

### **2.5 KS10 PROCESSOR**

The following sections describe where to find information on the KS10 processor.

#### **2.5.1 KS10 PHYSICAL DESCRIPTION AND SWITCHES**

To find information about the KS10 physical description and switches, see the following manual:

NOTEBOOK 9

- o TOPS-20 KS/KL Model A Installation Guide
  - o Creating the TOPS-20 File System

#### **2.5.2 KS10 Technical Overview**

To find a technical overview of the KS10, see the following manual:

NOTEBOOK 1

- o DECSYSTEM-20 Technical Summary
  - o Chapter 6, KS10 Processor

#### **2.5.3 TECHNICAL EXPLANATION OF KS10 CPU**

To find a technical explanation of the KS10 central processing unit, see the following manual:

NOTEBOOK 4

- o DECSYSTEM-10/DECSYSTEM-20 Processor Reference Manual

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o Chapter 4, KS10 System Operations

### 2.5.4 KS10 MEMORY

The following sections describe where to find information on KS10 memory.

**2.5.4.1 Overview of KS10 memory** - To find an overview of KS10 memory, see the following manual:

NOTEBOOK 1

- o DECSYSTEM-20 Technical Summary
  - o Chapter 6, KS10 Processor

**2.5.4.2 Technical Explanation of KS10 Memory** - To find a technical explanation of KS10 memory, see the following manual:

NOTEBOOK 4

- o DECSYSTEM-10/DECSYSTEM-20 Processor Reference Manual
  - o Chapter 1, Introduction
  - o Chapter 4, KS10 System Operations
  - o Appendix G, Handling Memory

**2.5.4.3 Memory Options** - To find information about memory options, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 2, Hardware

### 2.5.5 KS10 CONSOLE SUBSYSTEM

To find information about the KS10 console subsystem, see the following manuals:

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### NOTEBOOK 1

- o DECSYSTEM-20 Technical Summary
  - o Chapter 6, KS10 Processor

### NOTEBOOK 4

- o DECsystem-10/DECSYSTEM-20 Processor Reference Manual
  - o Chapter 4, KS10 System Operations

## 2.6 PERIPHERALS

The following sections describe where to find information on peripherals.

### 2.6.1 MASS-STORAGE PERIPHERALS

The following sections describe where to find information about mass-storage peripherals.

**2.6.1.1 Disks** - To find information about disks, see the following manuals:

#### NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 2, Hardware
- o TOPS-10/TOPS-20 Operator's Hardware Device and Maintenance Guide
  - o Chapter 5, Disk Drives

**2.6.1.2 Tape Drives** - To find information about tape drives, see the following manuals:

#### NOTEBOOK 10

- o TOPS-20 Operator's Guide

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o Chapter 2, Hardware
- o TOPS-10/TOPS-20 Operator's Hardware Device and Maintenance Guide
  - o Chapter 4, Magnetic Tapes

### 2.6.2 UNIT-RECORD PERIPHERALS

The following sections describe where to find information about unit-record peripherals.

**2.6.2.1 Line Printers** - To find information about line printers, see the following manuals:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 2, Hardware
- o TOPS-10/TOPS-20 Operator's Hardware Device and Maintenance Guide
  - o Chapter 1, Printers

**2.6.2.2 Cardreaders** - To find information about cardreaders, see the following manuals:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 2, Hardware
- o TOPS-10/TOPS-20 Operator's Hardware Device and Maintenance Guide
  - o Chapter 2, Card Readers

### 2.6.3 TERMINALS

To find information about the terminals, see the following manual:



## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 2, Hardware

### **2.6.4 DN20 COMMUNICATIONS FRONT END**

To find information about the DN20 communications front end, see the following manuals:

### NOTEBOOK 7

- o DECnet-20 System Manager's and Operator's Guide
  - o Chapter 3, Running DECnet-20

### NOTEBOOK 8

- o TOPS-20 PSI Installation Guide
  - o Chapter 1, Overview

## **2.7 THE LANGUAGES**

To find information about programming languages, see the following sections:

### **2.7.1 TOPS-20 ASSEMBLER**

To find information about the TOPS-20 assembler, see the following manual:

### NOTEBOOK 5

- o MACRO Assembler Reference Manual

### **2.7.2 DEBUGGING TOOLS**

To find information about debugging tools, see the following manual:

### NOTEBOOK 4

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 DDT Manual

### **2.7.3 FORTRAN**

To find information about TOPS-20 FORTRAN, see the following manuals:

NOTEBOOK 16

- o TOPS-10/TOPS-20 FORTRAN Language Manual
- o TOPS-20 FORTRAN Installation Guide

### **2.7.4 COBOL**

To find information about TOPS-20 COBOL, see the following manuals:

NOTEBOOK 17

- o TOPS-20 COBOL Language Manual
- o TOPS-20 COBOL Installation Guide

### **2.7.5 COBOL-68 and COBOL-74**

To find information about TOPS-20 COBOL-68 and COBOL-74, see the following manuals:

NOTEBOOK 18

- o TOPS-10/TOPS-20 COBOL Conversion Utility Guide
- o TOPS-10/TOPS-20 COBOL-74 Language Manual

### **2.7.6 ALGOL-20**

To find information about ALGOL-20, see the following manual:

NOTEBOOK 15

- o DECSYSTEM-10/20 ALGOL Programmer's Guide

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### **2.7.7 BASIC-PLUS-2**

To find information about BASIC-PLUS-2, see the following manual:

NOTEBOOK 15

- o TOPS-20 BASIC-PLUS-2 Language Manual

### **2.7.8 APL**

To find information about APL, see the following manual:

NOTEBOOK 15

- o APLSF Language Manual

### **2.7.9 BLISS-36**

To find information about BLISS-36, see the following manuals:

NOTEBOOK 19

- o BLISS-36 User's Guide
- o BLISS Language Guide
- o BLISS-36 Installation Notes

### **2.7.10 CPL**

To find information about CPL, see the following manual:

NOTEBOOK 16

- o DECSYSTEM-10/20 Conversational Programming Language Manual

### **2.7.11 PASCAL**

To find information about TOPS-20 PASCAL, see the following manuals:

NOTEBOOK 20

- o TOPS-20 PASCAL Language Manual

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 PASCAL Primer
- o TOPS-20 PASCAL Installation Guide

### 2.8 DATA MANAGEMENT AND APPLICATION

To find information about data management and application, see the following sections.

#### 2.8.1 DBMS

To find information about DBMS, see the following manuals:

##### NOTEBOOK 21

- o DBMS-20 Documentation Directory
- o DBMS-20 User's Guide
- o DBMS-20 Installation Guide

##### NOTEBOOK 22

- o DBMS-20 DBCS ERROR Message Manual
- o DBMS-20 Data Manipulation Language Reference Manual

**2.8.1.1 Data Description Process** - To find information about DBMS data description process, see the following manual:

##### NOTEBOOK 21

- o DBMS-20 Data Description Language Reference Manual

**2.8.1.2 DBMS Utilities** - To find information about DBMS utilities, see the following manual:

##### NOTEBOOK 22

- o DBMS-20 Utilities Manual

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### **2.8.2 IQL**

To find information about IQL, see the following manuals:

NOTEBOOK 14

- o Introduction to Interactive Query Language
- o Interactive Query Language User's Guide

### **2.8.3 SORT/MERGE**

To find information about the SORT/MERGE utility, see the following manual:

NOTEBOOK 17

- o TOPS-20 SORT/MERGE User's Guide

### **2.8.4 RMS**

To find information about the Record Management Services (RMS), see the following manuals:

NOTEBOOK 14

- o TOPS-20 RMS User's Guide
- o RMS-20 Programmer's Reference Manual

### **2.8.5 TRAFFIC-20**

To find information about TRAFFIC-20, see the following manual:

NOTEBOOK 22

- o TRAFFIC-20 Programmer's Manual

## **2.9 NETWORKS AND COMMUNICATIONS**

To find information about networks and communications, see the following sections.

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### 2.9.1 DECNET-20

To find information about DECnet-20, see the following manuals:

#### NOTEBOOK 7

- o Introduction to DECnet Phase IV
- o DECnet-20 User's Guide
- o DECnet-20/PSI-20 System Manager's Guide
- o DECnet-20 Installation Guide

#### NOTEBOOK 8

- o TOPS-20 DECnet-20 Programmer's Guide and Operations Manual

#### NOTEBOOK 24

- o DECnet/SNA TOPS-20 Gateway Management Guide
- o DECnet/SNA TOPS-20 Remote Job Entry User's and Operator's Guide
- o DECnet/SNA TOPS-20 Application Interface Programmers's Guide

### 2.9.2 PSI-20

To find information about PSI-20, see the following manuals:

#### NOTEBOOK 7

- o DECnet-20/PSI-20 System Manager's Guide

#### NOTEBOOK 8

- o TOPS-20 PSI User's Guide
- o TOPS-20 PSI Installation Guide

### 2.9.3 REMOTE JOB ENTRY STATIONS

To find information about remote job entry stations, see the following manual:

#### NOTEBOOK 24

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o DECnet/SNA TOPS-20 Remote Job Entry User's and Operator's Guide

### **2.9.4 LAT NETWORK MANAGEMENT**

The following sections describe where to find information on LAT network management.

**2.9.4.1 LAT Software Overview** - To find a LAT software overview, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 13, LAT Terminal Servers

**2.9.4.2 Loading and Dumping LAT Servers** - To find information about loading and dumping LAT servers, see the following manual:

NOTEBOOK 7

- o DECnet-20/PSI-20 System Manager's Guide
  - o Chapter 3, Running DECnet-20

**2.9.4.3 Specifying LAT Parameters** - To find information about specifying LAT parameters, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 13, LAT Terminal Servers

**2.9.4.4 Joining an Existing LAT Network** - To find information about joining an existing LAT network, see the following manuals:

NOTEBOOK 9

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 System Manager's Guide
  - o Chapter 13, LAT Terminal Servers

NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual
  - o Chapter 4, LCP Commands

**2.9.4.5 Starting and Stopping LAT Server Access** - To find information about starting and stopping LAT server access, see the following manuals:

NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual
  - o Chapter 4, LCP Commands

**2.9.4.6 Monitoring the LAT Network from TOPS-20** - To find information about monitoring the LAT network from TOPS-20, see the following manuals:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 13, LAT Terminal Servers

NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual
  - o Chapter 4, LCP Commands

**2.9.4.7 NI Availability for LAT** - To find information about NI availability for LAT, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 9, System Problems/Crashes



## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### 2.10 INSTALLATION

The following sections describe where to find information on installation.

#### 2.10.1 TOOLS

To find information about software installation tools, see the following sections.

**2.10.1.1 CHECKD** - To find information about CHECKD, see the following manual:

NOTEBOOK 12

- o TOPS-20 CHECKD Specification

**2.10.1.2 DLUSER** - To find information about DLUSER, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 8, Scheduled Software Tasks

**2.10.1.3 DUMPER** - To find information about the DUMPER program, see the following manuals:

NOTEBOOK 1

- o TOPS-20 User Utilities Guide
  - o Chapter 7, The DUMPER Program

NOTEBOOK 9

- o TOPS-20 KL Model B Installation Guide
  - o Chapter 2, Creating the TOPS-20 File System

NOTEBOOK 10

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks

**2.10.1.4 GALGEN** - To find information about the GALGEN program, see the following manual:

NOTEBOOK 9

- o TOPS-20 KL Model B Installation Guide
  - o Appendix D, Generating a Tailored BATCH and Spooling System

### **2.10.2 SYSTEM STARTUP/SHUTDOWN**

To find information about system startup/shutdown, see the following sections.

**2.10.2.1 Powering up the System** - To find information about powering up the system, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 4, Starting the System Hardware

**2.10.2.2 Loading the System** - To find information about loading the system, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 4, Starting the System Hardware

**2.10.2.3 Shutting Down the System** - To find information about shutting down the system, see the following manuals:

NOTEBOOK 9

WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 KL Model B Installation Guide
  - o Appendix A, Updating the DECSYSTEM-20 Software

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 9, Error Recovery Procedures

**2.10.2.4 KLINIT Initialization Dialogue** - To find information about KLINIT initialization dialogue, see the following manual:

NOTEBOOK 11

- o TOPS-10/TOPS-20 RSX-20F System Reference Manual
  - o Chapter 5, KLINIT

**2.10.2.5 Loading the TOPS-20 Monitor** - To find information about loading the TOPS-20 monitor, see the following manuals:

NOTEBOOK 9

- o TOPS-20 KL Model B Installation Guide
  - o Chapter 2, Creating the TOPS-20 File System

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 4, Starting the Hardware System

**2.10.2.6 System Startup Files** - To find information about system startup files, see the following manuals:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 4, Starting the Hardware System
  - o Chapter 5, The Operator Interface, OPR

NOTEBOOK 11

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 Operator's Command Language Reference Manual
  - o Chapter 5, ^E Privileged Commands
  - o Chapter 6, PTYCON Command Language

**2.10.2.7 Multi-System Installation** - To find information about a multi-system installation, see the following manuals:

### NOTEBOOK 9

- o TOPS-20 KL Model B Installation Guide
  - o Chapter 2, Creating the TOPS-20 File System

### NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks
  - o Chapter 8, Scheduled Software Tasks

**2.10.2.8 TCP/IP Installation** - To find information about TCP/IP installations, see the following manual:

### NOTEBOOK 9

- o TOPS-20 KL Model B Installation Guide
  - o Appendix C, Installing TCP/IP-20

**2.10.2.9 Selecting a TOPS-20 Monitor** - To find information about selecting a TOPS-20 monitor, see the following manual:

### NOTEBOOK 9

- o TOPS-20 KL Model B Installation Guide
  - o Chapter 2, Creating the TOPS-20 File System

**2.10.2.10 Creating System Defaults** - To find information about creating system defaults, see the following manuals:

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 11, Access Controls
- o TOPS-20 KL Model B Installation Guide
  - o Chapter 3, Tailoring the System

**2.10.2.11 Tailoring GALAXY** - To find information about tailoring GALAXY, see the following manual:

### NOTEBOOK 9

- o TOPS-20 KL Model B Installation Guide
  - o Appendix D, Generating a Tailored BATCH and Spooling System

**2.10.2.12 Creating the Front-End File System** - To find information about creating the front-end file system, see the following manuals:

### NOTEBOOK 9

- o TOPS-20 KL Model B Installation Guide
  - o Chapter 4, Creating the Front-end File System

### NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 9, Error Recovery Procedures

## **2.11 STRUCTURES AND DIRECTORIES**

The following sections describe where to find information on structures and directories.

### **2.11.1 TOOLS**

To find information about tools for structures and directories, see the following sections.

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

**2.11.1.1 DUMPER** - To find information about the DUMPER program, see the following manual:

NOTEBOOK 9

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks
  - o Chapter 8, Scheduled Software Tasks

**2.11.1.2 CHECKD** - To find information about CHECKD program, see the following manual:

NOTEBOOK 12

- o TOPS-20 CHECKD Specification

**2.11.1.3 DLUSER** - To find information about DLUSER, see the following manual:

NOTEBOOK 9

- o TOPS-20 Operator's Guide
  - o Chapter 8, Scheduled Software Tasks

**2.11.1.4 ^ECREATE** - To find information about ^ECREATE, see the following manual:

NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual
  - o Chapter 5, ^E Privileged Commands

### **2.11.2 SYSTEM STRUCTURES**

To find information about system structures, see the following manuals:

NOTEBOOK 1

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 User's Guide
  - o Chapter 6, Using Disk Files

### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 4, Creating Structures

### **2.11.3 LOGIN STRUCTURES**

To find information about login structures, see the following manual:

### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 4, Creating Structures

### **2.11.4 MOUNTABLE STRUCTURES**

To find information about mountable structures, see the following manual:

### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 4, Creating Structures

### **2.11.5 STRUCTURE NAMES**

To find information about structure names, see the following manuals:

### NOTEBOOK 1

- o TOPS-20 User's Guide
  - o Chapter 6, Using Disk Files

### NOTEBOOK 1

- o TOPS-20 User's Guide

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o Chapter 6, Using Disk Files

### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 4, Creating Structures

### **2.11.6 STRUCTURE SIZE**

To find information about structure size, see the following manual:

### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 4, Creating Structures

### **2.11.7 STRUCTURE PARAMETERS**

To find information about structure parameteres, see the following manual:

### NOTEBOOK 11

- o TOPS-20 Operator's Commands Language Reference Manual
  - o Chapter 3, OPR Command Descriptions

SET STRUCTURE command

### **2.11.8 CREATING A STRUCTURE**

To find information about creating a structure, see the following manual:

### NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks



## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### 2.11.9 CREATING A DIRECTORY

To find information about creating a directory, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 8, Scheduled Software Tasks

### 2.11.10 DIRECTORY AND FILE PROTECTION

To find information about directory and file protection, see the following manuals:

NOTEBOOK 1

- o TOPS-20 User's Guide
  - o Chapter 6, Using Disk Files

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 5, Creating Directories

## 2.12 ACCOUNTING

The following sections describe where to find information on accounting.

### 2.12.1 TOOLS

To find information about tools for accounting, see the following sections.

**2.12.1.1 ACTGEN** - To find information about ACTGEN, see the following manual:

NOTEBOOK 9

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 System Manager's Guide
  - o Chapter 6, Creating Accounts

**2.12.1.2 CHPNT** - To find information about CHPNT, see the following manual:

NOTEBOOK 10

- o TOPS-10/TOPS-20 UGAGE File Specification
  - o 3.0, Data Flow

### **2.12.2 ACCOUNTING SCHEMES**

To find information about accounting schemes, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 6, Creating Accounts

### **2.12.3 SETTING UP ACCOUNTING ON THE SYSTEM**

To find information about setting up accounting on the system, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 6, Creating Accounts

### **2.12.4 CREATING THE ACCOUNTS-TABLE DATABASE**

To find information about creating the accounts-table database, see the following manuals:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o Chapter 6, Creating Accounts

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 8, Scheduled Software Tasks

### 2.12.5 DATA COLLECTION AND REPORT GENERATION

To find information about data collection and report generation, see the following sections.

**2.12.5.1 Checkpointing** - To find information about checkpointing, see the following manual:

NOTEBOOK 11

- o TOPS-10/TOPS-20 USAGE File Specification
  - o 3.2.1, Checkpointing

**2.12.5.2 Event-Driven Accounting Data** - To find information about event-driven accounting data, see the following manual:

NOTEBOOK 11

- o TOPS-10/TOPS-20 USAGE File Specification
  - o 3.2.2, Event-Driven Data Collection

**2.12.5.3 Creating USAGE Files** - To find information about creating USAGE files, see the following manual:

NOTEBOOK 11

- o TOPS-10/TOPS-20 USAGE File Specification
  - o 2.0, Entry Descriptions
  - o 3.2.1, Checkpointing
  - o 4.0, Description of Data Common to all Entries

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o Appendix A, Usage File Record Formats

**2.12.5.4 Report Generation from USAGE Files** - To find information about report generation from USAGE files, see the following manual:

NOTEBOOK 11

- o TOPS-10/TOPS-20 USAGE File Specification
  - o 6.1, Running a Downstream Billing Program
  - o 6.2, Setting Billing Rates
  - o 6.3, Report Examples

## 2.13 SYSTEM BACKUP PROCEDURES

The following sections describes where to find information on system backup procedures.

### 2.13.1 TOOLS

To find information about tools used for system backups, see the following sections:

**2.13.1.1 EXEC** - To find information about the EXEC commands for doing backups, see the following manuals:

NOTEBOOK 2

- o TOPS-20 Commands Reference Manual
  - o Chapter 8, Scheduled Software Tasks

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 8, Scheduled Software Tasks

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

**2.13.1.2 OPR** - To find information about OPR commands for doing backups, see the following manuals:

NOTEBOOK 10

- o TOPS-20 Operator's Guide

NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual

**2.13.1.3 DUMPER** - To find information about backup procedures using DUMPER, see the following manuals:

NOTEBOOK 1

- o TOPS-20 User Utilities Manual
  - o Chapter 7, The DUMPER Program

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks
  - o Chapter 8, Scheduled Software Tasks

### **2.13.2 INTRODUCTION TO BACKUP PROCEDURES**

To find an introduction to backup procedures, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 7, System Backup Procedures

### **2.14 TAPE STORAGE**

The following sections describe where to find information on tape storage.

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### 2.14.1 TOOLS

To find information about tools used for tape storage, see the following sections.

**2.14.1.1 REAPER** - To find information about the REAPER program, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks
  - o Chapter 9, Error Recovery Procedures

**2.14.1.2 DUMPER** - To find information about the DUMPER program, see the following manual:

NOTEBOOK 1

- o TOPS-20 User Utilities Manual
  - o Chapter 7, The DUMPER Program

### 2.14.2 ARCHIVING AND RETRIEVAL

To find information about tape archiving and retrieval see the following manuals:

NOTEBOOK 1

- o TOPS-20 User's Guide
  - o Chapter 6, Using Disk Files

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### **2.14.3 MIGRATION**

To find information about migration, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks

### **2.14.4 TAPE LABELS**

To find information about tape labels, see the following manual:

NOTEBOOK 11

- o TOPS-20 Tape Processing Manual
  - o Chapter 2, Using Labeled Tapes
  - o Chapter 3, Digital System Label Definitions and Formats

### **2.14.5 AUTOMATIC VOLUME RECOGNITION**

To find information about automatic volume recognition, see the following manuals:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 8, Tape Storage

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 7, System Backup Procedures

### **2.14.6 SHARING TAPE DRIVES**

To find information about sharing tape drives, see the following manual:

NOTEBOOK 9

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 System Manager's Guide
  - o Chapter 8, Tape Storage

### 2.15 ERROR DETECTION AND RECOVERY

The following sections describe where to find information on error detection and recovery.

#### 2.15.1 TOOLS

To find information about the tools used for error detection and recovery, see the following sections.

**2.15.1.1 CHECKD** - To find information about the CHECKD program, see the following manual:

NOTEBOOK 12

- o TOPS-20 CHECKD Specification

**2.15.1.2 DLUSER** - To find information about DLUSER, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 8, Scheduled Software Tasks

**2.15.1.3 DOBOPR** - To find information about DOBOPR, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide

**2.15.1.4 SPEAR** - To find information about the SPEAR program, see the following manual:



## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

NOTEBOOK 10

- o TOPS-10/TOPS-20 SPEAR Manual

### **2.15.2 SYSTEM STARTUP ERROR MESSAGES**

To find information about system startup error messages, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 9, Error Recovery Procedures

### **2.15.3 HOME BLOCK AND BAT BLOCK MESSAGES**

To find information about the home block and bat block messages, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator Guide
  - o Chapter 9, Error Recovery Procedures

### **2.15.4 MEMORY PARITY ERRORS**

To find information about the memory parity errors, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 9, Error Recovery Procedures

### **2.15.5 DX20 ERROR MESSAGES**

To find information about DX20 error messages, see the following manual:

NOTEBOOK 10

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 Operator's Guide
  - o Chapter 9, Error Recovery Procedures

### **2.15.6 DEVICE ERROR MESSAGES**

To find information about device error messages, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 9, Error Recovery Procedures

### **2.15.7 BUGINFS, BUGCHECKS, BUGHLTS**

To find information about BUGINFS, BUGCHECKS, and BUGHLTS, see the following manual:

NOTEBOOK 9

- o TOPS-20 Operator's Guide
  - o Chapter 9, Error Recovery Procedures

NOTEBOOK 12

- o TOPS-20 BUGHLT Document

### **2.15.8 SYSTEM RELOADS**

To find information about the system reloads, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 9, Error Recovery Procedures

### **2.15.9 SYSTEM CRASHES**

To find information about the system crashes, see the following

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

manuals:

NOTEBOOK 9

- o TOPS-20 KL Model B Installation Guide
  - o Chapter 2, Creating the TOPS-20 File System

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 9, Error Recovery Procedures

NOTEBOOK 11

- o TOPS-10/TOPS-20 RSX-20F System Reference Manual
  - o Chapter 9, Error Detection and Logging

### **2.15.10 DUMP-ON-BUGCHK**

To find information about DUMP-ON-BUGCHK, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 9, System Problems/Crashes

### **2.15.11 FILE SYSTEM RECOVERY**

To find information about file system recovery, see the following manuals:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 7, System Backup Procedures
  - o Chapter 9, System Problems/Crashes

NOTEBOOK 10

- o TOPS-20 Operator's Guide

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o Chapter 8, Scheduled Software Tasks
- o Chapter 9, Error Recovery Procedures

### **2.15.12 SPEAR AND ERROR.SYS**

To find information about the SPEAR program and ERROR.SYS, see the following manual:

NOTEBOOK 10

- o TOPS-10/TOPS-20 SPEAR Manual

### **2.15.13 KLINK**

To find information about the KLINK program, see the following manuals:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 9, Error Recovery Procedures

NOTEBOOK 11

- o TOPS-10/TOPS-20 RSX-20F System Reference Manual
  - o Appendix D, KLINIK Access Dialog

### **2.15.14 RESTARTING PROGRAMS UNDER SYSJOB**

To find information about restarting programs under sysjob, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 9, Error Recovery Procedures

## **2.16 MONITORING THE SYSTEM**

The following sections describe where to find information about

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

monitoring the system.

### **2.16.1 GETTING SYSTEM INFORMATION**

To find information about getting system information, see the following manual:

NOTEBOOK 2

- o TOPS-20 Commands Reference Manual
  - o INFORMATION MONITOR command
  - o INFORMATION SYSTEM command
  - o SYSTAT command

### **2.16.2 WATCH**

To find information about the WATCH program, see the following manual:

NOTEBOOK 11

- o TOPS-20 WATCH: A Program for Measuring System Usage

### **2.17 CONTROLLING THE SYSTEM**

To find information about controlling the system with ^E commands, see the following manual:

NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual
  - o Chapter 5, ^E Privileged Commands

### **2.18 TUNING THE SYSTEM**

To find information about tuning the system, see the following sections.

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### 2.18.1 CLASS SCHEDULER

To find information about the class scheduler, see the following manuals:

#### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 10, System Performance

#### NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks

#### NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual
  - o Chapter 3, OPR Command Descriptions

### 2.18.2 BIAS CONTROL

To find information about bias control, see the following manuals:

#### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 10, System Performance
- o TOPS-20 KL Model B Installation Guide
  - o Chapter 3, Tailoring the System

### 2.18.3 MAKING BATCH JOBS LOW PRIORITY

To find information about making BATCH jobs low priority, see the following manual:

#### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 10, System Performance

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### **2.18.4 IMPROVING PROGRAM STARTUP TIME**

To find information about improving program startup time, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 10, System Performance

### **2.18.5 DYNAMIC DUAL-PORTING**

To find information about dynamic dual-porting, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 10, System Performance

## **2.19 SYSTEM SECURITY**

The following sections describe where to find information on system security.

### **2.19.1 PASSWORD MANAGEMENT**

To find information about password management, see the following manuals:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 11, Access Controls
- o TOPS-20 KL Model B Installation Guide
  - o Chapter 2, Creating the TOPS-20 File System

NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o Chapter 5, ^E Privileged Commands

NOTEBOOK 12

- o TOPS-20 CHECKD Specification

### **2.19.2 PRIVILEGED COMMANDS**

To find information about privileged commands, see the following manuals:

NOTEBOOK 2

- o TOPS-20 Commands Reference Manual

NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual
  - o ^E Privileged Commands

### **2.19.3 CREATING AN ACJ PROGRAM**

To find information about the ACJ program, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 11, Access Controls

## **2.20 CLUSTER MANAGEMENT**

The following sections describe where to find information on cluster management.

### **2.20.1 CFS HARDWARE**

To find information about CFS hardware, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide



## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o Chapter 12, The Common File System

### **2.20.2 CFS SYSTEM STARTUP**

To find information about CFS system startup, see the following manuals:

#### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 12, The Common File System

#### NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 4, Starting the Hardware System

### **2.20.3 INTERSYSTEM COMMUNICATION**

To find information about intersystem communication, see the following manual:

#### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 12, The Common File System

### **2.20.4 REMOTE OPERATOR COMMANDS**

To find information about remote operator commands, see the following manual:

#### NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 5, The Operator Interface, OPR

### **2.20.5 CLUSTER DATA GATHERING**

To find information about cluster data gathering, see the following

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 12, The Common File System

### **2.20.6 REMOTE CLUSTER PRINTING**

To find information about remote cluster printing, see the following manuals:

NOTEBOOK 2

- o TOPS-20 Commands Reference Manual
  - o PRINT command

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 3, After Software Installation

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 5, The Operator Interface, OPR
  - o Chapter 6, BATCH Software Tasks

### **2.20.7 CLUSTERWIDE FILE DISTRIBUTION**

To find information about clusterwide file distribution, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 3, After Software Installation
  - o Chapter 12, The Common File System

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

### **2.20.8 LOAD BALANCING**

To find information about load balancing, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 10, System Performance
  - o Chapter 12, The Common File System

### **2.20.9 CLUSTERWIDE USERNAMES**

To find information about clusterwide usernames, see the following manual:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 12, The Common File System

### **2.20.10 STRUCTURE ATTRIBUTES**

To find information about structure attributes, see the following manual:

NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual
  - o SET STRUCTURE command

### **2.20.11 CENTRALIZED LOGIN STRUCTURES**

To find information about centralized login structures, see the following manuals:

NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 12, The Common File System

NOTEBOOK 10

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o TOPS-20 Operator's Guide
  - o Chapter 8, Scheduled Software Tasks

### **2.20.12 RESTRICTING ACCESS TO STRUCTURES**

To find information about restricting access to structures, see the following manuals:

#### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 12, The Common File System

#### NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks

#### NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual
  - o SET STRUCTURE STR: EXCLUSIVE command

### **2.20.13 DISMOUNTING STRUCTURES**

To find information about dismounting structures, see the following manuals:

#### NOTEBOOK 9

- o TOPS-20 System Manager's Guide
  - o Chapter 12, The Common File System

#### NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 7, Unscheduled Software Tasks

#### NOTEBOOK 11

- o TOPS-20 Operator's Command Language Reference Manual

## WHERE TO FIND INFORMATION ON SPECIFIC TOPICS

- o DISMOUNT command

### **2.20.14 CFS SYSTEM SHUTDOWN**

To find information about CFS system shutdown, see the following manual:

NOTEBOOK 10

- o TOPS-20 Operator's Guide
  - o Chapter 8, Scheduled Software Tasks

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