Configuration Dictionary User Guide

ND-860366.1 EN

Norsk Data

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NOTE:
The numbering system for Norsk Data's documentation changed in September 1988. All numbers now start with an 8. The numbering structure is therefore ND-8xxxxx.xx xx. Example: ND-863018.3A EN. Existing manuals will receive a new number if and when they are updated or revised.

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THE PRODUCT

Configuration Dictionary is a part of the Operator Environment, and provides the user with helpful information about:

- CPU
- memory configuration
- peripherals
- communication
- operating system, segments and processes

Product numbers: ND 211071

THE READER

This manual is intended for operators and system supervisors of ND computer systems.

PREREQUISITE KNOWLEDGE

It is assumed that the reader has a basic knowledge of the SINTRAN operating system.

THE MANUAL

This manual is intended as a guide to how to use the Configuration Dictionary on an ND computer system, using the menu system in Operator Environment.

RELATED MANUALS

SINTRAN III Introduction	ND-860125
SINTRAN III System Supervisor	ND-830003
User Environment Reference Manual.....	ND-860194
SPRINT User Guide	ND-860252
NOTIS-DS Supervisor Guide	ND-830059
NOTIS-ID Supervisor Guide	ND-830062
File Manager Introduction	ND-860215
DIALOGUE-TRUE Operations	ND-830042

Continued on next page...

RELATED MANUALS

SIBAS II User Manual	ND-860127
SIBAS II Operator's Manual	ND-830009
Operator Environment User Guide	ND-830061
File System Verification User Guide ..	ND-860354
Operator Environment Menu User Guide .	ND-860359
User Area Management User Guide	ND-860367

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Chapter 1 Introduction

Operator Environment consists of a menu system which connects new and existing programs to cover the main functions of operating and maintaining an ND computer system.

This manual deals with the configuration of your computer. Configuration Dictionary will give you information about:

- the CPU (number, type, micro code etc.)
- how the Memory is configured
- disks (directory names, size and on which unit they are mounted)
- which peripherals (i.e. devices like terminals, printers etc.) that are connected to the computer
- communication (X.21, HDLC)
- operating system (SINTRAN version, patch level and work mode)
- system segment and number of device buffers, semaphores, internal devices
- number of processes (like batch processores, background programs, SIBAS processes etc.)

To run this program the Operator Environment must be installed on your computer.

The easiest way of running Operator Environment, is to let the computer bring you directly into the Operator Environment menu after logging on. To be able to do so, enter your USER PROFILE in User Environment (or the USER PROFILE for the user from which you want to run Operator Environment), and define:

- MENU SYSTEM as: (ND-OPERATIONS)OEM-MENU
- MAIN USER AREA as: ND-OPERATIONS

For more information on creating access to Operator Environment from User Environment or another menu system, see the User Environment Reference Manual ND-860194.

Use of terminal keys in Operator Environment Menu

- enter a program
- execute a command
- move to the next level of the menu
- choose an option in the menu

EXIT

- exit to the previous level of the menu
- exit a program
- remove a HELP picture

SHIFT + EXIT

- exit to the top menu

HELP

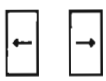
- obtain a HELP picture with online help

SPACE BAR

- remove a HELP picture

- move between fields in the text area

- enter or exit the text area
- remove a HELP picture
- go to TASK field to type direct command



- move the cursor in a submenu or in the text area

@

- type in a SINTRAN command directly

NOTE:
You can also give direct SINTRAN commands by typing the @-key from anywhere in the main menu. This brings you to the TASK field, where you can give your SINTRAN command.

Notation of terminal keys in this manual

Terminal key	Notation
	↵ - key
@	@ - key
EXIT	EXIT - key

1. Notation of terminal keys

The levels of the Operator Environment menu

The four levels of the Operator Environment menu are referred to in this manual as:

1) option
2) sub-option
3) task
4) sub-task

Chapter 2 Starting Configuration Dictionary

LOGIN PICTURE

If the conditions for the USER PROFILE (page 2) are met, the first screen picture after logging on your computer will be:

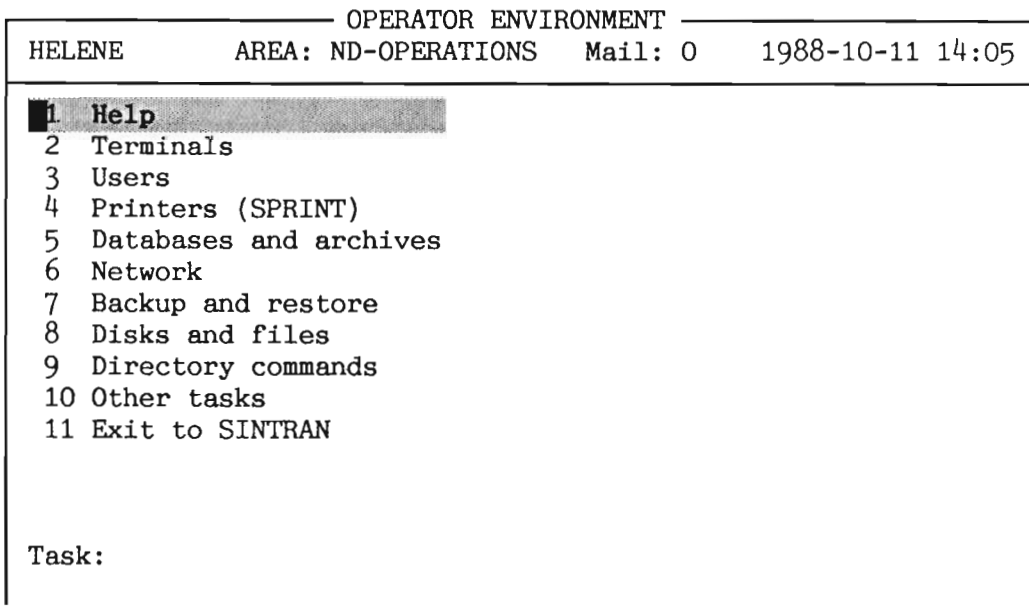


figure 1. Operator Environment login picture

The cursor is now positioned in front of option number 1. Choose the option

10 Other tasks,

by moving the cursor to the option (the option will be displayed in inverse video), and pressing the ↵ -key.

The screen picture below, will now appear on your screen:

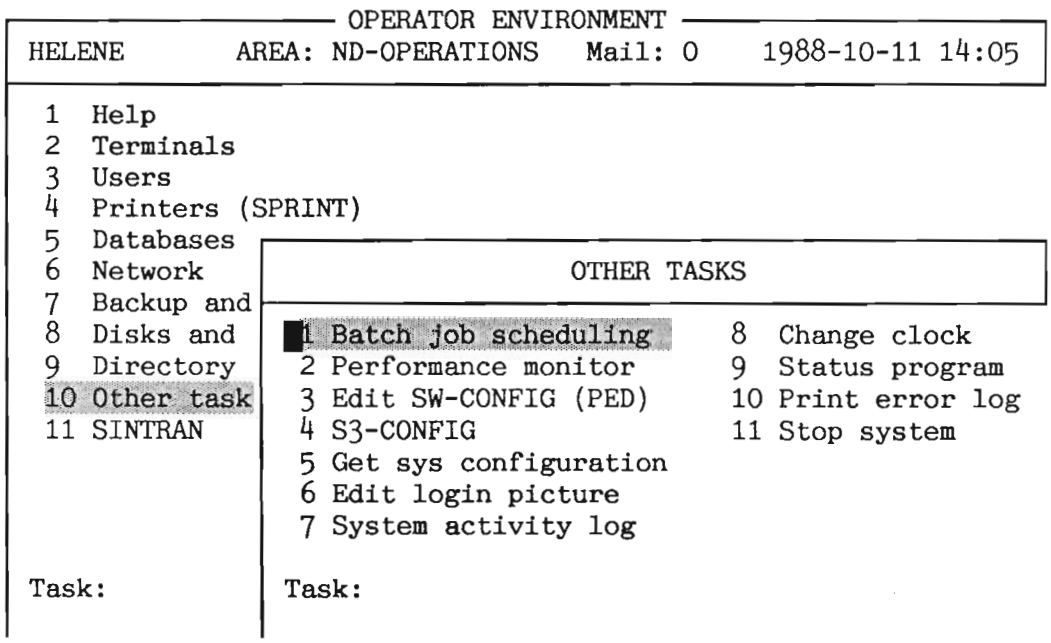


figure 2. OTHER TASKS menu.

2.1 Start the Configuration Dictionary program

Choose the sub-option **5 Get sys configuration** to enter the configuration database and look at or edit information about the hardware, operating system and software which make up the ND computer system.

You may now choose between three tasks:

- Hardware,
- Kernel or
- Exit

as shown on the screen picture below:

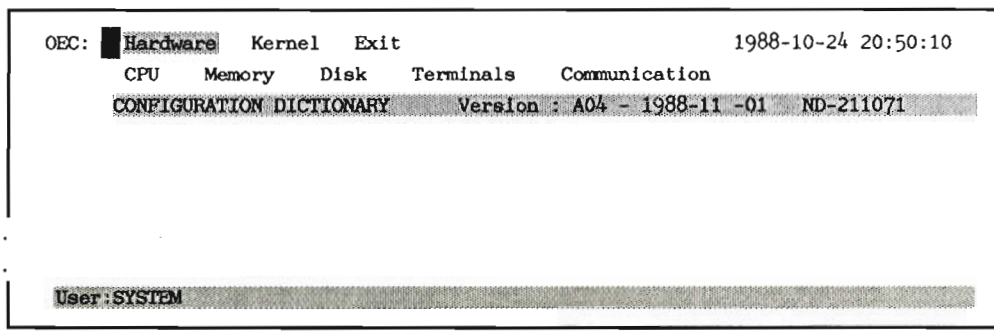
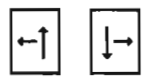


figure 3. Tasks in Configuration Dictionary.

Operating keys



- for scrolling

PRINT

- print or write to a file

Chapter 3 Hardware configuration

Choose HARDWARE to look at information about system hardware.

You are then presented with five choices: CPU, MEMORY, DISK, TERMINALS and COMMUNICATION.

CPU Information

Below is an example of output from the HARDWARE task. In this example, CPU has been chosen.

```
OEC:  Hardware  Kernel  Exit                              1988-10-24 20:50:10
      CPU  Memory  Disk  Terminals  Communication

(...:....1....:....2....:....3....:....4....:....5....:....6....:....7....:....)
  System Number       6773
  CPU - type          ND-110 with 32 bit floating point instructions.
  Instruction Set     ND-110 CX with 16 PITs
  System-Type         ND-500 - Serie 2
  Micro Code Ver.      15211
  Monitor Version     K09
  Swapper Version     J20

User:SYSTEM
```

figure 4. CPU information

Memory configuration

Choose the sub-task **Memory** to get information about the memory configuration on your system. An example of what the screen picture will look like is shown below:

```
OEC: Hardware   Kernel   Exit                              1988-10-24 20:50:10
     CPU   Memory   Disk   Terminals   Communication

(...:....1....:....2....:....3....:....4....:....5....:....6....:....7....:....)
  Reserved for Swapping              1447 Pages          2.83 MB
  Reserved for Sintran                309 Pages          0.60 MB
  Reserved for RT-Common                6 Pages          0.01 MB
  Reserved for ND-500                3872 Pages          7.56 MB

  Local ND-100                       2048 Pages          4.00 MB
+ Multiport Memory type 5            4096 Pages          8.00 MB
+ Reserved for PIOC                   512 Pages          1.00 MB
  ------------------------------------------------------------
= Total memory                       6656 Pages         13.00 MB

User:SYSTEM
```

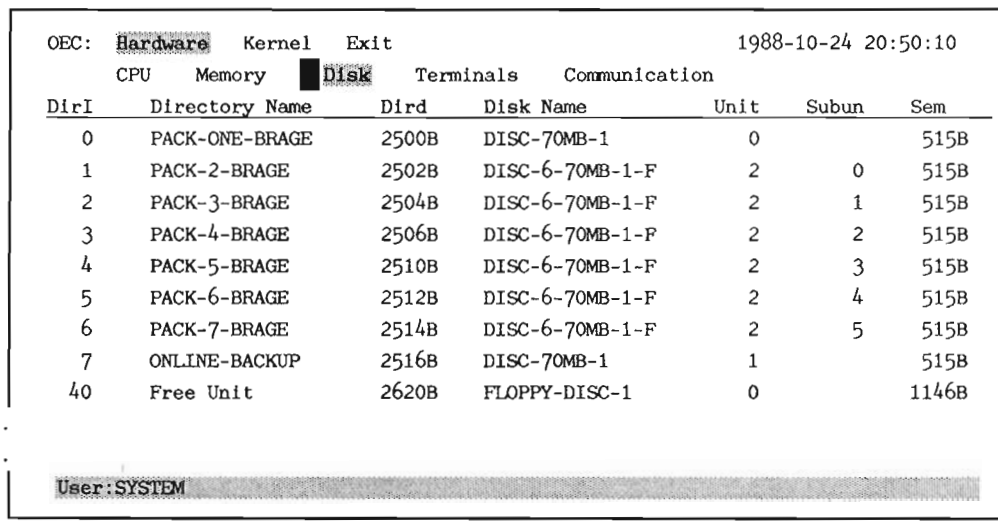
figure 5. Memory configuration.

For ND-500 it is possible to change the memory configuration manually, by means of

@ND-500-MONITOR using the sub command **DEFINE-MEMORY-CONFIGURATION**. See the manual SINTRAN III System Supervisor (ND-830003).

Disk Information

The sub-task **Disk** gives you information about all the disk units on your computer. Below is an example of the information displayed using this sub-task.



OEC: Hardware Kernel Exit 1988-10-24 20:50:10

CPU Memory Disk Terminals Communication

DirI	Directory Name	Dird	Disk Name	Unit	Subun	Sem
0	PACK-ONE-BRAGE	2500B	DISC-70MB-1	0		515B
1	PACK-2-BRAGE	2502B	DISC-6-70MB-1-F	2	0	515B
2	PACK-3-BRAGE	2504B	DISC-6-70MB-1-F	2	1	515B
3	PACK-4-BRAGE	2506B	DISC-6-70MB-1-F	2	2	515B
4	PACK-5-BRAGE	2510B	DISC-6-70MB-1-F	2	3	515B
5	PACK-6-BRAGE	2512B	DISC-6-70MB-1-F	2	4	515B
6	PACK-7-BRAGE	2514B	DISC-6-70MB-1-F	2	5	515B
7	ONLINE-BACKUP	2516B	DISC-70MB-1	1		515B
40	Free Unit	2620B	FLOPPY-DISC-1	0		1146B

User:SYSTEM

figure 6. Disk Information.

The information is similar to what you get by using the SINTRAN command:

@LIST-DIRECTORIES-ENTERED

The sub-task also gives to columns of additional information:

Dird= Directory semaphore. Logical device number 2500B is the directory semaphore for directory entry number 0. (Logical device number 2501B is the bit-file semaphore for directory entry number 0).

Sem = Logical device number 515B is a Semaphore for disk.
Logical device number 1146B is a Semaphore for floppy disk controller 1.

Terminals

Choose sub-task **terminals** to get information about terminals, printers and TAD's (Terminal Access Device)

```
OEC:  Hardware   Kernel   Exit                          1988-10-24 20:50:10
      CPU   Memory   Disk   Terminals   Communication

Dev.   Device Type          Term   Character     Ibaud   Obaud   Reserved
  1    Terminal             93     7/2  /Even    9600    9600
  7    Terminal             93     7/2  /Even    9600    9600
  9    MTAD Terminal
 15    Terminal             93     7/2  /Even    9600    9600
 34    MTAD Terminal
 35    MTAD Terminal
 36    Printer                     7/2  /Even    9600    9600    PRM000
 37    Terminal             93     7/2  /Even    9600    9600
 62    Net/One Terminal     53                                  Connected
545    Net/One Terminal     91                                  BAK08

768    Tad                                                      BAK33
769    Tad                                                      BAK24
770    Tad                                                      BAK02

User:SYSTEM
```

figure 7. Peripherals information.

Abbreviation	Explanation
Dev.	Logical device number
Term.	Terminal type
IBAUD	Input BAUD rate
OBAUD	Output BAUD rate
PRM (Print Manager)	SPRINT Spooling.
SPRT	SINTRAN Spooling.

2. Abbreviations in sub-task terminal

Change the terminal speed

The Ibaud and Obaud columns gives you the receive and transmission speed for the devices connected to your computer.

You may change the current speed by means of the **@SINTRAN-SERVICE-PROGRAM**, using the ***change-datafield** command and subcommand **TSPEED**. See the manual: SINTRAN III System Supervisor (ND-830003).

For terminals, you are recommended to use split speed, i.e. low transmission speed (e.g. 1200 baud), and high receive speed (e.g. 9600 baud).

If you change the speed, you must do so **both** with @SINTRAN-SERVICE-PROGRAM **and** in the Communication Switches menu for the terminal.

NOTE:
To make the new terminal speed effective, a warm start must be performed after the changes in @SINTRAN-SERVICE-PROGRAM.

TAD

The number of TADs equals the number of terminals on remote systems that can access this system simultaneously (via COSMOS).

Communication

The sub-task **Communication** gives you information about connections between your computer and other computers as shown below:

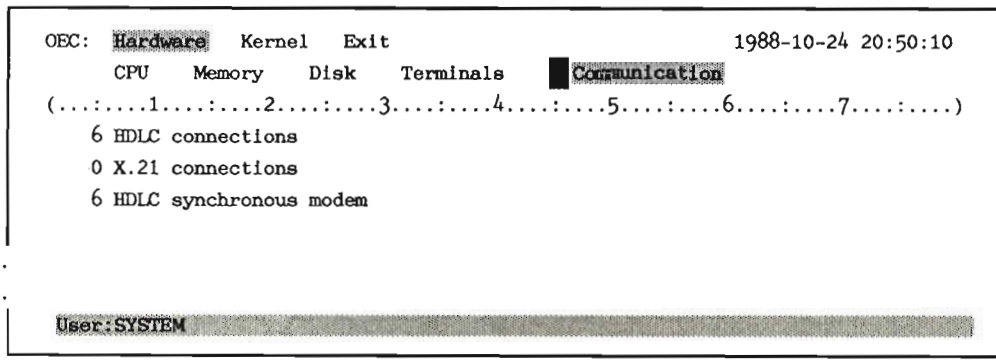


figure 8. Communication.

HDLC

HDLC is a device that connects two computers in a network. One HDLC is installed in each computer. The two HDLC's are connected with a cable.

X.21

The CCITT X.21 recommendation is a communication protocol. X.21 defines the physical characteristics and the call control procedures between the DTE (Data Terminal Equipment) and the DCE (Data Circuit Equipment).

The number of HDLCs and X.21 connections can be changed by means of the SINTRAN III Configuration program. The program is started by the @RECOVER command: **@S3-CONFIGURATION**
See the SINTRAN III System Supervisor Manual. (ND-830003)

Chapter 4 Kernel

When you choose the task **Kernel**, you will be presented with three sub-tasks for looking at information: Operating System, Segments and Process.

Operating system information

The sub-task **Operating system** gives you information about:

- Version number of the operating system SINTRAN
- when SINTRAN is generated,
- whether it is a standard configuration or not,
- patch level,
- and work mode.

Below is an example of output from the sub-task **Operating system :**

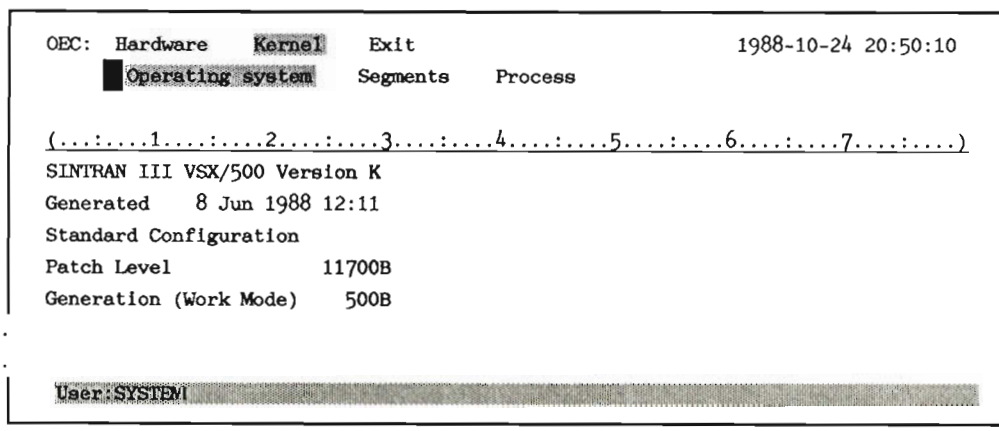


figure 9. Operating system information

Segments

Below is an example of output the sub-task **Segments** :

```
OEC:  Hardware   Kernel   Exit                          1988-10-24 20:50:10
      Operating system   Segments   Process

(...:....1....:....2....:....3....:....4....:....5....:....6....:....7....:....)
System segments size                  7
Number of Remote file access seg     16
          Symbolic Debugger  seg      8
          User segments              734      Free      679
Number of Device Buffers              64
Number of Semaphores                  50
Number of Internal devices            30      Block       2
                                              Char       28
Is Mon ADP available              YES
First Phys.Page for devicebuffer      0

User:SYSTEM
```

figure 10. Segments.

Most of the system parameters displayed above can be changed by means of the SINTRAN III Configuration program.
The program is started by the @RECOVER command:

@S3-CONFIGURATION

System parameters that can not be changed by the @S3-CONFIGURATION are:

Number of User segments (i.e. free segments)
Number of Semaphores (generated)
Number of (block-oriented) Internal devices

See the SINTRAN III System Supervisor Manual. (ND-830003)

Process

The last sub-task is **Process**, and the screen picture below is an example of the information given to you when this sub-task is chosen:

```
OEC:  Hardware    Kernel    Exit                          1988-10-24 20:50:10
      Operating system    Segments    Process

(...:....1....:....2....:....3....:....4....:....5....:....6....:....7....:....)
Number of Terminal Access Device      12
          Batch Processors             5
          User RT-programs           110     Free        71
          Background Programs         34     Using       34
          Terminals                   65
          ND-500 Processes            48
          SIBAS  Processes            12
          SINTRAN Spooling Prog        8
          Sprint Printers              3

User:SYSTEM
```

figure 11. Process

The number of some of the processes displayed above can be changed by means of the SINTRAN III Configuration program.
The program is started by the @RECOVER command:

@S3-CONFIGURATION

System parameters that can not be changed by the @S3-CONFIGURATION are:

Number of User RT-programs(free RT-descriptions)
Number of Terminals (used)
Number of SIBAS processes (generated)

See the SINTRAN III System Supervisor Manual. (ND-830003)

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