

**Documentation
Catalogue**

NORSK DATA A.S



Documentation Catalogue

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Manuals can be updated in two ways, new versions and revisions. New versions consist of a complete new manual which replaces the old manual. New versions incorporate all revisions since the previous version. Revisions consist of one or more single pages to be merged into the manual by the user, each revised page being listed on the new printing record sent out with the revision. The old printing record should be replaced by the new one.

New versions and revisions are announced in the ND Bulletin and can be ordered as described below.

The reader's comments form at the back of this manual can be used both to report errors in the manual and to give an evaluation of the manual. Both detailed and general comments are welcome.

These forms, together with all types of inquiry and requests for documentation should be sent to the local ND office or (in Norway) to:

Documentation Department
Norsk Data A.S
P.O. Box 4, Lindeberg gård
Oslo 10

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1. INTRODUCTION	1
1.1. Manual Categories	1
1.1.1. Reader Types	1
1.1.2. Manual Types	2
1.1.3. Subject Types	3
1.2. Norsk Data's Manual Numbering System	4
1.3. Versions and Revisions	4
1.4. The Manual Preface	5
1.5. Ordering Manuals	5
2. SURVEY OF MANUALS	7
2.1. General	7
2.2. Hardware Documentation	8
2.2.1. NORD-10/S, NORD-50, ND-100, ND-500	8
2.2.2. Data Storage and Interfaces	8
2.3. Mixed Hardware/Software Documentation	8
2.4. Software Documentation	12
2.4.1. Operating Systems	13
2.4.2. Compilers, Monitors and Loaders	15
2.4.3. Utility Programs	17
2.4.4. Administrative Data Processing and Databases	19
2.4.5. Data Communications	21
3. MANUAL DESCRIPTIONS	23
4. PRICE LIST	59

1. INTRODUCTION

This catalogue describes the documentation available to users of Norsk Data computer systems. All manuals in the catalogue can be ordered from the ND documentation department. A list of available manuals, their version numbers and prices, is published every month in the ND-Bulletin. This catalogue is published twice a year.

1.1. Manual Categories

The individual manuals have been placed in categories and the relationships between them indicated. The most common categories depend on the subject covered (subject type), the type of reader the manual is intended for (reader type) and the way the subject matter is presented (manual type). Manual type and reader type are often closely related.

1.1.1. Reader Types

Most readers belong to one or more of the following groups:

- Managers. Managers are usually interested in general information about a product to decide if it is of interest, and if it is, how the company can profit by acquiring it. Detailed technical descriptions are usually of less interest.
- End Users. These are noncomputer-professionals who use a computer-based system without having to program it themselves. The programs are already written and the user needs instructions on how to use them and information to help him understand the general design of the system.
- Programmers. Programmers have a general knowledge of computer systems and how to program them, but may have little knowledge of the particular programming system in use. They require detailed instructions on how to program using this system.
- Operators. Operators are responsible for the daily operation of a computer system. They need to know how to start and stop the system, how to keep the system running correctly and how to handle simple errors.
- Supervisors. A supervisor requires more detailed knowledge as he usually has the main responsibility for a system. He must be able to configure the system, make necessary changes to it and handle more difficult error situations.

Service. Service personnel must be able to locate and repair errors. This requires an understanding of error messages and symptoms, diagnostic tools, error removal procedures etc. Service is generally carried out by Norsk Data employees, but some service documentation is also available to customers.

1.1.2. Manual Types

The manual type determines which information is presented and how. This often depends on the intended readership.

Introductory Information. This type of manual contains a general functional description of a system, highlighting the main features. Brief technical details may be presented and hardware and software requirements mentioned. It is written for all types of users. It may be the only type of documentation necessary for managers and other users can read it before going on to more detailed documentation.

Reference Manual. The reference manual presents a detailed description of features and facilities available to the user. It should be accurate, complete and structured so that it is easy to find information quickly. It is mainly intended for experienced users who need to look up the precise syntax of a command and its parameters, the precise meaning of an error message etc.

User's Guide. A user's guide is written mainly for new users of the system and is intended to tutor the reader in the use of the system. It explains the features of the system and how to use them efficiently it should take the reader step by step through the use of the various features. It is intended to be read from beginning to end, beginning simply and introducing new concepts gradually.

Operator's Manual. This type of manual is written specifically for operators, ie. those responsible for the daily operation of a system. It contains the information necessary to carry out this task and may also contain information for supervisors, such as ordering and installing the system, making limited changes to it and handling serious error situations.

Maintenance Manual. This type of manual is written specifically for service personell. It contains the information necessary to identify and repair errors in the field, either by correcting the error or by replacing the unsatisfactory component.

Internal System Documentation. This shows the internal construction of a hardware or software product. It provides a detailed description of implementation, giving the reader a comprehensive understanding and possibly the ability to modify the product.

1.1.3. Subject Types

Manuals are usually divided according to their subject. The main division is into hardware, software and those covering a combination; hardware is subdivided into different types of hardware. This division is reflected in the Norsk Data manual numbering system which is described in the following section.

1.2. Norsk Data's Manual Numbering System

The numbering system for Norsk Data manuals consists of three numbers, as follows:

ND-xx.yyy.zz

These numbers indicate the following:

xx gives the subject type.

Hardware

- 05 = NORD-5, NORD-50, ND-500 CPUs
- 06 = NORD-1, NORD-10, NORD-10/S, ND-100 CPUs
- 11 = Data storage equipment
- 12 = I/O interfaces
- 13 = Miscellaneous hardware

Mixed hardware/software

- 30 = Operating, diagnostic, maintenance
- 40 = Miscellaneous
- 50 = Hardware/software system descriptions
- 70 = Documentation packages

Software

- 60 = All software

yyy is a sequential identification number.

zz is the version number.

In addition there may be revisions to the manual as described below. These are identified by letters (revision A, revision B, etc.).

1.3. Versions and Revisions

Manuals can be updated by revisions or by new versions.

Revisions consist of one or more single pages which the reader inserts into the old manual. Each revised page is listed on the new printing record which accompanies the revision. The old printing record should be replaced by the new one. Revisions are used to correct small errors in the manual or to document small changes in the product.

Revisions are indicated by letters, such as revision A to version 02.

New versions consist of a complete new replacement manual. They incorporate all revisions since the previous version. The printing record shows all old versions and revisions and the new version number. They are issued when changes to the manual involve more than a few minor revisions.

Versions are indicated by the last part of the manual number.

1.4. The Manual Preface

The preface should help the reader decide if this manual is relevant to his current needs. It should contain the following information:

1. Identification of the product(s) documented in the manual, their ND or PD number and version number.
2. A definition of intended readership.
3. The knowledge required to understand the manual and where this can be found in other manuals.
4. A brief description of contents, structure and how to use the manual.
5. A list of related manuals, how they are related and a recommended reading order where applicable.

1.5. Ordering Manuals

Customers receiving new hardware or software products or new versions will also receive the relevant documentation, so it is unnecessary to order this separately.

However users wanting additional manuals, or documentation for other products, can order these separately from Norsk Data. If a manual is updated with a new version or a revision, this will not be automatically sent out to those with the old manual, but must be ordered separately. New versions and revisions are announced in the ND Bulletin.

All manuals can be ordered from the local Norsk Data office or (in Norway) from:

Documentation Department
Norsk Data A.S
P.O.Box 4, Lindeberg Gård
Oslo 10, Norway

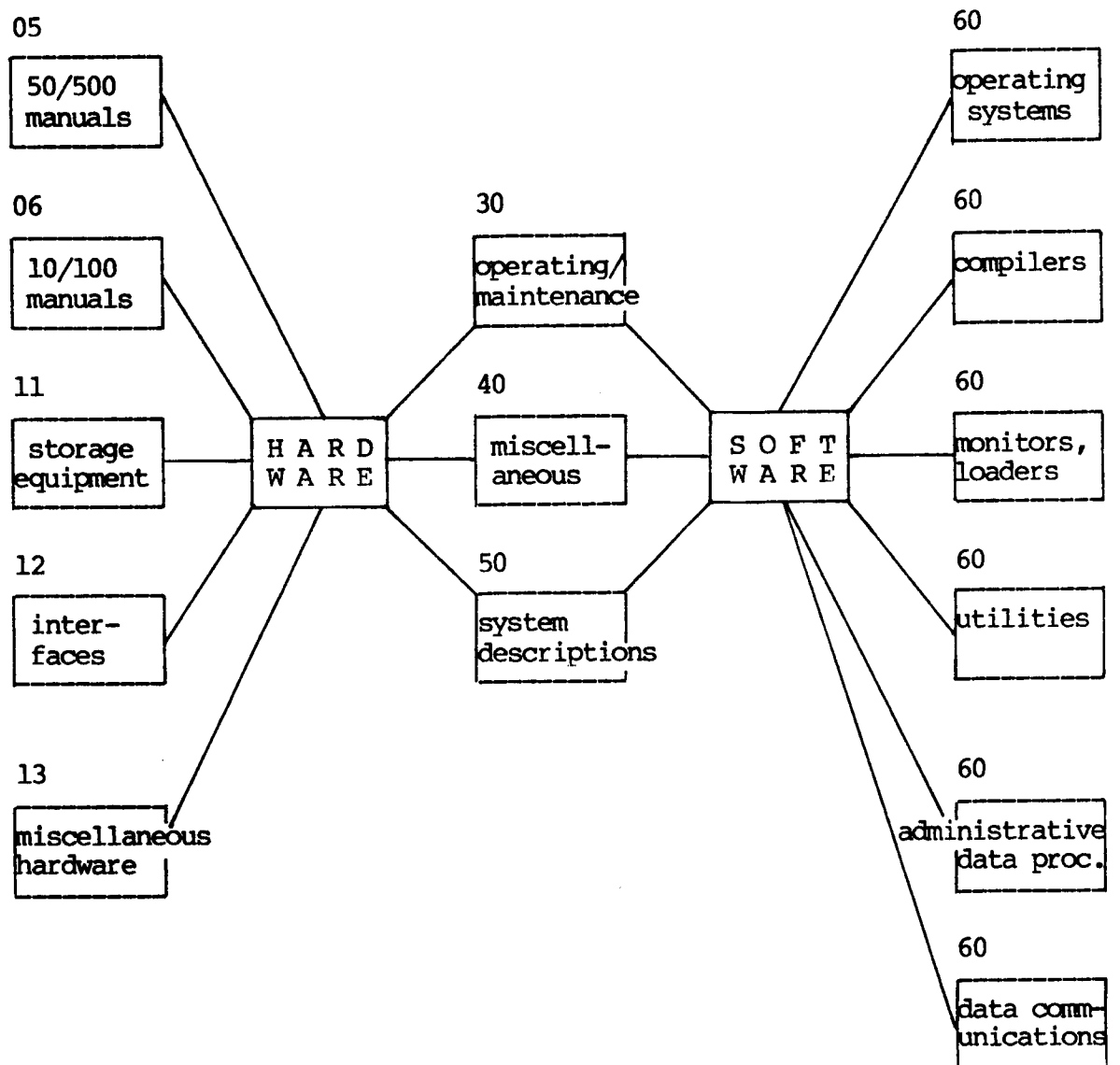


Figure 1. Manual Categories

2. SURVEY OF MANUALS

2.1. General

The numbering system described above shows a general division of Norsk Data manuals into three main categories, based on the subject matter:

1. Hardware
2. Mixed hardware/software
3. Software

Figure 1 shows how these categories are further subdivided.

2.2. Hardware Documentation

2.2.1. NORD-10/S, NORD-50, ND-100, ND-500

Figure 2a shows the hardware manuals available for the following CPUs produced by Norsk Data:

NORD-10/S
NORD-50
ND-100
ND-500

The manuals are arranged by CPU type and by manual type. The manual types are, from left to right:

Introductory information
Reference manuals
Internal documentation

The corresponding operating, maintenance and diagnostic (test program) documentation for these CPUs is shown in figure 2b.

2.2.2. Data Storage and Interfaces

Figure 3 shows manuals covering storage equipment and interfaces. It also shows some miscellaneous hardware documentation.

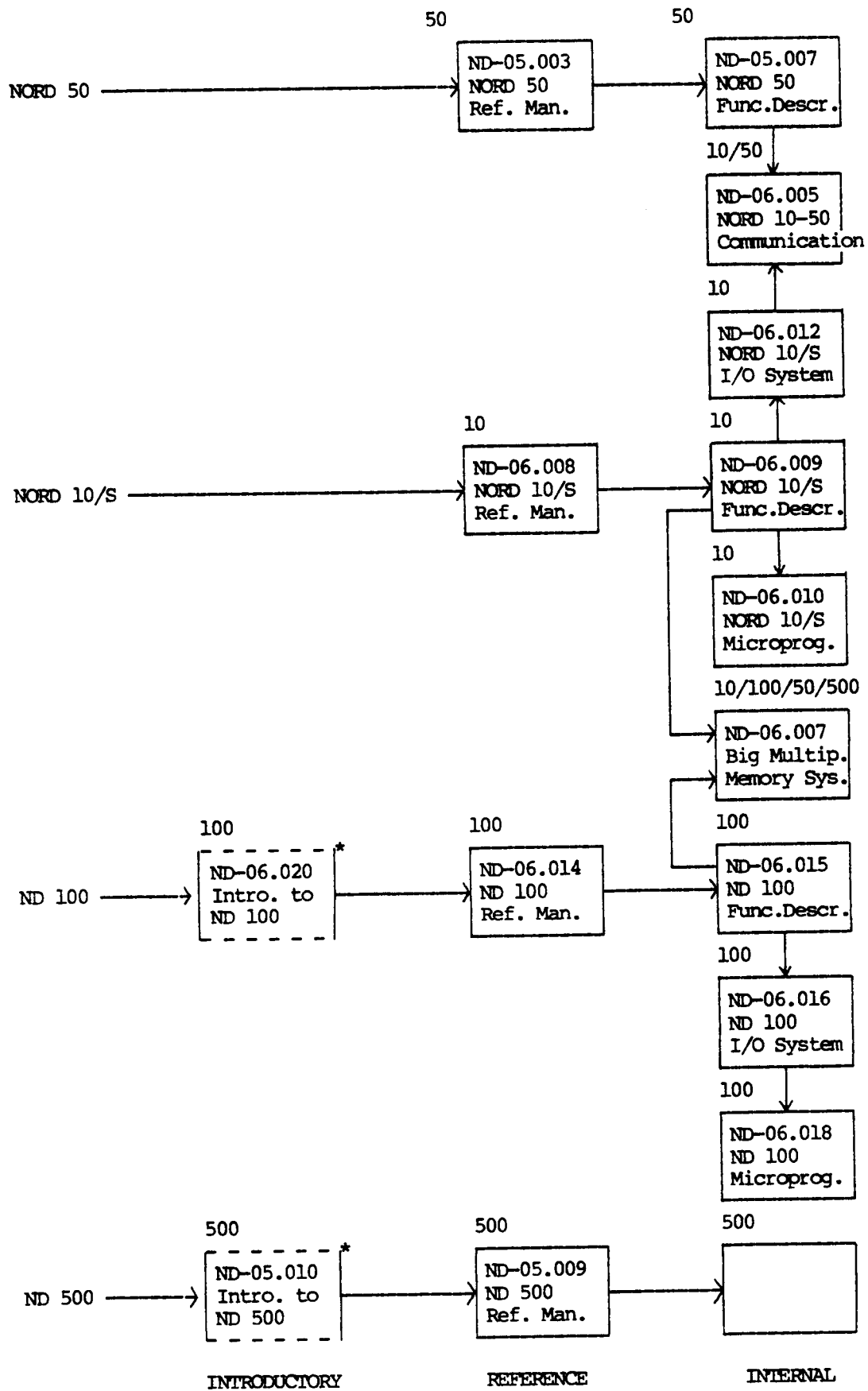
2.3. Mixed Hardware/Software Documentation

Most of the manuals in this category belong to the types:

Operating documentation
Test program and maintenance documentation

Figure 2b shows how these manuals are related to the hardware manuals for the same CPUs.

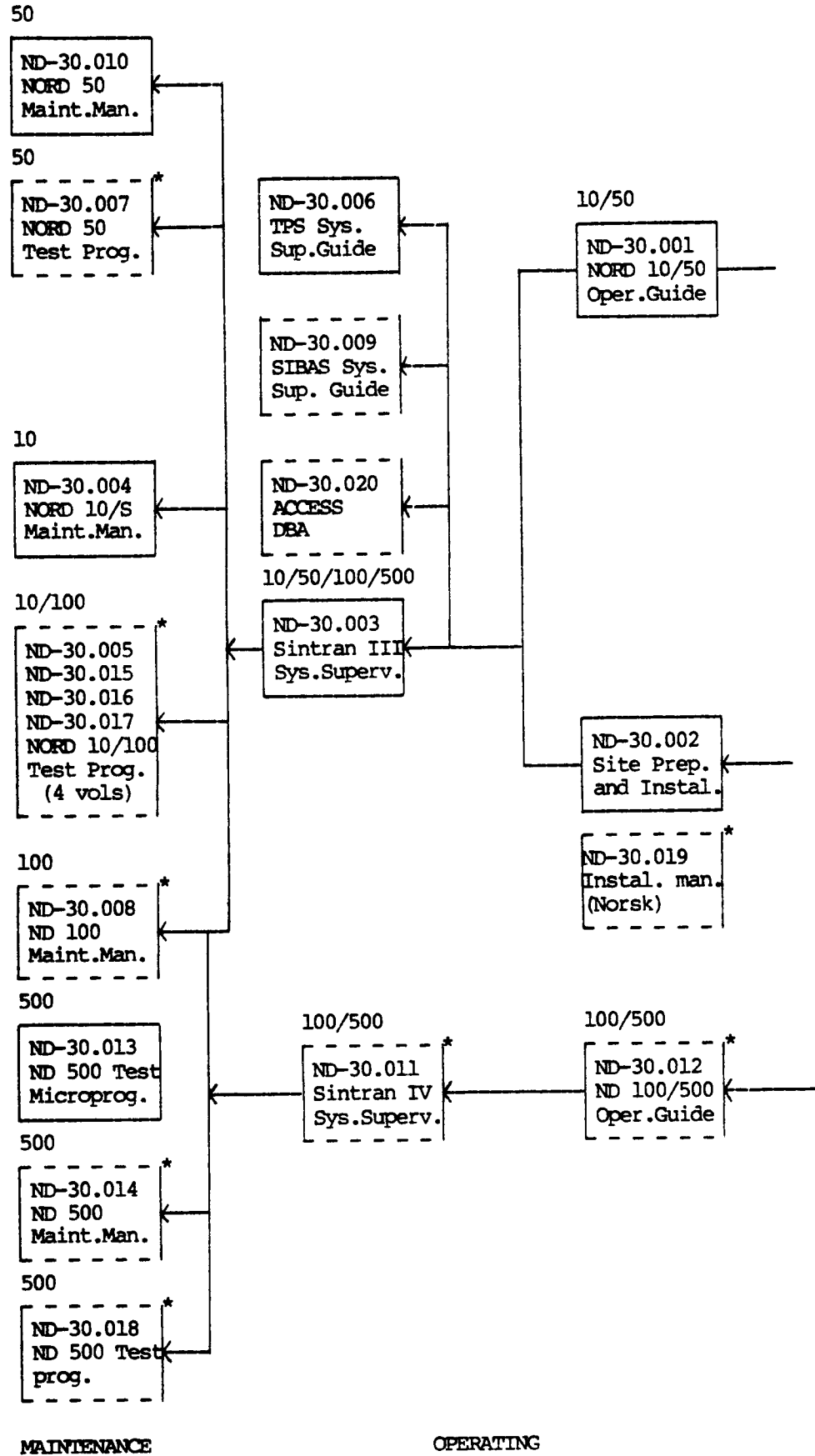
The other type of documentation in this category, system descriptions of Norsk Data products, is at present mainly available as brochures and data sheets, not as manuals.



* Not yet available

Figure 2a. CPU Hardware Manuals

ND-40.004.02



* Not yet available

Figure 2b. Operating and Maintenance Manuals

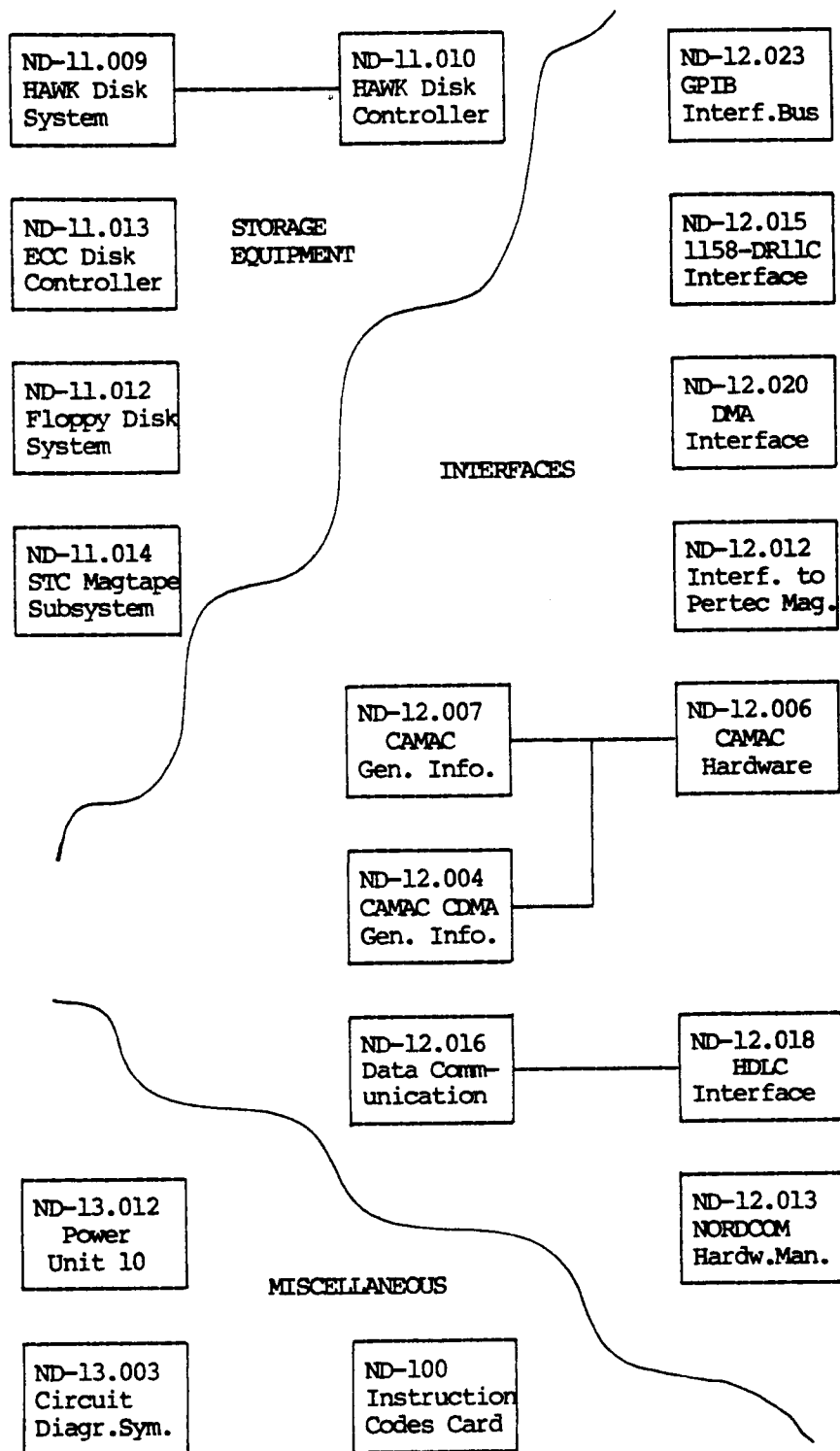


Figure 3. Storage Equipment, Interfaces and Misc. Hardware

2.4. Software Documentation

All software documentation has a number in the 60 series. It is divided into the following groups:

- Operating Systems
- Compilers
- Monitors, loaders
- Utilities
- Administrative data processing, databases
- Data communications

2.4.1. Operating Systems

The operating system in most common use at present is SINTRAN III/VS, the disk version of SINTRAN III. The set of manuals required to provide a comprehensive description is divided as follows:

- Introduction
- User's guides
- Reference manuals
- Operator/supervisor manuals
- Internal system documentation

The version that does not use a disk, SINTRAN III/RT, is much simpler and is described in the SINTRAN III/RT User's Guide.

Older operating systems such as SINTRAN II, NORDOPS and TSS are no longer in general use and are not included in this catalogue.

The newest operating system, SINTRAN IV, is not yet available. Preliminary documentation will be announced as soon as possible.

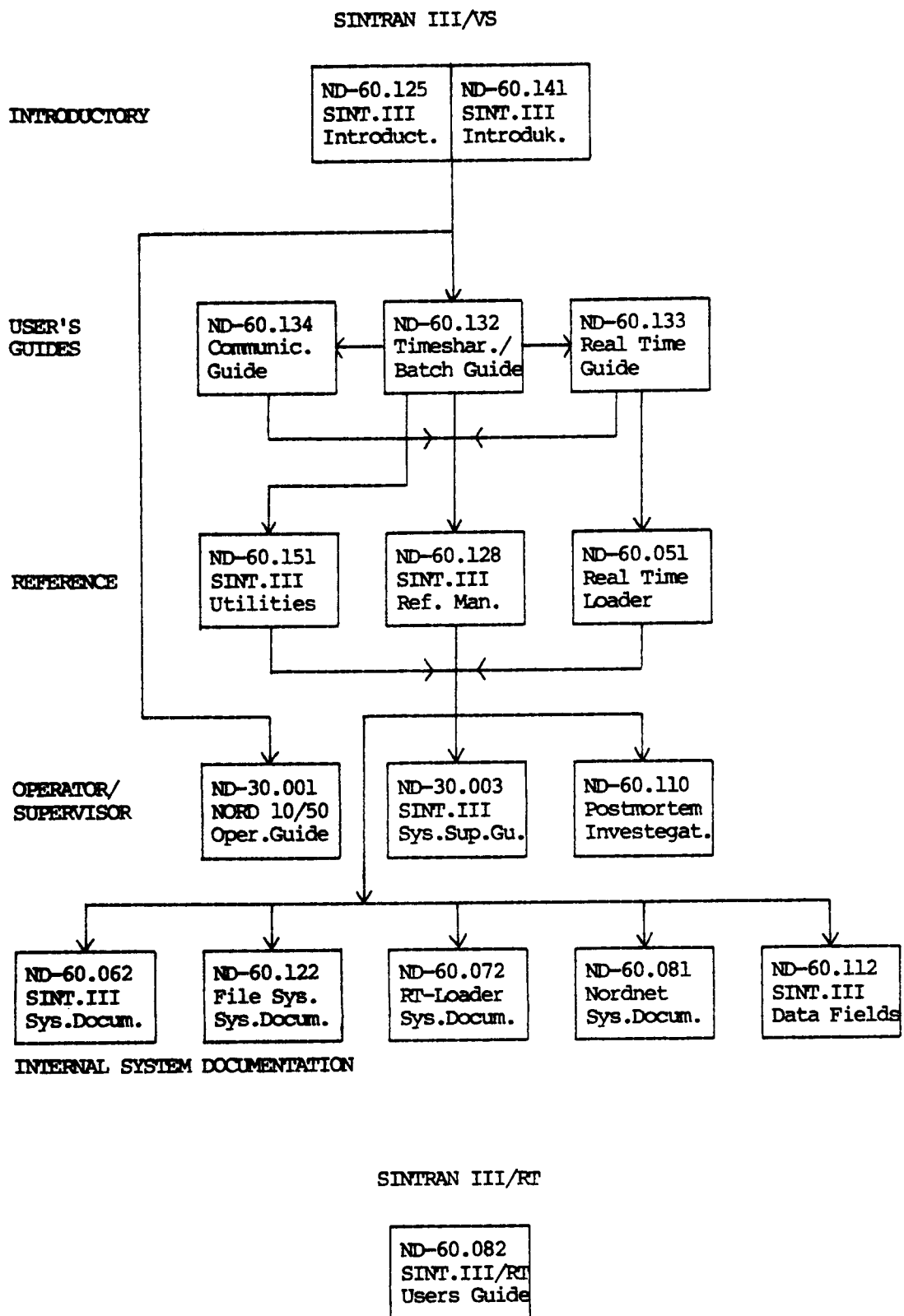


Figure 4. Operating Systems

2.4.2. Compilers, Monitors and Loaders

Figures 5 and 6 show the compiler, monitor and loader manuals available for the different CPUs. The NORD-10 and ND-100 are completely software compatible, whereas the NORD-50 and ND-500 need special compilers and loaders. The NORD-50 and ND-500 also use special monitors under SINTRAN III; these are not necessary for the NORD-10 and ND-100.

Some of the compiler manuals can be used for both ND-100/10 and ND-500 compilers, as shown in figure 6.

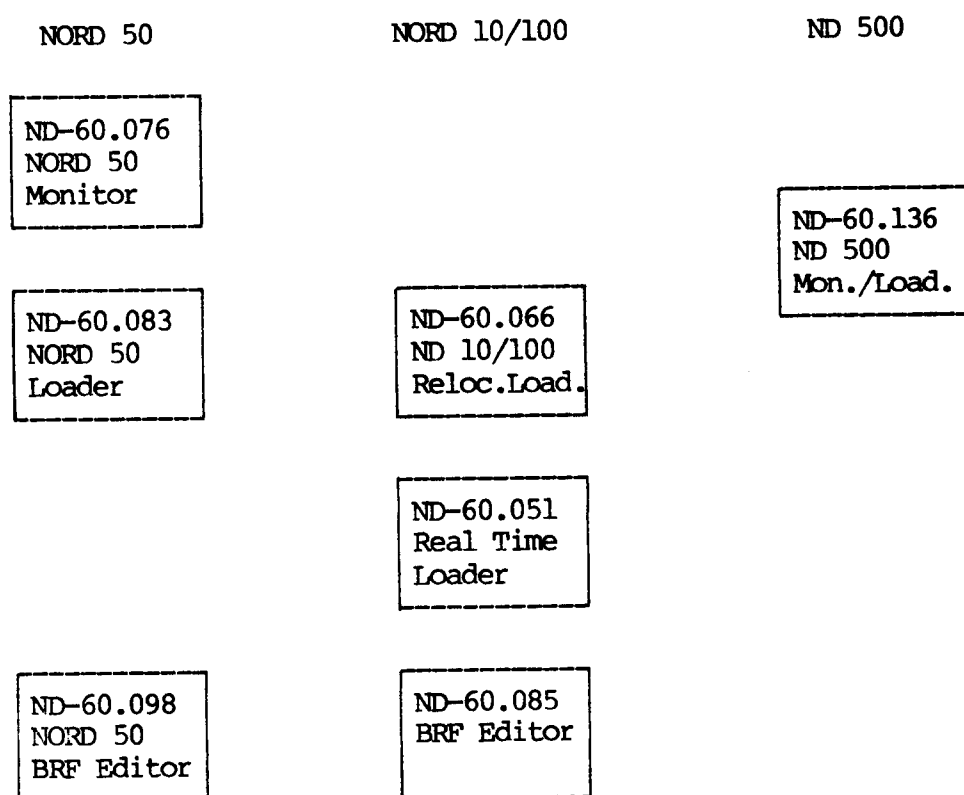


Figure 5. Monitors and Loaders

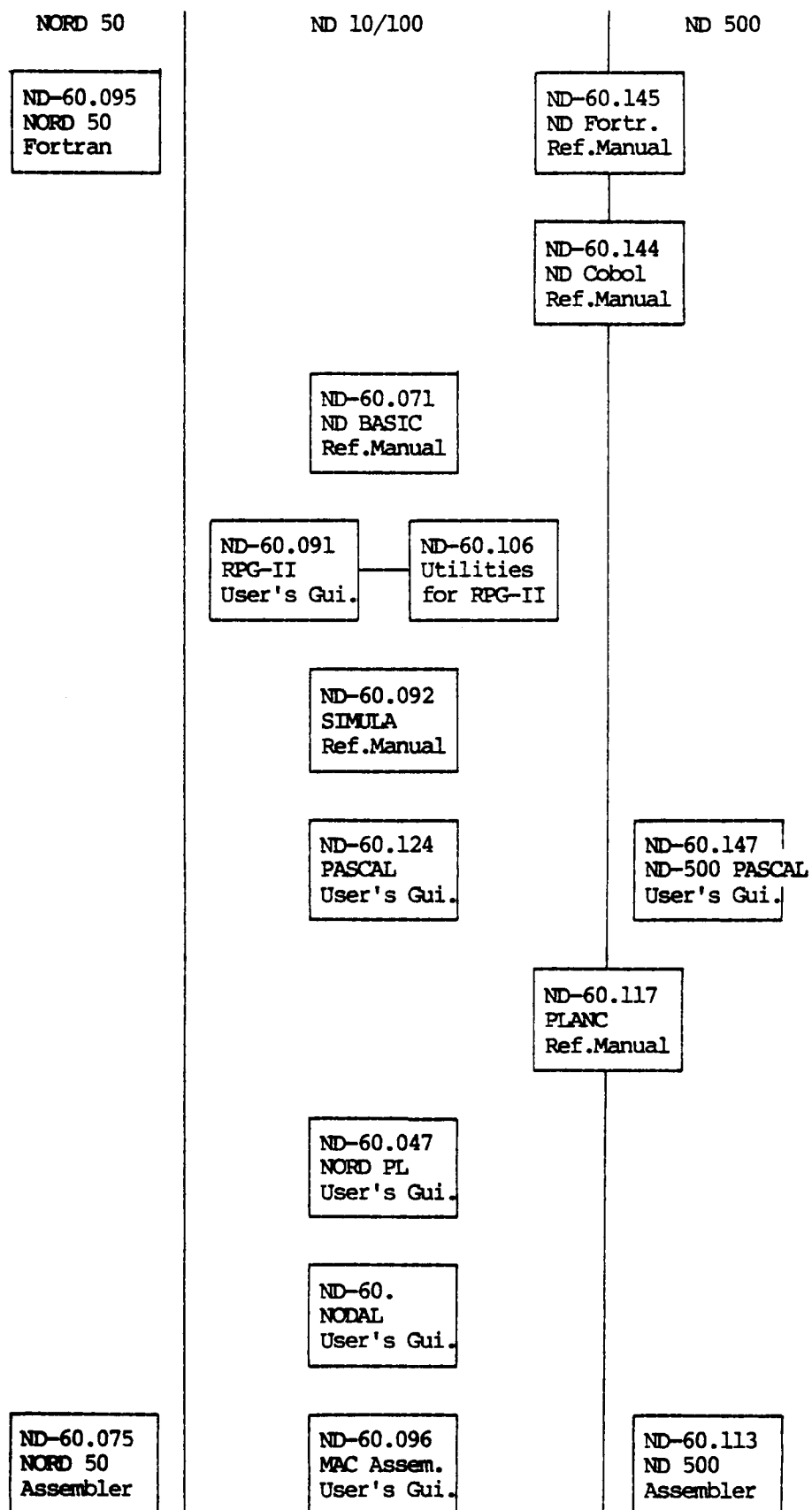


Figure 6. Compilers

ND-40.004.02

2.4.3. Utility Programs

A variety of utility programs are available:

- File utilities
- Editors
- Special input/output routines
- Scientific subroutines
- General purpose macrogenerator
- Debugger program

These are shown in figure 7.

FILE UTILITIES

ND-60.146
Sort/Merge
System

ND-60.102
FileExtract
User's Gui.*

ND-60.107
DATA CON
User's Gui.*

ND-60.126
Magtape
Lister Gui.*

ND-60.108
ISAM
User's Gui.

ND-60.157
Data Man.
Utilities

EDITORS

ND-60.031
QED User's
Manual

ND-60.121
PED User's
Guide

ND-60.148
PED
Brukerv.

ND-60.120
NOTIS-1
User's Gui.

ND-60.139
NOTIS-1
Brukerveil.

ND-60.155
NOTIS-1
Ref.Manual

ND-60.156
NOTIS-1
H}ndbok

INPUT/OUTPUT

ND-60.058
PLOT
Package

ND-60.099
FLOCON
User's Gui.*

ND-60.094
NORDCOM
User's Gui.

ND-60.093
NORD Pro-
cess I/O

ND-60.079
MEAS II
Prog.Sys.

MISCELLANEOUS

ND-60.158
Debugger
User Manual

ND-60.046
Trace
Routine

ND-60.109
Gen. Purp.
Macro Gen.**

ND-60.037
Scientific
Subroutines

* Now included in ND-60.157 Data Management Utilities

** Now included in ND-60.151 SINTRAN III Utilities

Figure 7. Utilities

2.4.4. Administrative Data Processing and Databases

The documentation relating to administrative data processing, shown in figure 8, can be subdivided as follows:

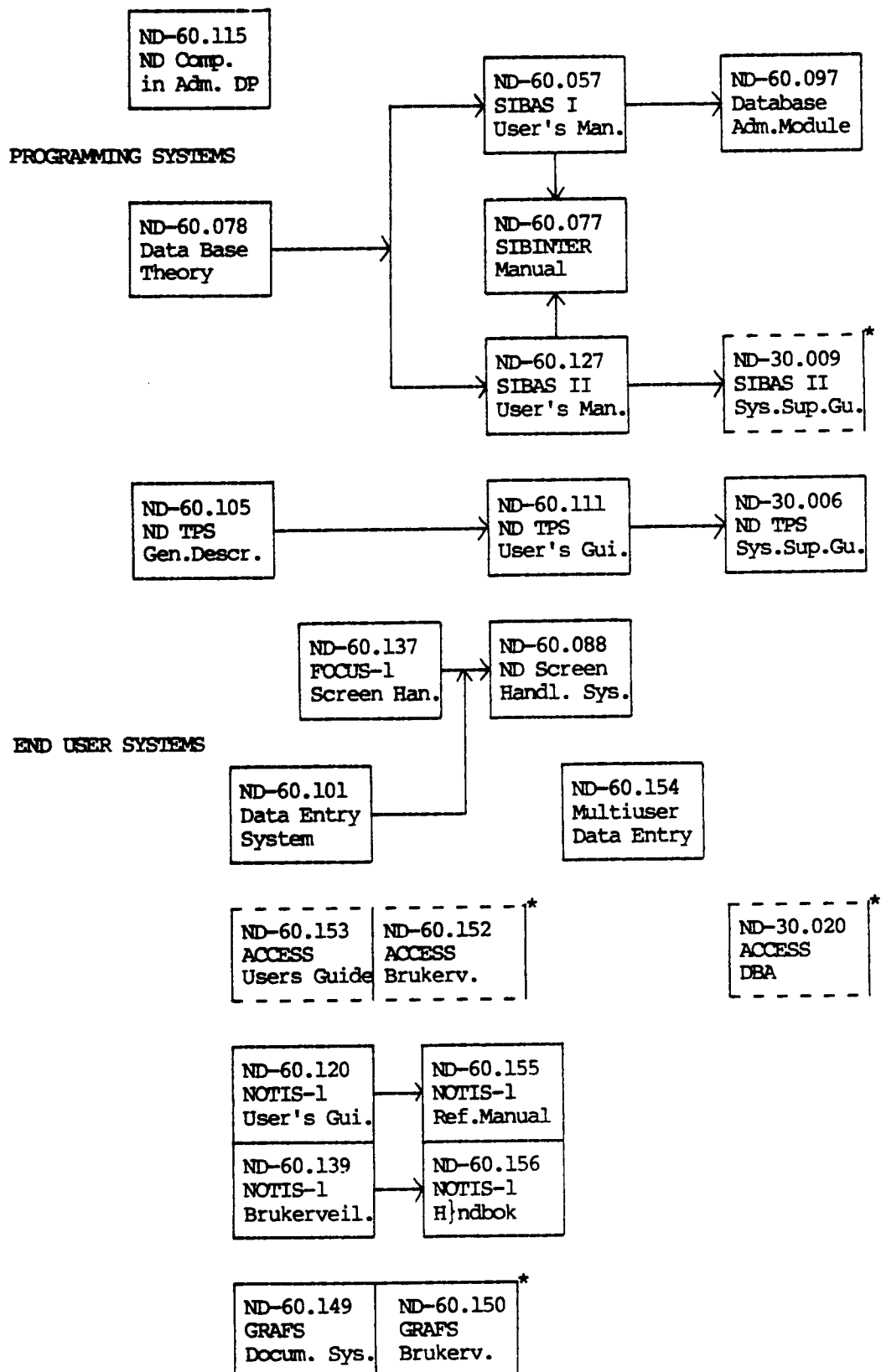
Programming systems

- Data base management
- Screen handling
- Transaction processing

End user systems

- Data entry
- ACCESS
- Text editing
- Document handling

Those manuals to the left of figure 8 require little technical knowledge, those to the right require a high degree.



* Not yet available

Figure 8. Administrative Data Processing

2.4.5. Data Communications

The documentation available for data communications consists mainly of manuals for the various IDT (intelligent data terminal) packages. In addition, the SINTRAN Communication Guide describes some data communication systems and there are some separate manuals, as shown in figure 9.

IDT packages
 SINTRAN III Communication Guide, including
 NORDNET, X-message, HDLC, X.21
 X.25 manual
 NORDNET system documentation

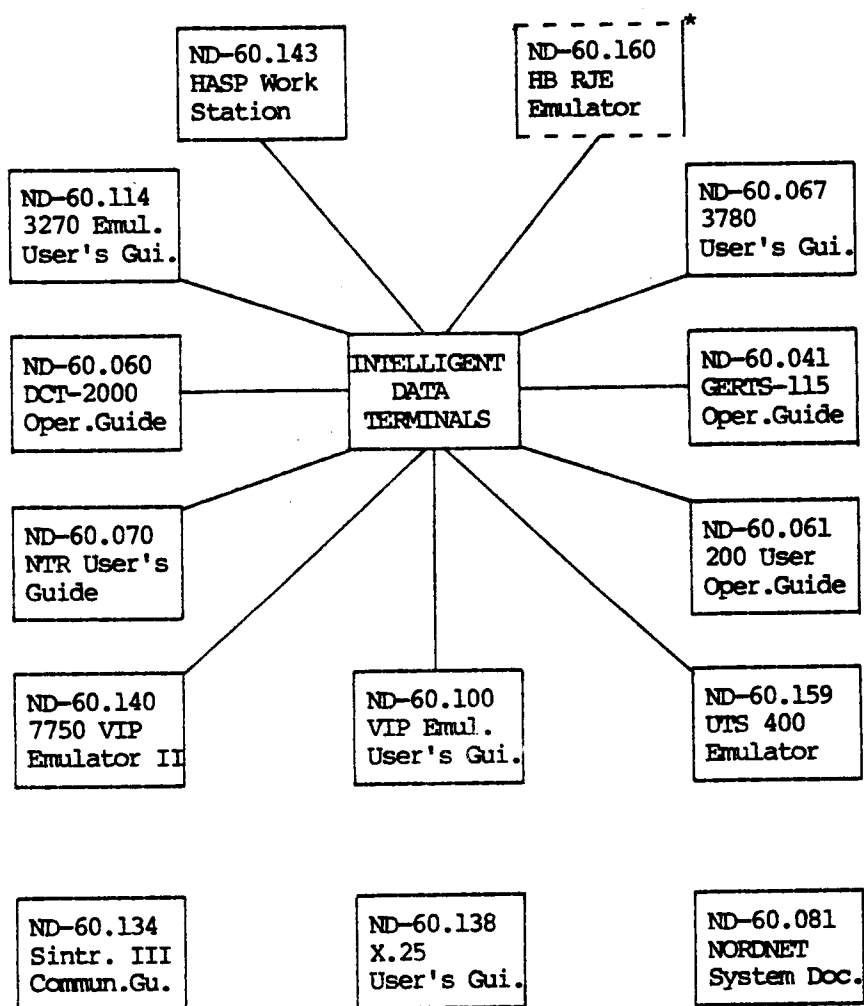


Figure 9. Data Communications

3. MANUAL DESCRIPTIONS

This chapter contains a short description of each manual. The descriptions are in numerical order and contain the following information:

- Manual number
- Manual name
- Subject and manual type
- Reader type
- Prerequisite knowledge

For information about versions, revisions and prices, see chapter 4.

ND-05.003

NORD-50 Reference Manual

This manual gives a detailed description of the NORD-50 registers and instruction set. It is written for programmers and operators. The part concerning registers should be of interest to technical and maintenance personnel. Readers should be familiar with the NORD-50 CPU at the level described in the NORD-50 Functional Description. 44 pages.

ND-05.007

NORD-50 Functional Description

This manual describes the main building blocks of the NORD-50 and their functions, from a hardware point of view. It is written for technical and maintenance personnel requiring detailed information about the NORD-50 and should also be of interest to software personnel. Some knowledge of digital techniques and computer systems in general is recommended. Knowledge of the NORD-50 instruction set as found in the NORD-50 Reference Manual is necessary. 163 pages.

ND-05.009

ND-500 CPU Reference Manual

This manual describes the general design, instruction set and addressing modes of the ND-500. It is organized as a reference manual. It is written for ND-500 assembler programmers, system programmers needing to know the exact format of the generated code and anybody needing a description of the ND-500 architecture. The manual is required by programmers wanting to fully utilize the trap handling system and memory management system in any programming language. No previous knowledge of the ND-500 is required. General knowledge of computer architecture is desirable and assembly language experience is required for those using the manual to program in the ND-500 assembler language. 272 pages.

ND-05.010 (Not yet available)

Introduction to ND-500

This manual gives a survey of ND-500 hardware and software. It is written for those wanting general information about the ND-500. Basic computer knowledge is recommended but not required.

ND-06.005

NORD-10/NORD-50 Communication System

This manual describes the operation of the communication hardware in the NORD-10/NORD-50 system. It gives a general description of memory communication, describes communication instructions and simulated memory programming. It is written for technical and maintenance personnel and communication system programmers. Familiarity with the NORD-10 and NORD-50 at the level described in the NORD-10/S and NORD-50 Functional Descriptions is required, also knowledge of NORD-10/S and NORD-50 instruction sets, which can be found in the NORD-10/S and NORD-50 Reference Manuals. 19 pages.

ND-06.007

Big Multiport Memory System

This manual gives a general and detailed description of the Big Multiport Memory System architecture, including memory, service and control channel specifications, and installation. It is written for technical and maintenance personnel needing a good understanding of this system, and installation personnel. Familiarity with the NORD-10, ND-100 and NORD-50 at the level described in their Functional Descriptions is required. 113 pages.

ND-06.008

NORD-10/S Reference Manual

This manual gives a detailed explanation of NORD-10/S architecture and principles from a hardware point of view, and a detailed description of the NORD-10/S instruction set. It is written for technical and maintenance personnel needing detailed information about the NORD-10/S and should also be of interest to programmers and operators. General computer knowledge is recommended. 169 pages.

ND-06.009

NORD-10/S Functional Description

This manual describes the main building blocks of the NORD-10/S and their functions, from a hardware point of view. It is written for technical and maintenance personnel requiring detailed information about the NORD-10/S and should also be of interest to software personnel. Some knowledge of digital techniques and computer systems in general is recommended. Knowledge of the NORD-10/S instruction set as found in the NORD-10/S Reference Manual is necessary. 235 pages.

ND-06.010

NORD-10/S Microprogram

This manual describes the exact format of the NORD-10/S micro-instructions and the microformat of the NORD-10/S macro-instructions. It is written for microprogram writers and those wanting more detailed understanding of the NORD-10/S CPU. Detailed knowledge of the NORD-10/S system and a thorough understanding of the NORD-10/S CPU are necessary. This information is given in the NORD-10/S Functional Description. Some experience with digital techniques is recommended. 80 pages.

ND-06.012

NORD-10/S Input/Output System

This manual describes the NORD-10/S Input/Output system architecture and principles from a hardware point of view, those parts of the I/O system common to all device controllers, the DMA data flow and the I/O interrupt system. It is written for technical and maintenance personnel requiring a good understanding of the connection of I/O interfaces to the NORD-10/S computer system and software personnel who program I/O interfaces. Familiarity with the NORD-10/S CPU at the level described in the NORD-10/S Functional Description is required, along with some knowledge of the NORD-10/S instruction set and assembly programming, which can be found in the NORD-10/S Reference Manual. 144 pages.

ND-06.014

ND-100 Reference Manual

This manual describes the main building blocks of the ND-100 and their functions. It describes the ND-100 instruction set in detail. It is written for technical and maintenance personnel requiring detailed information about the ND-100 and should also be of interest to programmers and operators. General computer knowledge is recommended. 187 pages.

ND-06.015

ND-100 Functional Description

This manual describes the main building blocks of the ND-100 and their functions, from a hardware point of view. It is written for technical and maintenance personnel needing detailed information about the ND-100 and should also be of interest to software personnel. Some knowledge of digital techniques and computer systems in general is necessary, along with knowledge of the ND-100 instruction set and assembly programming, which can be found in the ND-100 Reference Manual and MAC Assembler User's Guide. 340 pages.

ND-06.016

ND-100 Input/Output System

This manual describes the ND-100 Input/Output system architecture and principles from a hardware point of view, and those parts of the I/O system common to all device controllers. It gives the background necessary to understand fundamental design concepts of the ND-100 I/O system. It is written for technical and maintenance personnel requiring a good understanding of the connection of I/O interfaces to the ND-100 computer system and software personnel who program I/O interfaces. Familiarity with the ND-100 CPU at the level described in the ND-100 Functional Description is required, along with some knowledge of the ND-100 instruction set and assembly programming, which can be found in the ND-100 Reference Manual and MAC Assembler User's Guide. 222 pages.

ND-06.018

ND-100 Microprogramming Description

This manual describes how to microprogram the ND-100 to take full advantage of the writable control store. It is written for technical personnel writing their own microprogram and will be useful for those requiring more detailed understanding of the microprogrammed structure of the ND-100 CPU. Detailed knowledge of the ND-100 system and thorough understanding of the ND-100 CPU are recommended. This information is given in the ND-100 Functional Description. Some experience with digital techniques is recommended. 73 pages.

ND-06.020 (Not yet available)

Introduction to ND-100

This manual gives a survey of ND-100 hardware and software. It is written for those wanting a general description of the ND-100. Basic computer knowledge is recommended but not required.

ND-11.009

HAWK - Disk System

This manual is a reference manual and user's guide for the HAWK-disk system. It describes the major components and basic principles of read/write, including the read/write assembly, interface signals, power distribution system, seek operations, sectoring, read/write/erase operations and fault handling and detection. Knowledge of the hardware associated with the HAWK-Disk system is required. 133 pages.

ND-11.010

NORD-10/HAWK - Disk Controller

This manual is a reference manual and user's guide for the NORD-10/HAWK - Disk Controller. It describes NORD-10/HAWK programming specifications, the interface signals, disk addressing, the write and read operation, interrupt generation and handling, status generation, and the control word. Knowledge of the HAWK-Disk System is required. 76 pages.

ND-11.012

Floppy Disk System

This manual is a reference manual and user's guide for the Floppy Disk System. It describes the system itself, the interface and the formatter. General knowledge of the purpose and functioning of floppy disk systems is required. 183 pages.

ND-11.013

Error Correction Control (ECC) Disk Controller

This manual is a reference manual and user's guide for the ECC disk controller. It contains a general description of the ECC disk controller, and descriptions of the addressing concept, sector format, the interface signals and the error correction code. Controller functions are illustrated by timing diagrams. Interrupt generation and handling, a debugging guide and description of the logic boards are also included. Knowledge of disk controller function and operation is required. 146 pages.

ND-11.014

STC Magtape Subsystem

This manual is a reference manual on the STC magtape subsystem. It describes how STC magnetic tapes are connected to a ND-100 computer and what the 3020 STC magtape controller looks like. It is written for field service engineers and technical personnel directly involved with the operation or maintenance of magnetic tapes. It is especially useful during testing and installation. The manual contains a short description of the subsystem functions, how they are organized in a ND-100 system and a detailed description of the 3020 module. Programming specifications for the controller itself and for its driver routine are included along with a user's guide for test programs. Knowledge of the functioning and operation of magnetic tape systems is required. 96 pages.

ND-12.004

CAMAC CDMA NORD-10

This manual gives a detailed description of the principles of operation. It contains a summary of the programming specifications and includes diagrams of the timing and the logic. It is written for those who want to use CAMAC, or to know how it works. No previous knowledge is required. 20 pages.

ND-12.006

CAMAC CC-NORD-10 Hardware

This manual is written for CAMAC users. It describes the programming specifications and contains logic diagrams, parts list and signal definition list. 50 pages.

ND-12.007

CAMAC CC-NORD-10 Interface

This manual gives general information on the operation of the CC-NORD-10 crate controller which interfaces CAMAC crates directly to the input/output bus of the NORD-10 computer. It contains information on the physical and electrical specifications, interrupt handling, LAM handling and Link Bus characteristics. It gives information about addressing and data formats and the programmable operations on CC-NORD-10. It should be of interest to all those who want to understand how CAMAC works. 17 pages.

ND-12.012

Interface to PERTEC Magnetic Tape

This manual deals mainly with the signals between 1123 and 1124. It contains programming specifications and a description of the formatter. It also gives hardware information and contains logic diagrams. 60 pages.

ND-12.013

NORDCOM Colour Terminal

This manual contains information on the ND676 NORDCOM colour terminal. It has a product description and programming and interface specifications. Block diagrams and logic diagrams have been included along with test procedures. It is written as a maintenance manual and requires no special knowledge of ND systems. It should be of special interest to service personnel. 160 pages.

ND-12.015

1158 DR-11-C Interface

The manual gives an introduction to the 1158 DR-11-C interface. It contains hardware descriptions and programming specifications. Various test possibilities are given along with block diagrams and logic diagrams. 20 pages.

ND-12.016

Data Communication

This manual contains general information on data communication. It describes different networks, explains multiplexing and describes modems in general. Various communication procedures and data terminal equipment are discussed. It is written for those who want an introduction to data communication hardware. No previous knowledge is required. 150 pages.

ND-12.018

HDLC Interface

This manual gives a functional description of the High Level Data Link Control interface. It contains various standards and procedures and gives programming specifications. It has logic diagrams for the HDLC and a detailed description of the Multiprotocol Communication Controller is given. 100 pages.

ND-12.020

Universal DMA Interface ND850/851

This manual is a user's guide to interfacing and programming the ND850 Universal DMA Interface and ND851 Differential DMA Adapter. It describes the hardware and defines electrical, mechanical and programming specifications. It includes programming examples, circuit schema, parts list and test programs. The reader should be familiar with the NORD-10/S Reference Manual, ND-06.008. 70 pages.

ND-13.003

Circuit Diagram Symbols

This is a reference manual containing the symbols used on Norsk Data circuit diagrams. It describes the rules used in obtaining logic expressions. It contains definitions of logic signals and the symbols used to represent logic elements in Norsk Data circuit diagrams. General knowledge of circuit diagrams is essential. 62 pages.

ND-13.012

NORD-10 Power Unit

This is a reference/maintenance manual for the NORD Power Unit 10. It is written for field service engineers and technical personnel directly involved with maintaining CPUs using this power unit. It contains a description of the power unit, maintenance instructions for the replacement of batteries and the control panel, and adjustment procedures for the setting of the battery comparators. General knowledge of the power unit is required. 26 pages.

(Unnumbered)

ND-100 Instant Instruction Codes

This is a durable plastic card which can be folded into pocket size. It contains the instruction codes used with the NORD-10/S and the ND-100 CPUs. Instruction formats and explanations for the use of this card are given in the NORD-10/S Reference Manual, ND-06.008 and the ND-100 Reference Manual ND-06.014.

(Unnumbered)

ND-100 Operator's Communication Instruction Survey

This is a durable plastic card which can be folded into pocket size. It contains the control, display and monitor functions, and a table of ND-100 registers and their bit assignment. Further details are given in the ND-100 Functional Description ND-06.015.

ND-30.001

NORD-10/NORD-50 Operator's Guide

This manual is an introduction to the operation and maintenance of the NORD-10/S and the NORD/50. It is written mainly for operators who need basic information about how to run the NORD-10/S and NORD-50 and how to handle simple error situations. No previous knowledge of ND computers is necessary but the reader should be familiar with the general principles of computer operation and preferably have some experience in this field. 134 pages.

ND-30.002

Site Preparation and Installation Manual

This is a reference manual for technical personnel and customers preparing a computer site for Norsk Data equipment. It applies to all Norsk Data equipment configurations, the NORD-10/S, the NORD-50, the ND-100 and the ND-500. It is used as a reference document by the ND System Integration department and should only be used by a customer

ND-40.004.02

after consultation with them. 36 pages.

ND-30.003

SINTRAN III System Supervisor

This manual is a guide for system supervisors administering data centers implemented under SINTRAN III. It is written for operators controlling the daily operation of the system and for system supervisors who program and operate the system. No previous knowledge is required for operators. System supervisors should have a general knowledge of SINTRAN III from a user's point of view. This manual should be utilized with the following manuals:

SINTRAN III Time Sharing/Batch Guide (ND-60.132)

SINTRAN III Reference Manual (ND-60.128)

292 pages.

ND-30.004

NORD-10/S Hardware Maintenance Manual

This manual has been prepared for the ND Service department. It is written for field service engineers and technical personnel maintaining NORD-10/S CPUs. It contains a technical description and physical layout of the CPU input/output system and memory, hardware maintenance services, module substitution precautions, error symptoms and troubleshooting procedures, and maintenance information on the CPU, character oriented devices, DMA controllers, the memory and the power system. A basic knowledge of NORD-10/S hardware is required. 200 pages.

ND-30.005 (Not yet available)

Test Program Descriptions for ND-100 and NORD-10 Series, Vol.1

This manual describes the most frequently used test programs for the ND-100 and NORD-10 series (NORD-10/S, NORD-10, NORD-12). It contains introductory information and detailed descriptions of the test programs, how to run them and error messages. It is written for field service engineers and those directly involved with testing or maintenance. In-depth knowledge of the function of these computers is required. Less frequently used test programs are described in Vol.2 to 4.

ND-30.006

ND TPS System Supervisor's Guide

This manual is a guide for operators and system supervisors of the ND Transaction Processing System, a general transaction processing system that initiates and controls transactions between various input/output devices and application programs. TPS provides facilities for handling

terminals, data communications, databases etc. The manual is written for operators with responsibility for the daily operation of TPS and system supervisors with responsibility for planning, installing and modifying TPS. Operators require a basic understanding of the SINTRAN III operating system and the SIBAS database system. System supervisors should be thoroughly familiar with TPS, SINTRAN III, SIBAS and NSHS. 200 pages.

ND-30.007 (Not yet available)

Test Program Descriptions for NORD-50

This manual describes the test programs used with the NORD-50 CPU. It is written for field service engineers and technical personnel testing or maintaining NORD-50 CPUs. It contains details of the contents and structure of each test program and the procedure for their implementation. The manual is the central reference document on these test programs. In-depth knowledge of the function of the NORD-50 CPU is required.

ND-30.008 (Not yet available)

ND-100 Hardware Maintenance Manual

This manual will be prepared for the ND service department. It is intended for field service engineers and technical personnel maintaining ND-100 CPUs in the various ND-100 configurations. General knowledge of ND-100 hardware and familiarity with the SINTRAN III operating system are required.

ND-30.010 (Not yet available)

NORD-50 Hardware Maintenance Manual

This manual has been prepared for the Norsk Data service department. It is written for field service engineers and technical personnel maintaining NORD-50 CPUs. It describes the racks and operators panel, the NORD-50 monitor, NORD-50 error messages, test program information, the NORD-50 memory system, NORD-50 memory expansion and the power system. General knowledge of NORD-10/S hardware, including the input/output and memory systems and familiarity with the SINTRAN III operating system are required. 200 pages.

ND-30.011 (Not yet available)

SINTRAN IV System Supervisor

This manual is a guide for system supervisors administering data centers implemented under SINTRAN IV. It will be written for operators who control the daily operation of the system and for system supervisors who function as system programmers as well as operators. No previous knowledge will be required by operators. System

supervisors should possess general knowledge of SINTRAN IV from a user's point of view. This manual should be utilized with the following manuals:

SINTRAN IV Time Sharing/Batch Guide
SINTRAN IV Reference Manual

ND-30.013

Test Micro Program Descriptions for ND-500

This manual describes the test programs used with the ND-500 CPU. It is written for field service engineers and technical personnel testing or maintaining ND-500 CPUs. It contains details of the contents and structure of each test program and the procedure for their implementation. The manual is the central reference document on these test programs. An in-depth knowledge of ND-500 is required for proper utilization of the manual. 116 pages.

ND-30.014 (Not yet available)

ND-500 Hardware Maintenance Manual

This manual will be prepared for the ND service department. It is intended for field service engineers and technical personnel maintaining ND-500 CPUs in various ND-500 configurations. General knowledge of ND-500 hardware and familiarity with SINTRAN III or IV are required.

ND-30.018 (Not yet available)

Test Program Descriptions for ND-500

This manual describes the ND-500 Verification System. Part 1 describes the system in general and gives the reader enough information to use the Verification System. Part 2 gives details of some control aspects of the system. The manual is written mainly for ND System Integration and service staff. Knowledge of the ND-500 instruction set is necessary and knowledge of the ND-500 Trap System and Memory Management System is desirable.

ND-30.019 (Not yet available)

Installasjonshåndbok

This is a Norwegian version of the Site Preparation and Installation manual, ND-30.002.

ND-30.020 (Not yet available)

ACCESS DBA Manual

This is a reference manual for the Data Base Administrator or person responsible for an ACCESS system. Some knowledge of data processing is required. Basic knowledge of SINTRAN III, such as that given by the SINTRAN III Introduction, is useful.

ND-60.031

QED User's Manual

This manual is a user's guide and reference manual for the QED text editing program. The program is designed to maintain source program files such as FORTRAN, COBOL, BASIC, MAC or NPL but is also suitable for all kinds of text editing. The manual is written for programmers using the editor as a stand-alone program or as a subsystem under an operating system, the TSS time-sharing system, or the SINTRAN III real time, time-sharing and multi-batch operating system. For general text editing purposes, familiarity with computers or programming is not necessary. 40 pages.

ND-60.037

Scientific Subroutine Package

This manual describes the individual subroutines in the Scientific Subroutine Package which contains FORTRAN routines for performing statistical and mathematical functions, including matrix manipulation, integration, root finding and special functions like Bessel and Gamma functions. It is written for programmers who need a comprehensive description of the available routines. Familiarity with FORTRAN is required. 288 pages.

ND-60.041

ND IDT GERTS-115

This manual describes the basic and optional functions of the ND IDT GERTS-115. It is intended as an operator's guide and should be of interest to those who want to run the terminal as efficiently as possible. The manual contains information on starting and running the system and discusses the console commands and messages. It includes load procedures for various systems and systems running under SINTRAN III. 30 pages.

ND-60.046

Trace Routine

This manual describes the commands available in the TR tracing system for assembler level debugging, the error messages that may be generated, installation instruction and a flowchart of the TR routine. It is useful for assembler (MAC) programmers who need to debug programs at the machine level. It is of particular interest when debugging programs using privileged instructions, as the TR routine can simulate these instructions. 22 pages.

ND-60.047

NORD PL User's guide

This manual describes the NORD PL language in textbook style. It contains the definition of the language, compiler operating procedures and error message explanations, and a set of exercises for use in a teaching environment. It is written for programmers who will use NORD PL for writing programs, system analysts reading the ND-100/10 system programs and operators who make patches and modifications to system software. NORD PL users should have experience using the MAC assembly language and be familiar with the architecture of the ND-100/10 computers. 102 pages.

ND-60.051

SINTRAN III Real Time Loader

This is a reference manual of the commands in the real time loader, used to load real time programs in SINTRAN III. It is written for experienced users of SINTRAN III. Familiarity with the SINTRAN III Real Time Guide is required. 72 pages.

ND-60.057

SIBAS I User's Manual

This manual was written for the original SIBAS system, now replaced by SIBAS-II (see ND-60.127). It describes the implementation of a database, explaining all necessary parameters, the calls to be used in programs, error reports etc. In SIBAS-II the practicality of establishing the database is completely different, but most of the contents are still valid. The manual is written for programmers and supervisors on systems where SIBAS is implemented. Basic knowledge of SINTRAN and data processing is required and some programming experience is valuable. 370 pages.

ND-60.058

ND Plot Package

This is the documentation of the library routines in the plot package used to drive drum type incremental plotters. Calls may be made from FORTRAN, BASIC or MAC programs. It is written for programmers. 46 pages.

ND-60.060

ND IDT DCT-2000

This manual is an operator's guide to the ND IDT DCT-2000. It gives an introduction to the terminal and describes local commands and messages. It also describes the loading and start-up procedures of the ND IDT DCT-2000 program. It contains information on error recovery, general commands for ND IDT terminals and load procedures for various systems. 25 pages.

ND-60.061

ND IDT 200-USER

This manual contains information on the ND IDT 200-USER, a remote batch terminal operating with CDC Cyber/6000 series computers. It is an operator's guide and describes the commands and responses, start-up procedures and batch processing. Some attention is given to special functions and interactive processing. The appendices contain information on error recovery, general commands and various load procedures. 30 pages.

ND-60.062

SINTRAN III System Documentation

This is the main documentation for the implementation of SINTRAN III. It is written for those responsible for maintenance of SINTRAN III software. Familiarity with the external functions as documented in the reference and installation management manuals is required. 240 pages.

ND-60.066

ND Relocating Loader

This manual is a user's guide containing a general introduction to loading and descriptions of the NRL commands, the overlay mechanism and the Binary Relocatable Format (BRF). Error messages generated by NRL are described. The manual is required by ND-100/10 programmers and anybody who needs a description of the BRF format for maintaining BRF libraries or generating code to be loaded by NRL. No previous experience with loaders is required, but a minimum of knowledge of SINTRAN III is necessary. 44 pages.

ND-40.004.02

ND-60.067

ND IDT 3780

The ND IDT 3780 is a remote batch terminal operating with IBM 360/370 systems. The manual describes the start-up procedures and the batch processing. It is written as a user's guide and describes the local and general commands and gives information on the load procedures for NORD-20, NORD-10/20/100 stand alone systems and for systems running under SINTRAN III. 25 pages.

ND-60.070

ND IDT NTR

The ND IDT NTR is a program system in a NORD-10/12/100 computer for remote batch communication with a Univac 1100-series computer. The manual is a user's guide describing system features, initiating and running the system, commands, responses and load procedures. 40 pages.

ND-60.071

NORD-10 BASIC Compiler Reference Manual

This manual is written for programmers using BASIC. It is suitable as a self-study guide to programming in general, using BASIC as a tool. It explains BASIC features and its interactive use, and contains a complete description of available commands, statements and functions. No previous experience of programming languages or hardware is required. 236 pages.

ND-60.072

SINTRAN III Real Time Loader System Documentation

The manual describes the implementation of the real time loader. It is written for system programmers working in support and development. Familiarity with the SINTRAN III Real Time Loader manual is required. 40 pages.

ND-60.075

NORD-50 Assembler

This manual describes the NORD-50 assembler operating procedure, the assembler directives, macro usage and external program representation. The appendices contain tables of instructions, BRJ directives generated by the assembler and numeric opcodes. It is written for users of the NORD-50 assembler. Familiarity with assembler programming and sufficient SINTRAN III experience to run the assembler is required. Details of the instruction set are given in the NORD-50 Reference Manual ND-05.003. 52 pages.

ND-40.004.02

ND-60.076

NORD-50 Monitor User's Guide and System Documentation

The first three chapters of this manual describe how to run NORD-50 programs. All available commands are explained, including those reserved for the system supervisor. File access and the use of monitor calls from the NORD-50 are described. Chapters four to six contain the monitor system architecture and describe how to implement monitor and system documentation. This manual should be read by NORD-50 users. The first three chapters are intended for users who execute programs on the NORD-50. A working knowledge of SINTRAN III and familiarity with NORD-50 FORTRAN are required. These can be obtained from the SINTRAN III Timesharing/Batch Guide ND-60.132 and NORD-50 FORTRAN Reference Manual ND-60.095. Chapters four to six are not required reading in order to use the monitor, but should be read by system programmers and analysts and by system supervisors installing the monitor. Thorough knowledge of the internal operation of SINTRAN III and/or the underlying hardware is required. Less detailed information is required by users reading these chapters as a general description of the monitor. 92 pages.

ND-60.077

SIBINTER

This manual describes the software product SIBINTER (ND Interactive Information Processing and Report Generating System), the tool for processing records interactively (from terminals) in the database. All access methods used in programs are also available from SIBINTER. Knowledge of the structure of SIBAS databases and programming experience are recommended, along with study of the SIBAS-II User's Manual. 54 pages.

ND-60.078

Database Theory and Design

This manual covers the main concepts of databases, not their implementation on ND computers. The two principle methods of record access, by index or random, are discussed and illustrated by examples. The manual is a suitable introduction for anybody setting up a database. No previous knowledge of databases or programming is required, but some elementary experience of data processing is useful.

ND-60.079

MEAS II User's Manual

MEAS II is an analog program system for real time process control. This manual describes how to run the MEAS program system under SINTRAN III. It is written for application programmers, but the program calls themselves are documented in MEAS II - An Analog Input Program System for Process Control, Application Manual, SINTEF Report STF48 A73023. 66 pages.

ND-60.081

NORDNET System Documentation

The manual documents the implementation of NORDNET data communications software under SINTRAN III. It is written for those responsible for NORDNET software maintenance. Broad knowledge of SINTRAN III is required. The external functions available in NORDNET are documented in the SINTRAN III Reference Manual and SINTRAN III Communication Guide. 120 pages.

ND-60.082

SINTRAN III/RT User's Guide
(formerly SINTRAN III Core User's Guide)

This manual documents the external functions of a special version of SINTRAN III. The SINTRAN III/RT operating system is a simplification of SINTRAN III/VS. It does not include memory management and the file system. It is primarily written for end-users and programmers. Knowledge of the SINTRAN III/VS system as found in the SINTRAN III Introduction is required. 134 pages.

ND-60.083

NORD-50 Loader User's Guide

This manual gives a brief introduction to the loading process. It describes how to use the NORD-50 loader, how to load an overlaid program, how to define the communication between NORD-50 and NORD-10, the relocatable code (BRF5) format and the error messages produced by the loader. It is written for all programmers using the NORD-50. It is also recommended for system supervisors who maintain a library of relocatable modules for the NORD-50 with the NORD-50 BRF Editor. No previous knowledge of loaders is required. Familiarity with the NORD-10/NORD-50 system is of great advantage for understanding more advanced use of the loader. 25 pages.

ND-60.085

BRF Editor

This manual describes the commands available in the BRF editor to maintain and modify BRF files and to disassemble the BRF directives and machine instructions. It is written for those who maintain libraries of relocatable modules, including system supervisors, advanced programmers and system programmers. Some knowledge of the internal BRF format is required. This can be found in the ND Relocating Loader Manual ND-60.066, which also gives the required information on loading BRF code into the ND-100. 6 pages.

ND-60.088

The NORD Screen Handling System

The Screen Handling System NSHS is a system for handling video display terminals. It uses two main features, pictures and programs. The first part of the manual describes how to create pictures which are used by the application programs. The second part contains the calls/parameters available for the programming. The third part is the user's guide and contains practical examples for the user, starting with defining pictures, writing and executing programs. There is additional information about points which have previously proved difficult. The manual is written for programmers and supervisors. Experience of interactive data processing and programming, preferably FORTRAN, is required.

ND-60.091

ND RPG II User's Guide

This is a user's guide for the ND RPG II system, describing compiler operating procedure, external representation and file access from RPG programs. It describes compiler and run time error messages and differences from other RPG systems. It is written for ND RPG II programmers who know the RPG language. Basic knowledge of SINTRAN III and the file system is required. 52 pages.

ND-60.092

ND-100 SINTRAN III SIMULA Reference Manual

This is a reference manual describing extensions to and differences between the ND-100 SINTRAN III SIMULA and the SIMULA Common Base Language. It also describes the use of the compiler and the external program representation. It is intended as a reference text for the ND-100 implementation, not as a tutorial text on SIMULA. It is written for programmers writing SIMULA programs for the ND-100. Thorough knowledge of the language itself and familiarity with SINTRAN III are required. 58 pages.

ND-60.093

NORD Process I/O

The manual describes calls to library routines for

ND-820 AD converter

Noratom-Norcontrol process equipment

the digital I/O monitor calls DIW and DOLW

ND-810 digital input

ND-811 digital output

CAMAC

direct digital control (DDC)

FORTTRAN or MAC can be used. The manual is written for application programmers who should be familiar with the input/output system in SINTRAN III. 56 pages.

ND-60.094

NCT - ND Colour Terminal User's Guide

The manual covers the main design specification and the external functions of the NCT service program. 42 pages.

ND-60.095

NORD-50 FORTRAN Reference Manual

This is a reference manual describing the NORD-50 implementation of FORTRAN. It also describes external program representation, compiler operating procedure and file access under the SINTRAN III operating system. Appendices include error message explanations, summaries of loader and monitor commands and a short description of internal data representation and procedure call conventions for interfacing to other languages. The manual is written for FORTRAN programmers of the NORD-50. Familiarity with elementary FORTRAN and SINTRAN III usage are recommended but the manual contains all the information required to write, compile, load and execute a FORTRAN program on the NORD-50. 182 pages.

ND-60.096

MAC Assembler User's Guide

This manual describes the MAC assembler for ND-100/10 computers. It contains the assembler commands, specifications for the external representation of assembly programs, assembler operating procedures and a description of the hardware environment. Standard and optional extensions to MAC and the special versions of MAC (MACF, MACM) are presented. The appendix has a list of machine instructions but the NORD-10 or ND-100 CPU Reference Manual is required to describe instruction formats and addressing modes. Basic knowledge of assemblers and the architecture of ND-100/10 is required, but detailed knowledge of the computer hardware or previous MAC experience is

unnecessary. 134 pages.

ND-60.097

Database Administrator Module

This manual describes supervision of databases under the old SIBAS system. It is not valid for SIBAS-II, where it is replaced by chapter 6 of the SIBAS-II User's Manual ND-60.127. 120 pages.

ND-60.098

NORD-50 BRF Editor

This manual describes the commands available in the NORD-50 BRF editor to maintain and modify NORD-50 BRF files and to disassemble the BRF directives and machine instructions. It is written for those maintaining libraries of relocatable NORD-50 modules, including system supervisors, advanced programmers and system programmers. Some knowledge of the internal BRF format (BRF5) is required. This can be found in the NORD-50 Loader User's Guide ND-60.083, which also gives the required background information about loading NORD-50 segments. 6 pages.

ND-60.099

ND Flocon User's Guide (Now included in Data Management Utilities, ND-60.157)

The manual describes the functions of the floppy disk converting system which converts data to SINTRAN III compatible files. It is written for programmers and end users. Familiarity with floppy disk formatting and running programs under SINTRAN III is required. 44 pages.

ND-60.100

7750 VIP EMULATOR

This manual is a user's guide that describes how to generate and run the 7750 VIP emulator under the SINTRAN III operating system. The 7750 VIP emulator communicates with a Honeywell Bull host computer. 18 pages.

ND-60.101

ND Data Entry System

The Data Entry System consists of the Data Entry Compiler and the Data Entry Editor. Data Entry uses parts of the Screen Handling System (invisible to the user). The editor is used for calling pictures, entering data to the fields and transporting records between screen

and disk files. It can also be used for control reading of records (verifying), search on a key etc. The compiler is a special language used for writing 'applications' used for designing record output, checking data and grouping pictures to be called from the same application. The manual is a typical reference manual for those already familiar with the system but is not recommended as a textbook. It contains no practical examples. 52 pages.

ND-60.102

ND FILE-EXTRACT Utility Command User's Guide (Now included in Data Management Utilities, ND-60.157)

This manual describes the commands available in the FILE-EXTRACT utility program, which is used to extract records (selected by user defined criteria) and write them to another file or output device. FILE-EXTRACT is used by programmers, system supervisors and database managers who need to rearrange files, generate reports, reformat files according to record layout, split one set of data into two separate files and similar jobs. Familiarity with the file system and commonly used file organizing methods is required. 28 pages.

ND-60.105

ND TPS General Description

This manual is an introduction to the ND Transaction Processing System, a general transaction processing system that initiates and controls transactions between various input/output devices and application programs. It provides facilities for handling terminals, data communications, databases etc. The manual contains introductory information and should be of interest to data processing managers, systems analysts, programmers and operators. The system is described as it appears to a user, programmer or operator. No previous knowledge of ND TPS or transaction processing is required, but some knowledge of the SINTRAN III operating system, the SIBAS database system and the ND Screen Handling System is recommended. 50 pages.

ND-60.106

Utility Programs for the RPG II User

This manual contains the information required to convert RPG II files and systems from other RPG II installations to ND RPG II. It is useful to RPG II programmers and operators making such conversions and should be regarded as a supplement to ND RPG II User's Guide ND-60.091. 10 pages.

ND-60.107

DATACON User's Guide (Now included in Data Management Utilities, ND-60.157)

This manual describes DATACON, a data conversion utility system capable of converting data files from one data representation to another using user defined alphabet tables and record descriptions. The system includes a simple report generation feature, an inspection tool for use on files being converted. The manual is required by programmers and system supervisors when data are exchanged between ND computers and other computer systems and for data file conversion. General knowledge of SINTRAN III is required. 18 pages.

ND-60.108

ND Indexed Sequential Access Method User's Guide

This manual describes ND ISAM, a file structure which uses a separate index file when searching in a large sequential file. It is a reference guide to the subroutines available to handle such files, but contains sufficient introductory information to serve as a guide for the first time user of ND ISAM. The manual is written for programmers experienced in a high level language, who want to reduce average access time to large files of sequentially ordered data. The application program must be written in a language allowing calls to external FORTRAN routines. Familiarity with the file system is required and previous knowledge of ISAM structured files is helpful. 38 pages.

ND-60.109

G P M General-Purpose Macro Generator (Now included in SINTRAN III Utilities, ND-60.151)

The manual describes a macro processor that may be applied to program source code, symbolic data fields, operating system commands etc. It is organized as a user's guide, progressing from an introduction to macro evaluation to more advanced use of GPM. It should be of interest to all programmers dealing with symbolic code, especially those dealing with system generation procedures. Familiarity with the macro concept is recommended. 38 pages.

ND-60.110

SINTRAN III Postmortem Investigator User's Guide

The SINTRAN III postmortem investigator program system is developed to aid those debugging SINTRAN. It is part of the installation management documentation and familiarity with manuals documenting SINTRAN III implementation is required, particularly the SINTRAN III System Documentation ND-60.062. 30 pages.

ND-60.111

ND TPS User's Guide

This manual is a combined programmer's guide and reference manual for the ND Transaction Processing System, a general transaction processing system that initiates and controls transactions between various input/output devices and application programs. TPS provides facilities for handling terminals, data communications, databases etc. The manual is written for programmers writing application programs to be run under ND TPS. These programs can be written in FORTRAN, COBOL, NPL and MAC. It will also interest system designers who design applications to be run under TPS. Previous knowledge of ND TPS or transaction processing is not required, but some knowledge of the SINTRAN III operating system, the SIBAS database system and the ND Screen Handling System is necessary. 200 pages.

ND-60.112

SINTRAN III System Documentation - Data Fields

This manual documents the layout of data fields in SINTRAN III used for controlling devices. It is written for system programmers working in support and development and for supervisors who control system configuration. Familiarity with the SINTRAN III System Documentation manual ND-60.062 is required. 100 pages.

ND-60.113

ND-500 Assembler Reference Manual

This manual briefly describes the ND-500 Assembler operating environment, and describes commands and directives to the assembler and assembler operating procedure. It is a user's guide, but will also serve as a reference manual for the ND-500 assembler. The appendix gives a list of machine instructions, but the ND-500 CPU Reference Manual ND-05.009 is required to describe instruction formats and addressing modes. The manual is written for programmers using the ND-500 Assembler. Familiarity with assemblers in general is required, but no previous experience with the ND-500 is expected. 100 pages.

ND-60.114

ND IDT 3270 Emulator User's Guide

This manual contains the details required to implement a ND 3270 terminal system and to operate a ND 3270 terminal unit. It is written for system users and programmers responsible for system implementation. No previous knowledge is required, but some knowledge of the SINTRAN III operating system is recommended. Familiarity with the program system residing in the central site (host) computer is required and a basic knowledge of 3270 terminal systems is recommended for system programmers. The manual contains a general description,

brief functional and operational description and describes special features and load procedures, diagnostic features, message formats and control characters. System error messages etc. are explained in the appendices. 100 pages.

ND-60.115

ND Computers in Administrative Data Processing

This manual surveys the most important software tools available to users of ND computers, not only those especially related to administrative processing. It includes an introduction and coverage of SINTRAN III, QED text editor, NORD-10 COBOL, NORD-10 FORTRAN, the ND relocating loader, SIBAS, NSHS, Data Entry System, TPS, Sort Systems and ISAM. It is written for programmers and end users with experience of data processing.

ND-60.117

PLANC Reference Manual

This manual is primarily for reference, but chapter 1 gives a survey of the whole language for less experienced programmers, or users who only require a reading knowledge of PLANC programs. PLANC (Programming Language ND Computers) is designed as a high-level systems programming language. It is a member of the ALGOL/PASCAL family of block structured languages. PLANC is used mainly for writing systems software such as operating systems and compilers. It has been defined in a machine-independent manner and machine-dependent features (eg. data allocation strategies, interfaces to programs in other languages) for particular machines are specified in this manual.

ND-60.120

NOTIS-1 User's Guide

This manual is a beginner's guide to the NOTIS-1 Word Processor, the ND Text Editor Word Processor. The ND Text Editor can be used alone, or in conjunction with the complete NOTIS-1 text processing system described in NOTIS-1 Reference Manual ND-60.155. Text Editor Word Processor files are entered and edited from a video display terminal and printed directly on an output device. Text can be modified, deleted, moved, substituted or inserted with very simple editor commands. Print directive default values in the program lead to formatting results which can be inspected on the screen in the Text Editor Word Processor's INSPECT mode as a formatted file type :PRNT generated by the PRINT command. The :PRNT file can then be sent to an output device with the COPY command in INSPECT. Print directive default values may be modified by the System Supervisor at program initialization, or overridden by the user who may use the corresponding directive with the desired value at the beginning of the file, before any text has been entered. Further enhancement of the formatting results may be obtained by a series of formatting directives given at the beginning of the line. Previous knowledge of

computers or text processing is unnecessary. 50 pages.

ND-60.121

PED User's Guide

This manual is a combined user's guide and reference manual which describes the ND Program-Editor, a VDU page mode editor for asynchronous terminals connected to ND computers running the SINTRAN III operating system. The Program-Editor is used to create a program or data file which can then be copied to an output device. A program file may be compiled by the program COMPILE. The manual is written for anyone needing a program editor to edit programs or data files. General knowledge of the timesharing facilities of the SINTRAN III operating system is recommended. 20 pages.

ND-60.122

NORD File System - System Documentation

This manual documents the implementation of the file system in SINTRAN III. It is written for system programmers working in support and development. Familiarity with the external functions of the file system, as documented in the reference and installation management manuals, is required. 100 pages.

ND-60.124

ND-100 PASCAL Compiler User's Guide

This manual describes the differences between standard PASCAL (as described in Jensen & Wirth: PASCAL User Manual and Report) and ND-100 PASCAL. Compiler operating procedure and the set of available commands and options are described in detail. Compiler error messages and overlay generation with the multilevel NRL overlay system are explained. The manual is organized as a reference manual, although examples are included to make it useful as a user's guide too. A thorough knowledge of PASCAL is assumed. PASCAL constructs are not described except where ND PASCAL differs from standard PASCAL. Familiarity with SINTRAN III and the file system is required to utilize SINTRAN III-specific extensions. 53 pages.

ND-60.125

SINTRAN III Introduction

This manual gives a survey of the basic functions available in SINTRAN III, such as communication with the system via a terminal, the file storage system, creating and running programs. It is written for users requiring an introduction to SINTRAN III and will be of special interest to those with little knowledge of computers. It also provides a useful introduction to the more advanced SINTRAN manuals.

ND-60.126

MAGTAPE-LISTER Program User's Guide

This manual describes the commands available in the MAGTAPE-LISTER subsystem, which is used to generate an octal dump or line printer/disk file listing of IBM, KV, Univac or Honeywell Bull formatted magnetic tapes. It describes the commands available and the error messages that may be generated by the program. The manual is required by programmers and operators who transfer data on magnetic tape between ND and other computers. Familiarity with the formats used on the tapes to be converted is required, but no other special knowledge. 11 pages.

ND-60.127

SIBAS-II User's Manual

This manual covers all aspects of the SIBAS data base system, replacing the old SIBAS manual ND-60.057 and The Database Administrator Module ND-60.097. It is written for a variety of users, who may choose the relevant chapters as indicated below. Chapters 1 and 2 are a general introduction to database principles and give the background for the remaining chapters. No knowledge of data processing is required and these chapters are recommended as an introduction. The following chapters describe the definition/redefinition of databases and calls/parameters to be used in application programs. The section on how to administer and operate the database is of special importance to supervisors. Chapter 6 describes the utility programs, the Data Base Maintenance Module and SIBAS Service Program which replace the old Database Administrator Module. The next chapter explains Error and Exception Conditions and appendices A-F give summaries of calls and statements. 246 pages.

ND-60.128

SINTRAN III Reference Manual

This manual details the commands and monitor calls of SINTRAN III in alphabetical order. Each function is described in a standard format. It is for experienced users who want to look up the precise details of commands and monitor calls. Familiarity with the SINTRAN III Introduction and the SINTRAN III user's guides is recommended. 346 pages.

ND-60.132

SINTRAN III Timesharing/Batch Guide

The manual describes commands and monitor calls available to timesharing/batch users of SINTRAN III. The material is ordered according to functional category, not alphabetically. Familiarity with the SINTRAN III Introduction, ND-60.125 is recommended. 108 pages.

ND-60.133 (Not yet available)

SINTRAN III Real Time Guide

This manual describes commands and monitor calls available for real time programming of SINTRAN III. The material is ordered according to functional category, not alphabetically as in the SINTRAN III Reference Manual. It is written as a user guide and has sufficient detail of the interrupt and memory management hardware to be self contained for RT programmers. A reading knowledge of FORTRAN is required and familiarity with the ND-100 instruction set is helpful.

ND-60.134

SINTRAN III Communication Guide

This manual contains information on NORDNET, Remote Job Entry (RJE), X-message (XMSG), High Level Data Link (HDLC) DMA (OPTION) and the X.21 Communication Protocol. It is written for timesharing users needing a guide to the communication functions of SINTRAN III. Familiarity with the SINTRAN III Timesharing/Batch Guide, ND-60.132 is required. 140 pages.

ND-60.136

ND-500 Loader/Monitor

This manual describes the available commands in NLL (ND Linkage Loader) and the ND-500 Monitor. NLL is used to build segments to be executed by the ND-500 and the monitor controls their execution. The manual is organized as a user's guide, but serves as a reference manual to commands and error messages. There is a short description of the internal structure. This manual is written for programmers and operators who want to load and run programs on the ND-500. Previous knowledge of the ND-500, the ND-100 and the SINTRAN III operating system is required. The ND-500 CPU Reference Manual ND-05.009 provides a sufficiently detailed description of the ND-500 architecture for advanced users. The Loader/Monitor manual alone is sufficient for most ND-500 users. 102 pages.

ND-60.137

FOCUS-1 Screen Handling System (Preliminary version)

This manual describes the FOCUS-1 Screen Handling System. It contains an introduction to the system, definitions of general terms and abbreviations, a description of the restricted version of the NSHS screen definition system and details of the user program call interface. It is written for systems analysts and experienced programmers. Experience of NSHS is useful but not essential. 30 pages.

ND-60.138

X.25 User's Guide

This manual describes the interface between a user and the X.25 module and explains how to use the X.25 link level when the packet monitor calls are used. It contains a detailed description and simple examples of the usage and can serve as a reference. The logging facility and interface specifications for the X.25 (Packet Level) are described. Familiarity with the basic concepts of X.25 as described in the X.25 recommendation and some knowledge of SINTRAN III RT programming are required.

ND-60.139

NOTIS-1 Brukerveiledning

This manual is a Norwegian language version of the NOTIS-1 User's Guide ND-60.120 and contains exactly the same information. 50 pages.

ND-60.140

7750 VIP EMULATOR II

This manual describes how to generate, load and run the 7750 VIP EMULATOR on an ND computer running under SINTRAN III. The ND 7750 VIP emulates the Honeywell Bull 7750 VIP terminal. It is a remote interactive terminal which communicates with a Honeywell Bull host computer. The manual is written for operators and application programmers. Some knowledge of SINTRAN III is necessary. 40 pages.

ND-60.141

SINTRAN III Introduksjon

This is a Norwegian version of the SINTRAN III Introduction ND-60.125.

ND-60.143

ND IDT HASP II Work Station

The ND IDT HASP Work Station is a software system running under SINTRAN III/VS on ND-100/10 computers. The system operates as a remote batch terminal to an IBM 360/370 computer. The manual is a user's guide and describes the loading and starting procedures and the communication procedures. It contains information on commands and responses, error messages and error recovery. 50 pages.

ND-60.144

ND COBOL Reference Manual

This manual describes the ND implementation of the COBOL language for the ND-100 and ND-500 computers. Language extensions and implementation dependent features, compiler operating procedures and the use of subroutines in other languages are described. The manual is intended for reference purposes and is not a COBOL textbook. It is written for programmers using COBOL for programming ND computers. Familiarity with COBOL is helpful, but not essential. 200 pages.

ND-60.145

ND Fortran Reference Manual

This manual describes the ND implementation of the FORTRAN language for the ND-100 and ND-500 computers. Language extensions and implementation dependent features, compiler operating procedures and the use of subroutines in other languages are described. The manual is intended for reference purposes and is not a FORTRAN textbook. It is written for programmers using FORTRAN for programming ND computers. Familiarity with FORTRAN is helpful, but not essential. 200 pages.

ND-60.146

ND-100 Sort/Merge System

This manual describes the use of the ND-100 Sort/Merge system, a general system for sorting data contained on mass storage. The system is available as an interactive SINTRAN III subsystem and as a subroutine package; both are described. There is a short survey of the method used. The manual is written for interactive subsystem users and programmers wanting to call the subroutines from their own programs. No previous experience with SINTRAN III or programming is necessary, but understanding of the record layout in the file to be sorted is required. The subroutine package uses the standard FORTRAN call conventions, and the programmer is expected to write his application program in FORTRAN or a language supporting subroutines written in FORTRAN, and must know how to declare and load external FORTRAN subroutines. 30 pages.

ND-60.147

ND-500 PASCAL Compiler User's Guide

This manual describes the differences between standard PASCAL (as described in Jensen & Wirth: PASCAL User Manual and Report) and ND-500 PASCAL. Compiler operating procedure and the set of available commands and options are described in detail. Compiler error messages, run time error messages and loading procedures are explained. The manual is organized as a reference manual, although examples are included to make it useful as a user's guide too. A thorough knowledge of PASCAL is assumed. PASCAL constructs are not described except where ND PASCAL

differs from standard PASCAL. Familiarity with SINTRAN III and the file system is required to utilize SINTRAN III-specific extensions. 48 pages.

ND-60.148

PED Brukerveiledning

This is a Norwegian version of the PED User's Guide ND-60.121.

ND-60.149 (Not yet available)

GRAFS User's Guide

This manual will describe GRAFS, a General Retrieval, Archival and Filing System, part of the ND Text and Information System NOTIS. It will be a combined user's guide and reference manual. GRAFS has parts for form definition, document registration, retrieval by form and retrieval by search language. It is intended later to include a part for report generation output. GRAFS contains a complete screen handling system. The user interface is so closely related to that of the ND Text-Editor that it will fit well into office environments and will be easily learnt by operators familiar with NOTIS-1.

ND-60.150

GRAFS Brukerveiledning (Not yet available)

This is a Norwegian version of the GRAFS User's Guide ND-60.149.

ND-60.151

SINTRAN III Utilities Manual

This manual contains information previously published in several different manuals. There are sections covering the PERFORM subsystem, the General Purpose Macro Generator, the MAIL subsystem and the BACK-UP subsystem. It is a reference text for more advanced users of SINTRAN III and familiarity with the operating system is required.

ND-60.152

ACCESS Brukerveiledning (Not yet available)

This is a Norwegian version of the ACCESS user's guide, ND-60.153, described below.

ND-60.153

ND ACCESS User's Guide (Not yet available)

This manual describes the ND query language ACCESS, an end user system for accessing information on a database. The database can be both queried and updated through the use of simple tables. It describes the functions of ACCESS as seen by an end user and also contains information on creating and maintaining the database through the data dictionary. Knowledge of databases or programming is unnecessary. The database administrator must be familiar with the principles of databases and know the particular database system being used ie. SIBAS.

ND-60.154

ND Multiuser Data Entry System (Norwegian version only)

This is a preliminary user's guide in Norwegian for the new Data Entry System (DES). The first three chapters describe the main subprograms of DES, handling data input, preparation and administration of data and file handling. Chapter four is intended especially for supervisors and describes the various tasks involved in running the (standard) database. Programming or data processing experience is useful but not essential.

ND-60.155

NOTIS-1 Reference Manual

This manual is a complete user's guide and reference manual which describes the NORD Text and Information System (NOTIS-1), which consists of the NORD Text Editor TED-WP described in the NOTIS-1 User's Guide ND-60.120 and the Text Formatter. The NORD Text Editor TED-WP is a VDU page mode text editor for asynchronous terminals connected to ND computers running the SINTRAN operating system. It can be used alone, or in conjunction with the Text Formatter which is a mode in the NOTIS-1 system taking one or more unformatted files type :TEXT as input and producing as output a formatted file type :OUT which is ready to be inspected from the terminal via the Text Editors INSPECT mode. From INSPECT the file can be copied to an output device. The manual contains detailed information on the system, together with all editor commands and formatting directives. A new, standard macro library has also been included. The manual is written for experienced users of the NOTIS-1 text processing system. It is helpful to have some knowledge of the principles of electronic text processing. 150 pages.

ND-60.156

NOTIS-1 Håndbok

This is a Norwegian version of the NOTIS-1 Reference Manual, ND-60.155 which will be available by the end of 1981.

ND-60.157

Data Management Utilities

This manual contains information previously published in several separate manuals (see figure 7). These utilities provide facilities for a user to examine, modify and transform data, or print data from files on disk, magnetic tape or diskette. There are also facilities for moving data between these media or between different data formats on one medium.

ND-60.158

Symbolic Debugger

This manual describes how to use the Symbolic Debugger, an interactive tool for testing programs written in higher level languages, Fortran, COBOL and PLANC, available on the ND-100 and ND-500. The debugger has facilities for setting breakpoints, where the program will stop under certain conditions. Then the user can interactively examine or change information, eg. values of program variables or the path and frequency of subprogram calls, before continuing program execution. This may enable the user to find several bugs during one execution of the program. Testing may be adequately completed for some parts a program despite bugs present in other parts.

ND-60.159

UTS-400 Emulator User's Guide

This manual describes the interactive system between ND and UNIVAC computers. It contains an introduction and general description, lists files and programs, describes installation and usage, and the UTS Data Entry Programs. It is written as a reference manual for operators of UTS-400 but should also be of interest to system analysts. Operators require no previous knowledge but programmers should be familiar with SINTRAN III and the operating system of UNIVAC computers. 40 pages.

ND-60.160

Honeywell Bull Remote Job Entry Emulator User's Guide

This manual describes the ND GRTS RJE-terminal on an ND computer running under SINTRAN III. It contains a survey of the system, command syntax rules, instructions for unskilled operators and system supervisors, details of all commands available and system program

documentation. It is written for all RJE-terminal users, particularly system supervisors. Operators require no previous knowledge but programmers should be familiar with SINTRAN III and the operating system of the Honeywell Bull H6000.

ND-70.xxx

Documentation Packages

Two packages are available at present; their contents are listed below. Further packages covering SINTRAN III Operation, SINTRAN III System Documentation, ND-Technical, FORTRAN, SIBAS, TPS and NOTIS will be available in the future.

ND-70.001

SINTRAN III Basic (Timesharing)

- SINTRAN III Introduction
- SINTRAN III Timesharing/Batch Guide
- SINTRAN III Reference Manual
- SINTRAN III Utilities Manual

ND-70.002

SINTRAN III Advanced (Real-Time)

- SINTRAN III Communication Guide
- SINTRAN III Real-Time Guide
- SINTRAN III Real-Time Loader

4. PRICE LIST

The following pages give a list of the available manuals, their version numbers and prices.

An up-to-date version of this list is published every month in the ND Bulletin. Since new manuals, new versions and revisions are constantly being printed, the reader is referred to this list for the most recent information on available manuals and prices.

Title	Publ.No.	Version	Last Release	Price NOK	Reference to Product No.:
Big Multiport Memory System	ND-06.007	01	August 1978	175	146
BRF Editor — NORD-10	ND-60.085	01	June 1977	25	10044P 10005R
CAMAC — CC-NORD-10 General Information	ND-12.007	01	September 1974	100	800
CAMAC — CC-NORD-10 Hardware	ND-12.006	01	June 1974	100	800
CDMA — NORD-10 General Information	ND-12.004	01	June 1974	100	—
Circuit Diagram Symbols	ND-13.003	01	July 1976	75	—
COBOL Reference Manual	ND-60.144	01	January 1981	150	10176A
Data Communication	ND-12.016	01	March 1978	225	—
Data Entry System	ND-60.101	03	January 1979	75	10053F
Database Administrator Module	ND-60.097	01	October 1977	75	
Database Theory & Design	ND-60.078	01	December 1976	125	—
DATACON User's Guide	ND-60.107	01	September 1978	50	10072B
DCHT — Data Channel Test Program	ND-62.005	01	May 1974	25	—
* DDPP Håndbok	Kan kjøpes i Universitets Bokhandlen				10142A
Documentation Catalogue	ND-40.004	01	May 1981	0	
ECC — (Error Correction Control) Disk Controller Revision A	ND-11.013	01	October 1978 June 1979	175	558
1158 — DR-11-C Interface	ND-12.015	01	April 1978	50	814 815
File Extract Utility Command User's Guide	ND-60.102	02	January 1979	50	10044P 10005R
File System - System Documentation	ND-60.122	02	January 1980	125	✓
FLOCON User's Guide	ND-60.099	01	June 1978	75	10021F * 10014F *
Floppy Disk System	ND-11.012	01	October 1976	175	355
FOCUS-I Screen Handling System	ND-60.137	01	August 1981	75	10188A
GPM - General Purpose Macro Generator	ND-60.109	01	February 1979	75	10124A
HAWK Disk Controller	ND-11.010	01	March 1976	150	551
HAWK Disk System	ND-11.009	01	March 1976	200	510 511
HDLC — High Level Data Link Control Interface	ND-12.018	01	November 1978	150	720, 721 722, 723
Interface to Pertec Magtape with Formatter	ND-12.012	01	February 1977	75	556

NOTE:

Changes/updates compared to the list of November 1981 are marked with an asterisk.

Title	Publ.No.	Version	Last Release	Price NOK	Reference to Product No.:
ISAM - NORD Indexed Sequential Access Method User's Guide Revision A	ND-60.108	01	February 1979 January 1980	50	10073D
MAC User's Guide	ND-60.096	01	March 1978	100	10044Q 10005S
Magtape-Lister Program User's Guide	ND-60.126	01	March 1979	25	
MEAS II - An Analog Program System for Program Control	ND-60.079	01	January 1977	100	10036A
MSD-SORT System	ND-60.123	02	June 1980	25	10075D
NCT - NORD Colour Terminal Users Guide	ND-60.094	01	October 1977	75	10046C
NODAL			December 1974	100	10066A
NORD Computers in Administrative Data Processing Applications Revision A Revision B	ND-60.115	01	August 1979 December 1979 August 1980	100	—
NORD FORTRAN Reference Manual Revision A	ND-60.145	01	May 1981 May 1981	125	10190B
NORD IDT					
3270 Emulator User's Guide	ND-60.114	01	September 1979	75	10016C
3780 User's Guide	ND-60.067	02	January 1976	75	10030A
200 User Operator's Guide	ND-60.061	01	October 1975	75	10069B 10026A
DCT-2000 Operator's Guide	ND-60.060	01	October 1975	75	10057A 10031A
GERTS-115 Operator's Guide	ND-60.041	03	February 1977	75	10027B
HASP Work Station	ND-60.069	02	June 1978	75	10063A 10028B
HASP-II Work Station User's Guide	ND-60.143	01	December 1980	75	10183B 10184B
NTR User's Guide Revision A	ND-60.070	02	December 1976 November 1977	75	10056B 10029B
UTS-400 Emulator User's Guide	ND-60.159	01	September 1981	75	10061A
7750 VIP Emulator User's Guide	ND-60.100	01	December 1977	75	10059A
7750 VIP Emulator-II User's Guide	ND-60.140	01	March 1981	75	10312A
NORD PL User's Guide Revision A	ND-60.047	03	October 1976 July 1977	75	10044Q 10005S
NORD Process I/O Software Guide Revision A	ND-60.093	01	September 1977 October 1978	75	—
NORD Screen Handling System	ND-60.088	02	April 1979	75	10135B 10053F 10013H

NOTE:

Changes/updates compared to the list of November 1981 are marked with an asterisk.

Title	Publ.No.	Version	Last Release	Price NOK	Reference to Product No.
NORD-10/100 FORTRAN System Reference Manual	ND-60.074	03	June 1980	125	10067D 10033K 10023K
NORD-10 BASIC Compiler Reference Manual Revision A Revision B Revision C Revision D	ND-60.071	01	August 1976 September 1977 March 1979 January 1980 May 1981	125	10034C 10024C
NORD-10 Relocating Loader	ND-60.066	01	April 1977	50	10044Q 10005S
NORD-10/S Input/Output System	ND-06.012	01	May 1978	200	—
NORD-10/S Functional Description Revision A	ND-06.009	01	August 1977 October 1978	175	—
NORD-10/S General Description and Module Description	ND-06.013	01	October 1978	75	—
NORD-10/S Hardware Maintenance Manual	ND-30.004	02	September 1981	250	—
NORD-10/S Instruction Codes Card			October 1978	0	—
NORD-10/S Microprogram	ND-06.010	01	February 1978	150	—
NORD-10/S Reference Manual Revision A	ND-06.008	01	April 1977 June 1977	100	—
NORD-12 Reference Manual	ND-07.001	01	May 1975	75	—
NORD-10/NORD-50 Communication System	ND-06.005	01	August 1975	50	10004N
NORD-10/NORD-50 Operator's Guide	ND-30.001	01	August 1979	75	20, 50
NORD-50 Assembler Revision A	ND-60.075	01	July 1976 January 1979	75	10004N
NORD-50 BRF Editor	ND-60.098	01	December 1977	25	10004N
NORD-50 General Description and Module Description	ND-05.008	01	January 1979	75	—
NORD-50 FORTRAN Reference Manual	ND-60.095	02	May 1978	125	10004N
NORD-50 Functional Description	ND-05.007	01	November 1977	175	—
NORD-50 Loader User's Guide	ND-60.083	02	August 1978	50	10004N
NORD-50 Monitor User's Guide and System Documentation	ND-60.076	02	November 1978	125	10004N
NORD-50 Reference Manual	ND-05.003	01	February 1976	75	10004N
NORD-50 Test System Revision A	ND-62.008	01	September 1975 May 1977	25	50

NOTE:

Changes/updates compared to the list of November 1981 are marked with an asterisk.

Title	Publ.No.	Version	Last Release	Price NOK	Reference to Product No.:
NORD-100 Backplane	ND-06.017	01	April 1979	50	
NORD-100 Functional Description	ND-06.015	01	August 1980	150	✓
NORD-100 Input/Output System	ND-06.016	01	December 1980	200	
NORD-100 Instruction Codes Card			March 1981	0	—
NORD-100 Microprogramming Description	ND-06.018	01	January 1980	100	✓ —
NORD-100 Operator's Communication Instruction Survey			July 1981	0	—
NORD-100 Reference Manual	ND-06.014	01	March 1979	150	100
NORD-100 Sort/Merge System	ND-60.146	01	February 1981	100	10179A
NORD-500 Assembler Reference Manual	ND-60.113	02	May 1980	100	✓ 50 10311A
NORD-500 Loader/Monitor	ND-60.136	02	July 1981	50	10319B 10333A
NORD-500 Reference Manual	ND-05.009	01	October 1980	150	
NORDCOM Colour Terminal Hardware Manual	ND-12.013	02	October 1979	225	680
NORDNET System Documentation	ND-60.081	04	July 1980	125	10050
NOTIS Training Manual	ND-60.131	01	January 1980	50	10079D
NOTIS-1 Bruker-veiledning	ND-60.139	03	September 1981	75	10079F
NOTIS-1 Reference Manual	ND-60.155	01	October 1981	100	10079F
NOTIS-1 User's Guide	ND-60.120	04	August 1981	75	10079F
NOTIS-1 Øvingsbok	ND-60.142	01	October 1980	50	10079D
PASCAL Compiler User's Guide	ND-60.124	03	December 1980	75	10076G 10133G
PED Bruker-veiledning	ND-60.148	01	May 1981	50	10080C
PED User's Guide	ND-60.121	03	Mars 1981	50	✓ 10080C
PLOT Package	ND-60.058	03	July 1975	75	10010A
Power Unit 10	ND-13.012	01	December 1978	50	20
QED User's Manual Revision A Revision B Revision C	ND-60.031	04	March 1979 August 1979 September 1979 August 1980	50	10044Q 10005S

NOTE:

Changes/updates compared to the list of November 1981 are marked with an asterisk.

Title	Publ.No.	Version	Last Release	Price NOK	Reference to Product No.:
Reference to Utility Program for the RPG-II User	ND-60.106	01	August 1978	25	10018J
RPG—II User's Guide	ND-60.091	01	September 1977	75	10018J
RUNOFF	ND-60.064	01	December 1975	75	10065A
SCANNET User's Guide	ND-60.087	01	May 1977	75	—
Scientific Subroutine Package	ND-60.037	01	September 1972	100	10007B 10009A 10070A
SIBAS II User's Manual	ND-60.127	02	September 1981	175	10166C 10167A
SIBAS — Database System Introduction User's Manual Revision A	ND-60.057	02	October 1976 May 1978	50 175	
SIBAS Workshop	ND-60.129	01	April 1979	50	
SIBINTER	ND-60.077	01	December 1976	75	10166C
SIMULA Reference Manual - NORD-100	ND-60.092	03	December 1980	75	10058L
SINTRAN III Communication Guide	ND-60.134	02	November 1981	125	10048E 10130D
SINTRAN III Data Fields	ND-60.112	01	June 1979	75	✓
SINTRAN III Introduksjon	ND-60.141	01	September 1980	50	10048E
SINTRAN III Introduction	ND-60.125	02	October 1981	50	10048F 10174F 10175F
SINTRAN III Postmortem Investigator	ND-60.110	01	April 1979	50	
SINTRAN III Real Time Loader	ND-60.051	07	August 1981	75	10048E
SINTRAN III Real Time Loader - System Documentation	ND-60.072	02	August 1977	100	✓
SINTRAN III Real Time Programming	ND-60.084	02	May 1979	75	
SINTRAN III Reference Manual	ND-60.128	02	October 1981	150	10048E
SINTRAN III System Documentation Revision A Revision B Revision C Revision D	ND-60.062	01	December 1975 September 1976 February 1978 May 1979 June 1980	225	✓
SINTRAN III System Supervisor	ND-30.003	01	May 1980	75	10048E
SINTRAN III Timesharing/ Batch Guide	ND-60.132	01	May 1980	125	10048E

NOTE:

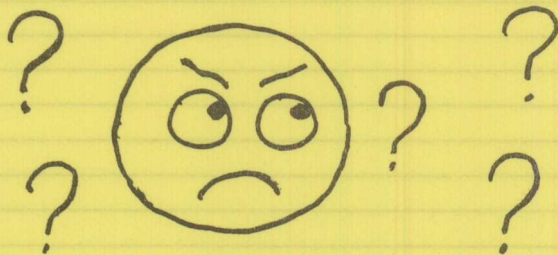
Changes/updates compared to the list of November 1981 are marked with an asterisk.

Title	Publ.NO.	Version	Last Release	Price NOK	Reference Product No.:
SINTRAN III User's Guide (Same as version 08 incl. revisions A, B, C)	ND-60.050	09	December 1979	150	10048 (80.02.01A)
SINTRAN III User's Guide Revision A Revision B Revision C	ND-60.050	08	October 1978 November 1978 May 1979 December 1979	150	10048 (80.02.01A)
SINTRAN III—C User's Guide	ND-60.082	01	May 1977	125	10047 (80.02.01A)
* SINTRAN III Utilities Manual	ND-60.151	01	November 1981	75	10337B
SITE Preparation Manual English Version	ND-30.002	02	May 1981	75	
STC Magtape Subsystem	ND-11.014	01	July 1980	150	
Test Micro Program Description - ND-500	ND-30.013	01	May 1981	75	10321B
Test Program Description Revision A Revision B Revision C Revision D	ND-62.009	03	June 1977 May 1977 June 1977 September 1978 November 1978	50	—
* TPS - NORD TPS General Description	ND-60.105	02	October 1981	75	10054B *
* TPS - NORD TPS User's Guide	ND-60.111	02	November 1981	125	10054B *
TPS System Supervisor's Guide	ND-30.006	01	February 1981	125	10054B *
TRACE Routine	ND-60.046	02	November 1974	25	10044Q 10005S
Universal DMA Interface	ND-12.020	01	January 1980	125	
Verification Programs NORD-10	ND-62.006	01	August 1974	25	
X.25 User's Guide	ND-60.138	01	April 1981	100	10199A

NOTE:

Changes/updates compared to the list of November 1981 are marked with an asterisk.

***** **SEND US YOUR COMMENTS!!!** *****

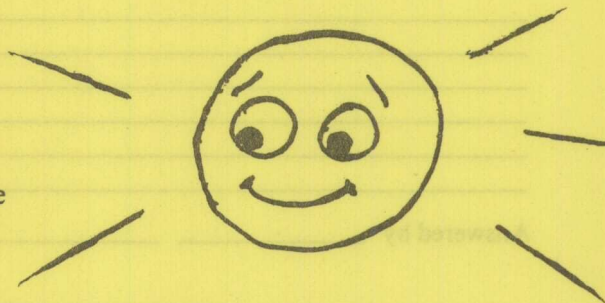


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Manual name: Documentation Catalogue

Manual number: 40.004.02

What problems do you have? (use extra pages if needed)

Do you have suggestions for improving this manual?

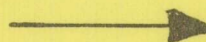
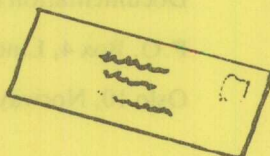
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