

Norsk Data



TRUE **Operator Guide**

ND-30.042.1 EN



TRUE

Operator Guide

ND-30.042.1 EN

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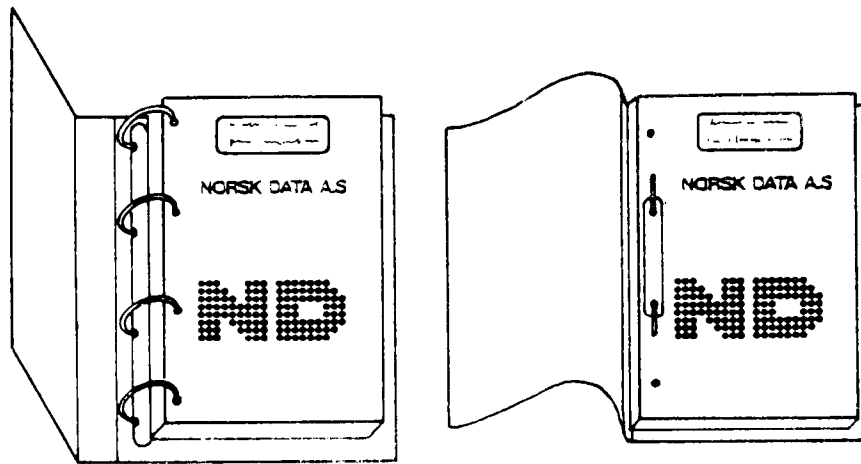
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PREFACE

THE PRODUCT

This manual describes the operating procedures for TRUE, the TRansaction User Environment. The product identification is:

ND-10557B for ND-100
ND-10558B for ND-500

THE READERS

This manual is meant for the operator and the supervisor of a TRUE installation. The manual should be used mainly for operating the TRUE system.

PREREQUISITE KNOWLEDGE

This manual contains all the information necessary to run a TRUE installation. The person responsible for a TRUE installation should know how the installation is configured. He should also have some knowledge of the administrative problems that can be solved by the system.

THE MANUAL

Chapter.1. of the manual is written for the totally inexperienced user. This chapter describes, in general, the equipment necessary to run a TRUE system.

Chapter.2. describes some basic features of TRUE.

Chapter.3. describes the menus and the submenus of TRUE.

Chapter.4. describes how you can record the commands that you use to operate the TRUE system.

Chapter.5. describes the programs in TRUEMAN which is supplied as an extra option. These programs can be used for the maintenance of menus, functions, terminals, users and application programs in the TRUE system.

Chapter.6. describes the TRUEMAN Report System, which contains options for defining, ordering, running, printing and deleting reports.

Appendix.A. provides a listing of all commands in TRUE. This should be useful for quick reference. Appendix.B. provides definitions for some of the terms used in the manual.

RELATED MANUAL

TRUE User Manual ND-60.195.2 EN

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STANDARD NOTATION

.....

In the text you see:	What it means or what it is used for:
<p>012↵</p>	<ul style="list-style-type: none"> ● Commands given by the user are <u>underlined</u>. In TRUE all commands are given by their command numbers. The commands must be terminated by ↵.
<p>@</p>	<ul style="list-style-type: none"> ● This is the SINTRAN III prompt sign. It indicates that you are in touch with the computer's operating system and can give commands.
<p>M</p>	<ul style="list-style-type: none"> ● Keytops are shown in this way.
<p>↵</p>	<ul style="list-style-type: none"> ● This represents the carriage return key. On the terminal it may be marked ↵, CR, RETURN or ENTER.
<p>↑</p>	<ul style="list-style-type: none"> ● This represents the HOME key.
<p>⌫</p>	<ul style="list-style-type: none"> ● This represents the delete key.
<p>FUNC - ↑</p>	<ul style="list-style-type: none"> ● This means you press the FUNC key <u>followed</u> by the ↑ key.
<p>CTRL + W</p>	<ul style="list-style-type: none"> ● This is an example of a CTRL combination. It means you press the CTRL key <u>and</u> hold it down while you press W.

C H A P T E R 1
INTRODUCTION

.....

- WHAT IS "TRUE" ?
- THE HARDWARE IN TRUE
- THE TERMINAL
- MAGNETIC DISKS
- FLEXIBLE DISKS
- THE LINE PRINTER
- STARTING THE COMPUTER

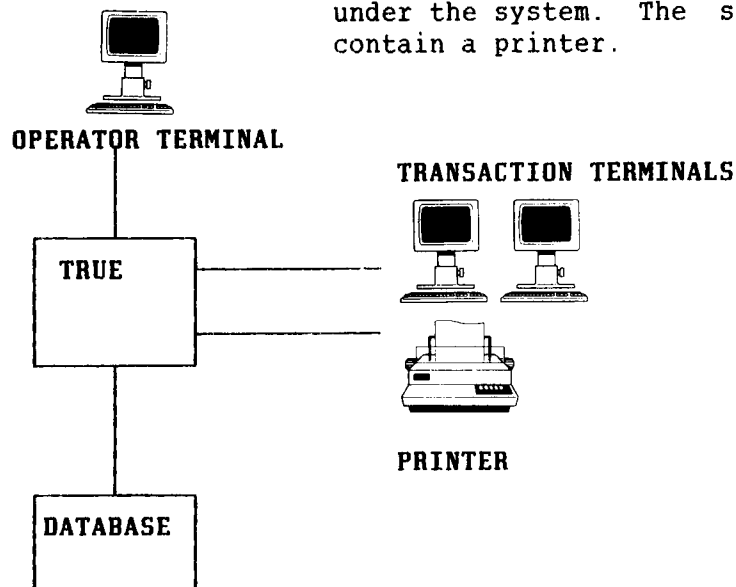
1 INTRODUCTION

1.1 WHAT IS TRUE ?

TRUE is a supervisory computer program system for monitoring transaction processing on the ND family of computers. A transaction processing system allows the user to interact between an input/output device and a database, allowing him to retrieve, add or modify information in the database.

A simple configuration of the TRUE system

The TRUE system is operated from a screen terminal. A typical TRUE system will normally run on a ND-100 or a ND-500 computer. There will be a database on a disk storage medium, and there will be a number of transaction terminals running under the system. The system may also contain a printer.



The tasks of the operator

The operator is responsible for:

- . starting and stopping the TRUE system;
- . taking checkpoints and backups of the databases;
- . starting the recovery procedures in case of errors;
- . managing the transaction terminals;
- . managing the user processes; and
- . communicating and sending messages to the transaction terminals.

1.2 WHO IS RESPONSIBLE FOR TRUE ?

A TRUE installation will typically include the use of a ND-100 or a ND-500 computer, a number of terminal users, a disk storage device and printers. A number of different people are involved in operating and maintaining a TRUE installation:

The Operator

The operator is responsible for the daily operation of the TRUE system. He is responsible for starting and stopping the individual user systems, for producing reports, and for taking security copies of processed data. The operator usually works at the operator terminal.

The System Supervisor

The system supervisor is responsible for the entire computer installation. System failures are usually reported to him.

The system supervisor is responsible for informing the operator about the backup, rollback and recovery procedures, which are installation dependent.

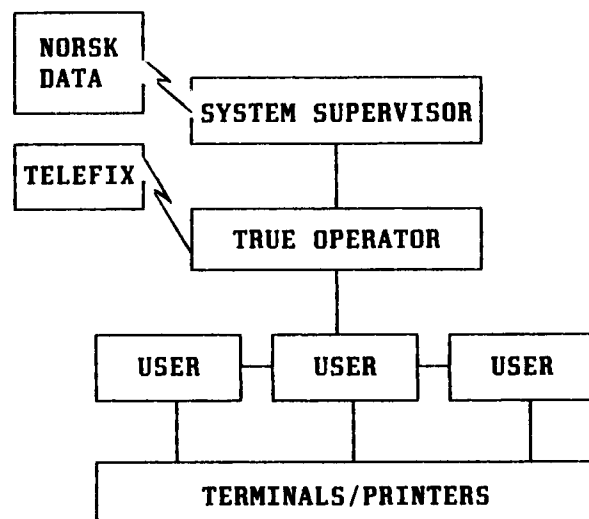
The User

The individual user usually works with the user systems s/he has been authorized to use.

Service Personnel

Norsk Data's service personnel may be summoned if there are errors in the installation or if the programs must be corrected. You may also use Norsk Data's customer service TELEFIX for a repair job.

Call NORSK DATA or
use NORSK DATA's TELEFIX
service to correct possible
errors in the TRUE system.

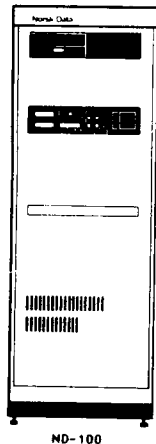


The organization of personnel on the TRUE system

1.3 THE HARDWARE IN TRUE

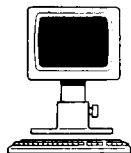
The hardware that is typically used in the TRUE system is briefly described here:

The ND-100 Computer central processing unit

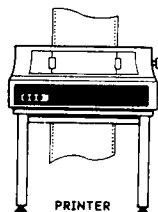


The most important part of the computer is the Central Processing Unit (CPU). The programs are executed in the CPU. On the ND-100 the CPU is placed in one cabinet, and on the ND-500 it is placed in two cabinets.

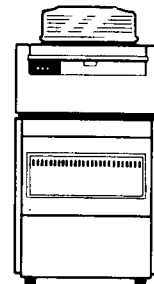
Together with the CPU, the cabinet also houses internal storage. The part of the system currently being processed is stored here. The internal storage also holds the processing data, the input data, which is to be processed, and the output data resulting from it.



The Terminal



The Printer



The Magnetic Disk Device

The Terminal
input device
output device

The program and the input data are usually "fed" to the computer via an input device such as a terminal.

The Printer
output device

The results, the output data, are usually taken out of the computer's internal storage on a printer, or stored on an external device such as the disk.

Magnetic Disk Device
external storage

Normally there will not be enough room in the internal storage to store large amounts of data for longer periods of time. For this reason computers use an external storage such as a magnetic disk device.

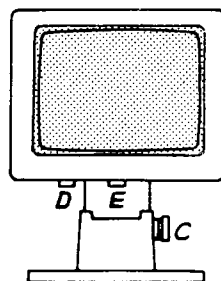
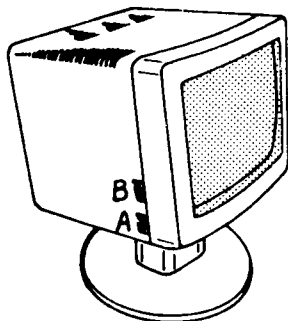
All the devices which are connected to the computer are called peripheral units. Both the computer and the peripheral units have power switched ON when working.

1.4 THE TERMINAL

The terminal is both an input and an output device. With the terminal keyboard you can enter data, or correct data already present in the system. You can check your input data on the terminal screen, which will also be used to accept messages from the system.

For TRUE you will normally use the Tandberg terminal ND-246 (terminal type 53).

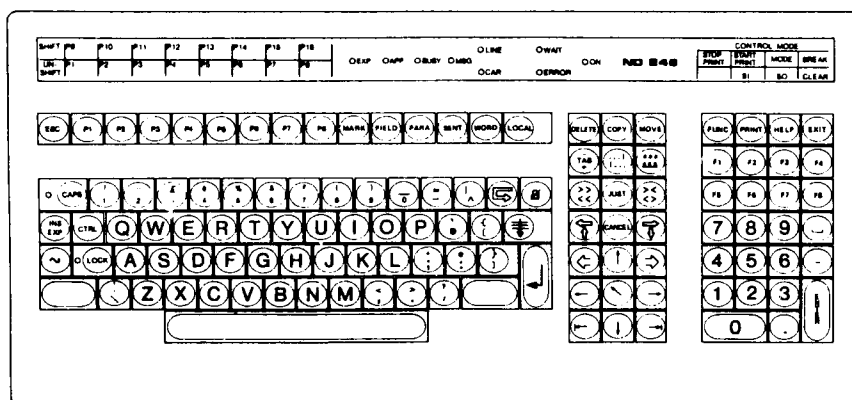
The Terminal Screen turning ON and OFF



- A - to turn the terminal ON or OFF
- B - to regulate light intensity of screen
- C - to regulate the height of the screen
- D - to regulate the angle of inclination
- E - to regulate the angle in proportion to foot.

The Keyboard

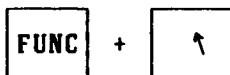
The keyboard is shown here below. We will mention only the most important keys here. The functions of the keys are described in the text, at the appropriate places.



Carriage
Return key



Home key



Cancels the command
in progress



Deletes the last
character input

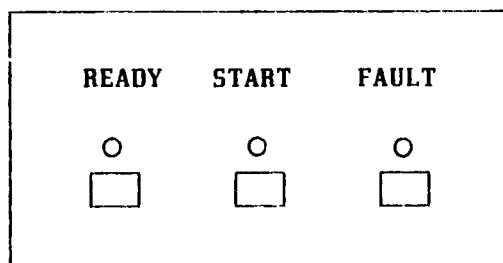
1.5 MAGNETIC DISKS

A magnetic disk is an external storage device which can hold large amounts of data. The disk unit contains one or more magnetic disks (disk packs).

Care of the Disk Unit

- . Handle disks very carefully;
- . avoid great variations in temperatures;
- . avoid direct sunlight;
- . avoid electro-magnetic fields;
- . do not drop the disks.

The Disk Unit Panel



The panel on a disk unit is shown here. The "Ready" and the "Start" lamps are lit when the disk is in operation. The cover of the disk unit must not be opened at this stage.

The "Fault" lamp will be lit if there is an error on the disk. The disk can be restarted by pressing the ERROR switch. If the lamp remains lit after this, stop the disk unit and contact the system supervisor.

Changing Disk Packs

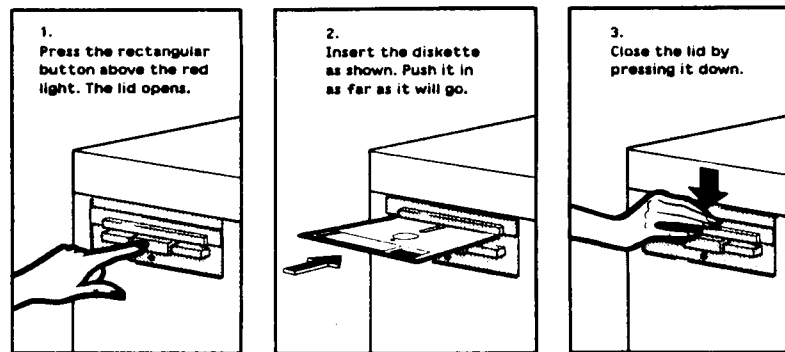
- 1) Press the switch under the "Start" lamp. The "Ready" lamp and the "Start" lamp will now start to blink. When they have gone out, the disks have stopped rotating and the disk unit cover may be opened.
- 2) Open the cover and put on the lid that belongs to the disk pack. To remove the disk, turn the lid counter-clockwise. Turn until you hear a click. Lift up the disk pack and place it in its case. A clip mechanism in the case holds the disk in place.
- 3) If a new disk pack is to be placed in the disk unit, reverse the procedure: remove the disk from its case and place the new pack in position together with its plastic lid. Take the lid off by turning it clockwise.
- 4) You can restart the disk by pressing the "Start" switch. When the "Start" and "Ready" lamps are both showing a steady light, the pack is ready for use.

1.6 FLEXIBLE DISKS (FLOPPY DISKS)

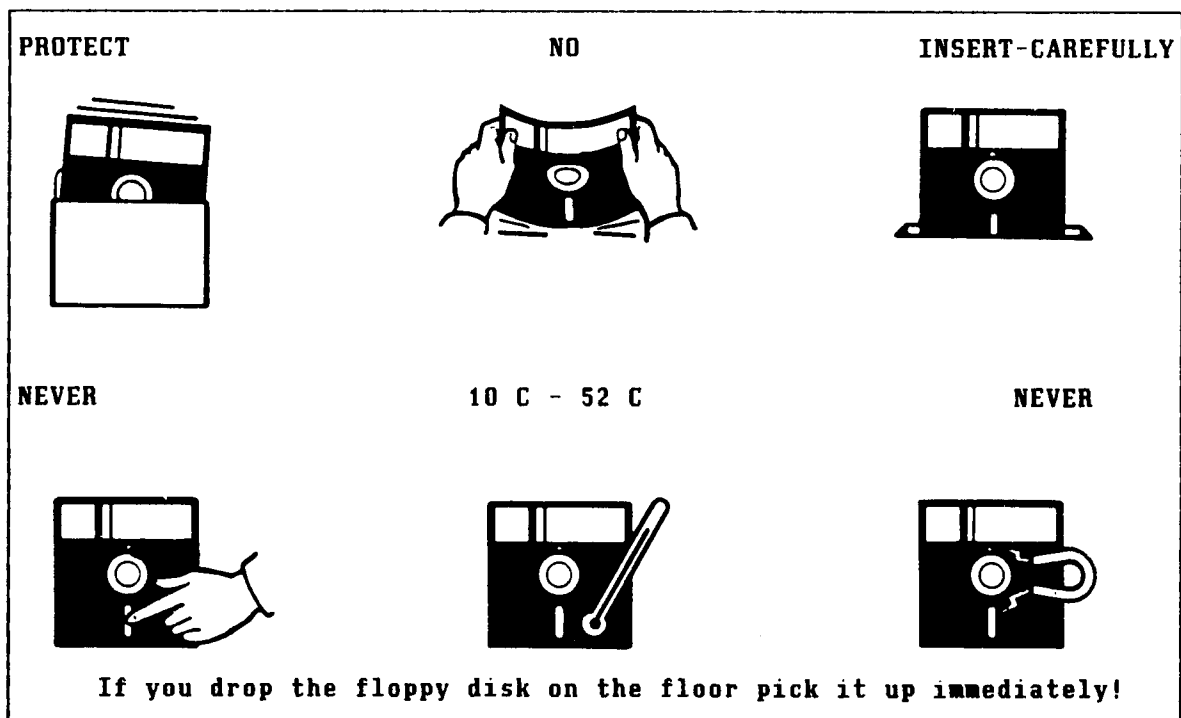
A floppy disk is also an external storage device. It stores considerably less data than a hard disk. But, it has the advantage of being easy to handle, easy to install and easy to transport.

The disk drive for the floppy disks is normally situated at the top left-hand corner of the computer. The figure below shows how to insert a floppy disk in the disk drive.

How to Insert a Floppy Disk in the Disk Drive



Caring for The Floppy Disks



1.7 THE LINE PRINTER

The line printer is a useful output device for producing hard-copy output of your data, reports and so on. There are several types of line printers. Most manufacturers provide operating instructions for their products. However, the basic procedures are usually the same for most printers. Here, we will provide a brief account of the Terminet printer.

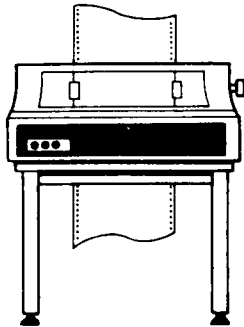
The Terminet Line Printer Opening the Printer

To open the printer, just lift the cover above the paper.

Feeding Paper

The opening for feeding the paper (the forms) is on the underside of the machine. The paper is inserted between the roll and the ribbon.

Regulating the Sheet Length



Paper sheet length is usually measured in inches (ca. 2,5 cm.). For every sheet length, insert a guide tape of corresponding length. Guide tape is a punched tape. There are different sizes of guide tapes for each printer. If the sheet length is permanent the correct tape will usually be on. The guide tape is put on a toothed wheel on the left side of the printer. Make sure that the wheels on the tape grip the teeth on the toothed wheel!

Regulating the Sheet Width

The feed paper must also fit into the two toothed wheels on the roll which drive the paper forwards. Lock the paper properly between the toothed wheel.

Setting the Sheet Top

Some forms have a mark showing exactly where the top line is to be printed. To adjust the paper to the proper position, move the paper backwards or forwards using the knob on the side of the printer.

Starting the Printer

You can establish contact between the printer and the computer by pressing the switch marked "ON LINE".

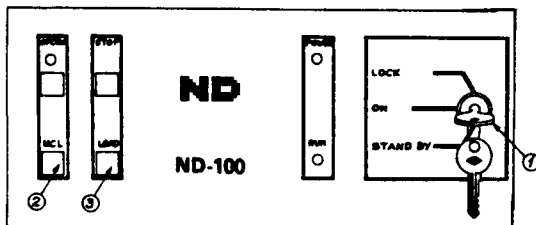
After printing out nonstandard forms, reset the printer to standard format! The printer should normally be set to standard format. Readjustments should be made only when you use nonstandard forms.

Run a test printout to check the proper positioning of the paper. If you are not satisfied with the positioning of text on the paper, stop the printer by using the "LOCAL" switch, and make the appropriate adjustments. When all adjustments are made, press the "ON LINE" switch again to restore contact with the computer.

1.8 STARTING THE COMPUTER

Normally the computer, as well as the terminals, the disk units and the printers, will be ON continuously.

Starting the Computer



- 1) Turn the key to the "ON" position and press the keys marked STOP (2) and MCL (MASTER CLEAR) in that order. Wait for a few seconds until the computer answers with a signal on the console.
 - 2) Switch on the disk unit as described in section 1.4. Wait until the disk unit has started.
 - 3) Switch on the TRUE operator's terminal. (This must be a screen-oriented terminal)
 - 4) On the computer, press the switch marked LOAD (4). The lamp marked RUN (5) should now light up. The computer now begins to work and writes out messages on the console.
 - 5) Turn the key to the position LOCK (6).
 - 6) Switch on the other terminals and the line printer(s).
 - 7) After a few minutes the picture shown here will appear on the operator's terminal asking for the correct time and date. This should be correct, otherwise the recovery of the databases controlled by TRUE will not be performed correctly.
- . If the time and date are not correct, enter the correct time and date.

Watch out for error messages at this stage.

TRUE Initialization

The TRUE operator must log in, eventually with a password, in order to start TRUE-OPCOM.

—end of chapter—

C H A P T E R 2
OPERATING THE TRUE SYSTEM

.....

- **THE STRUCTURE OF TRUE**
- **CONFIGURATIONS OF THE TRUE SYSTEM**
- **WHAT YOU SHOULD KNOW ABOUT TRUE**
- **THE STATES OF THE TRUE MODULE**
- **LOGGING IN AND LOGGING OUT**
- **SELECTING AND EDITING MENU COMMANDS**

2 OPERATING THE TRUE SYSTEM

2.1 THE STRUCTURE OF TRUE

A TRUE system consists of a group of TRUE modules, which are under the supervisory control of an OPCOM process. All commands sent to a TRUE module, either from OPCOM or from user processes, are in fact addressed to its "Operational Manager" (OPMAN) which may be considered to be the kernel of the TRUE module. Each OPMAN controls a group of transaction processes, which consist of transaction terminal processes and transaction batch processes.

OPCOM:
the Operator Communication
Program

OPCOM, the Operator Communication Program, controls the TRUE system. OPCOM is like an ordinary SINTRAN III background subsystem. It is screen-oriented, the commands are presented in the form of a main menu and a selected submenu. The OPCOM commands allow the operator to start, stop or halt the TRUE system. There are also commands to checkpoint, backup or recover the databases used by the system. These commands serve vital functions in connection with normal processing and in case of hardware or software malfunctioning.

Other commands are also available for such functions as starting and stopping individual TRUE modules, starting and aborting transactions, changing system parameters, and broadcasting messages.

OPMAN:
the Operational Manager

A TRUE module consists of a user program/process/database environment controlled by an OPMAN (Operational Manager). Each OPMAN process is a version of the OPMAN program. Each version has a unique module name, network address and a set of user-written subroutines. All commands to a module are in fact addressed to its OPMAN.

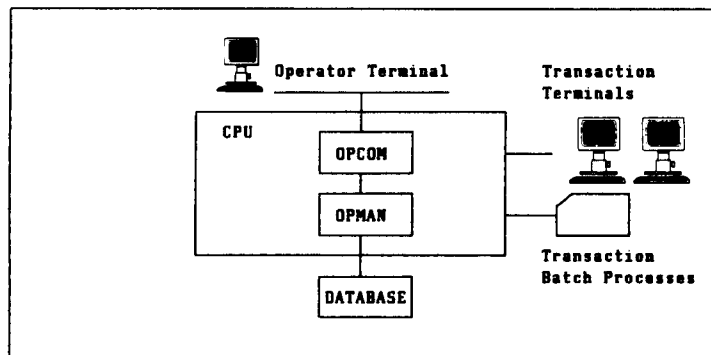
All user programs and user processes must be local to an OPMAN process. The user processes must also be background processes. Some of them may be permanent module members, while others may join and quit module membership dynamically. The database(s) must be local or back-end databases.

Each OPMAN version may control 128 terminal processes, 32 batch processes, and 16 databases.

2.2 CONFIGURATIONS OF THE TRUE SYSTEM

A typical configuration of the TRUE system

In a typical configuration of the TRUE system there will be an OPCOM program controlling several TRUE modules. And each TRUE module consists of several transaction terminals, transaction batch processes and databases.

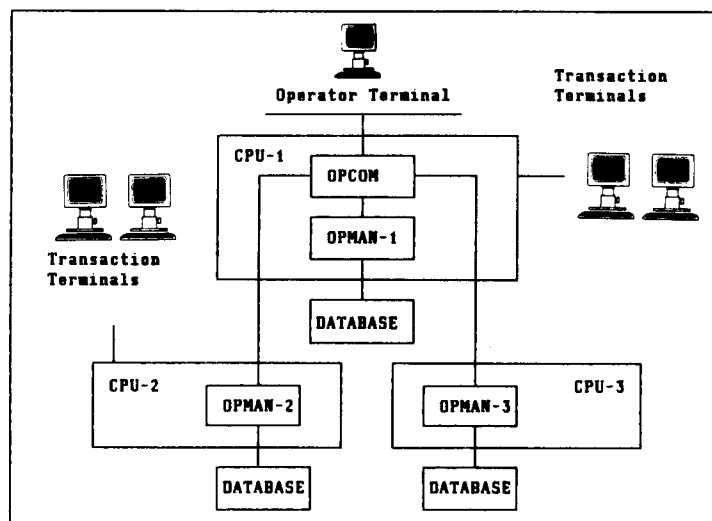


A Hierarchical Configuration of TRUE

It is possible to have several TRUE modules within one TRUE system. The TRUE modules may be distributed to several computers. In this way a TRUE system may consist of a hierarchy where one OPCOM controls several TRUE modules, which may be located in different computers, controlling their own user processes, user programs and databases.

It is also possible to construct more complex hierarchies, where a module controls other modules.

An example of an hierarchical TRUE system is shown below:



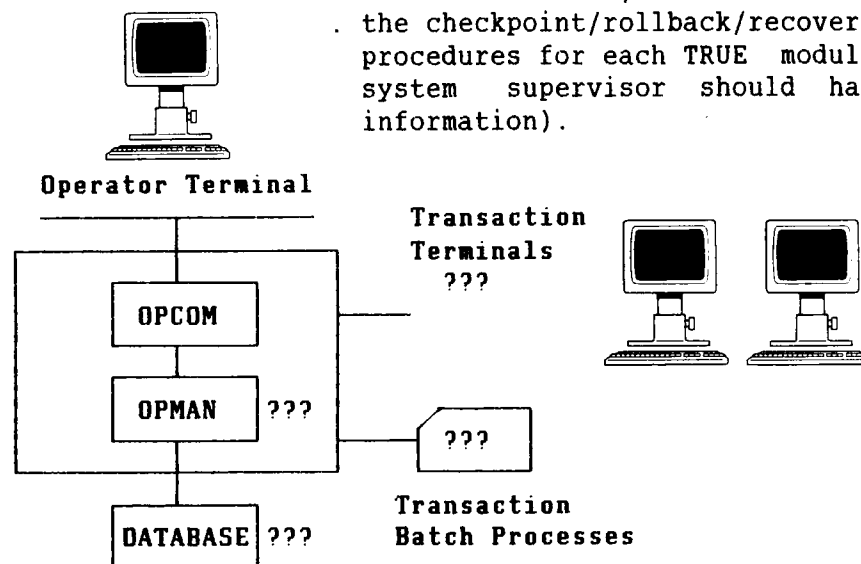
2.3 WHAT YOU SHOULD KNOW ABOUT TRUE ?

Before you operate TRUE, you should find out the configuration of your system. Normally there will be one OPCOM version controlling several TRUE modules. There will also be a number of terminals and databases attached to you system. So, to operate TRUE you need to know the identifications of all these.

What you should know ?

To operate the TRUE system you should know the following:

- . the login procedure which starts the TRUE system;
- . the names of each TRUE module;
- . the transaction terminals, batch processes and databases administered by each TRUE module;
- . the default parameters of each TRUE module;
- . the password necessary to release OPCOM from the PAUSE state;
- . the names of the databases belonging to each TRUE module;
- . the checkpoint/rollback/recovery/backup procedures for each TRUE module. (The system supervisor should have this information).



- . What are the names of the OPMAN modules ?
- . What are the numbers of terminals running under TRUE ?
- . What are the names of databases running under TRUE ?

Your system supervisor should be able to give you information about your TRUE installation.

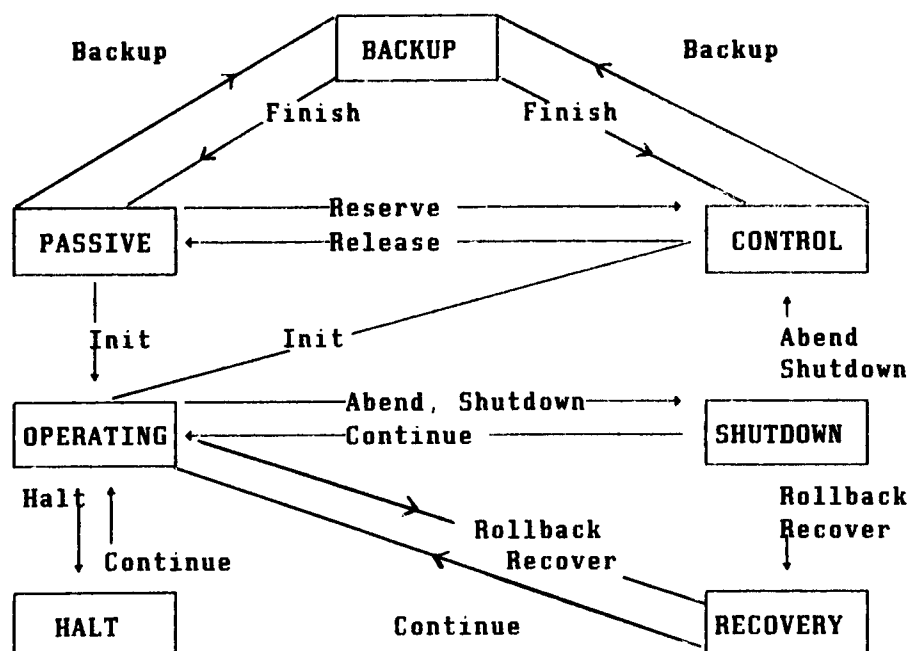
2.4 THE STATES OF THE TRUE MODULE

Each TRUE module may control several terminal processes, batch processes, and databases. You will, of course, have to know the exact configuration of your installation. The TRUE module can assume one of the following states:

PASSIVE State	OPMAN is idle, only listening for requests.
CONTROL State	OPMAN controls the user processes.
OPERATING State	OPMAN permits normal user activity.
HALT State	OPMAN has stopped temporarily.
SHUTDOWN State	No new activities are allowed, but the present activities may be completed.
RECOVERY State	A database is being recovered.
BACKUP State	A database is being backed up.

Changes in the OPMAN States

The state of the OPMAN module changes according to the OPCOM commands and/or calls from TRUE functions. The following diagram illustrates how the OPMAN states may be changed:



2.5 LOGGING IN AND LOGGING OUT

The OPCOM program manages the TRUE system. Usually, the OPCOM module will be identified by the name TRUE-OPCOM. So, the TRUE system is started by giving the command: TRUE-OPCOM ↵

OPCOM should preferably not be run from a transaction terminal. If you run OPCOM from a transaction terminal, a warning is given at start-up time, and the OPCOM process is considered to be an ordinary transaction process. This means that system SHUTDOWN cannot be completed before the OPCOM process has terminated.

The following main menu, here with submenu 8, is displayed:

```
*** TRUE OPERATOR COMMUNICATION PROGRAM ***

1. SYSTEM START/STOP.          5. READ STATUS.
2. SYSTEM CHECKP/BACKUP/RESTART. 6. ACTIVATE/TERMINATE USER PROCESS
3. SYSTEM STATUS CHANGES.     7. TIME FUNCTIONS.
4. COMMUNICATION STATUS/BROADCAST 8. EXIT.

OPCOM MAIN MENU. YOUR CHOICE: 8
=====
01: LOGOUT.
02: EXIT TO SINTRAN III.
03: EXIT TO TRANSACTION MENU.
04: EXIT TO TEST PROGRAM.
05: PAUSE.

YOUR CHOICE:
=====
=====MESSAGES TO THE OPERATOR=====
[4 message lines]
```

The Main Menu

The main menu has eight alternatives. Each of these eight alternatives leads to a submenu.

Messages to the Operator

The lowest four lines on the screen are reserved for messages from the lower levels of the TRUE system. The last message has a > character preceding it. When the 4 message lines are full the next message is displayed on the topmost line. Messages are lost if they are sent when TRUE-OPCOM is not active.

When there is a message from the lower levels of the TRUE system, the EXP. lamp on the terminal board is lit. The lamp is switched off again when the message is displayed.

Logging Out

When OPCOM is running, USER BREAK (ESC) is disabled. To exit from the TRUE system, select command alternative 8 from the main menu, and then choose the required alternative.

----->>>>>

The PAUSE Command

If PAUSE (command alternative 85) is selected, OPCOM is locked and you must give a password to restart OPCOM. You should always give the PAUSE command if you intend to leave the terminal for a short time. The advantage of using PAUSE (as compared to logout) is that messages from the lower levels of the TRUE system may still be displayed. It is, therefore, advisable that the system supervisor should configure the system such that OPCOM automatically reverts to the PAUSE state if it is not used for some length of time.

Your system supervisor should know the password for starting OPCOM from the PAUSE state.

When OPCOM is Started

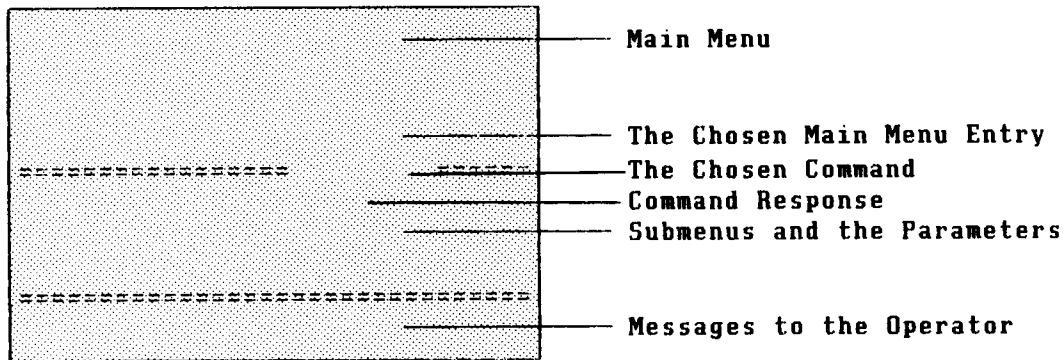
When OPCOM is started, it tells whether or not the commands are logged. It also warns if it is run on a transaction terminal. If it is run on a transaction terminal the module name and type of membership (permanent or associated) is indicated.

If OPCOM is Run on a Transaction Terminal

If OPCOM is run on a transaction terminal, ABEND and SHUTDOWN operations cannot be completed before the OPCOM terminal is logged out.

2.6 SELECTING AND EDITING MENU COMMANDS

The main menu and the submenu commands are selected by typing the appropriate command number followed by carriage return.




Submenu to Main Menu

Type Q+J to go from the submenu to the main menu.


Editing Commands

Typing mistakes can be corrected by using the FOCUS edit functions (see The FOCUS Screen Handling System, ND.60.137). We will mention here some of the most important functions:

 or <A>

Delete character.

<A> means that you press the CTRL key while you press the A key.

 + <W>

Restart editing the current field.

 + ^

Cancel command in progress.

When you edit a field, the BUSY lamp on top of the terminal board is lit. The lamp is switched off when you complete editing the field.

It is important that you edit the fields as quickly as possible, because as long as you are editing the fields, messages from the lower levels of the TRUE system cannot be displayed on the screen.

—end of chapter—

CHAPTER 3
THE TRUE SUBMENUS

.....

- SUBMENU COMMAND DESCRIPTIONS
- IMPORTANT HINTS
- SUBMENU 1: SYSTEM START/STOP
- SUBMENU 2: SYSTEM CHECKPOINT/BACKUP/RESTART
- SUBMENU 3: SYSTEM STATUS CHANGES
- SUBMENU 4: COMMUNICATION STATUS/BROADCAST
- SUBMENU 5: READ STATUS
- SUBMENU 6: ACTIVATE/TERMINATE USER PROCESS
- SUBMENU 7: TIME FUNCTIONING
- SUBMENU 8: EXIT

***** T R U E O P E R A T O R C O M M U N I C A T I O N P R O G R A M *****

- | | |
|-----------------------------------|------------------------------------|
| 1. SYSTEM START/STOP. | 5. READ STATUS. |
| 2. SYSTEM CHECKP/BACKUP/RESTART. | 6. ACTIVATE/TERMINATE USER PROCESS |
| 3. SYSTEM STATUS CHANGES. | 7. TIME FUNCTIONS. |
| 4. COMMUNICATION STATUS/BROADCAST | 8. EXIT. |

OPCOM MAIN MENU. YOUR CHOICE: 8

=====

81: LOGOUT.

82: EXIT TO SINTRAN III.

83: EXIT TO TRANSACTION MENU.

84: EXIT TO TEST PROGRAM.

85: PAUSE.

YOUR CHOICE:

=====MESSAGES TO THE OPERATOR=====

[4 message lines]

3 THE TRUE SUBMENUS

3.1 THE SUBMENU COMMAND DESCRIPTIONS

The TRUE main menu has 8 alternatives. Each alternative leads to a submenu.

Main menu to Submenu	The main menu remains on the screen all the time. To enter a submenu choose the appropriate submenu number.
The Submenu Commands	The submenu commands are given by typing in the appropriate command number followed by carriage return. The submenu commands can be chosen directly from the main menu provided you remember the appropriate command number.
Submenu to Main Menu	Type 0(zero) to go to main menu from submenu.
Submenu Command Parameters	The effect of some of the commands in the submenus is dependent on the particular configuration of the TRUE system. To be able to use the submenu commands you should know the identifications of the TRUE modules, the transaction terminals, the batch processes and the databases configured in the TRUE system. The system manager is the person to approach for this kind of information. We will provide here general descriptions of the commands in the submenus.
Default Values	Each submenu command has default parameter values which are displayed and supplied when carriage return is given.
Feedback on Menu Commands	When you choose a menu command, you will always get feedback on whether the command has been successful or not.

● IMPORTANT HINTS ●

- | | |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Know the TRUE Configuration | . Be sure that you know the configuration of your TRUE system. The system supervisor should have this information. |
| Know the Module Names | . Be sure that you know the names of the TRUE modules. Also be sure that you know the identifications of the transaction terminals, transaction batch processes and the databases administered by your TRUE system. |
| Edit Quickly | . Do not take long to edit the menu commands. Because, as long as you are editing the menu commands, the messages from the lower levels of the TRUE system will be blocked. |
| PAUSE
if you are going away | . If you intend to leave the terminal for any reason put the OPCOM in the <u>PAUSE</u> state. This will then allow messages from the lower levels of the TRUE system to be displayed on the screen, while OPCOM is protected from unauthorized use. |
| Know the Password | . Be sure that you know the <u>password</u> to start the TRUE system from the pause state. |
| ALL DB:S
All Databases | . If you want a command to be valid for all databases (DBs), then use the string "ALL DB:S" as database name. |
| ALL MODULES
To address All modules | . If there are more than one OPMAN versions in the system, the string "ALL MODULES" addresses them all together. If the modules exist at different hierarchical levels, the string "MASTER MODULES" addresses all module versions at the topmost hierarchical level. |
| MASTER MODULES
To address Higher modules | |

3.2 SUBMENU 1: SYSTEM START/STOP

11: START MODULE(S)
12: INITIATE MODULE(S)
13: HALT MODULE(S)
14: CONTINUE MODULE(S)
15: SHUTDOWN MODULE(S)
16: ABEND MODULE(S)
17: STOP MODULE(S)

- | | |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11: START MODULE(S) | <ul style="list-style-type: none">* APPEND-BATCH command is given to SINTRAN III, entering the OPMAN job into the batch queue. The batch process which is to run OPMAN, should be in IDLE state when the command is given, otherwise an error is given. (Normally, a module enters the PASSIVE state just after start up.)* This command works only for modules residing in the same CPU as OPCOM. Other modules must be started by SINTRAN III at cold-start or warm-start, or by the APPEND-BATCH command from remote logg-in. |
| 12: INITIATE MODULE(S) | <ul style="list-style-type: none">* The module(s) enter the OPERATING state.* The activities at the transaction terminals and transaction batch processes are aborted.* The time information tabulated in a module and its time queue file is cleared. |
| 13: HALT MODULE(S) | <ul style="list-style-type: none">* The module(s) are stopped temporarily.* No batch jobs will be entered into the queue when the module is in this state.* Normally, the databases will be reserved by OPMAN. Ask the system supervisor for details |
| 14: CONTINUE MODULE(S) | <ul style="list-style-type: none">* Restarts the module(s) from the HALT, SHUTDOWN or RECOVERY state. If no state is specified, the module is restarted from the current state.* The OPERATING state is set. |
| 15: SHUTDOWN MODULE(S) | <ul style="list-style-type: none">* The transaction processes are allowed to finish their activities in a normal way and the module(s) will shutdown gracefully.* No new activities may be started.* When all transaction processes are completed, the module(s) enter the CONTROL state. |
| 16: ABEND MODULE(S) | <ul style="list-style-type: none">* Transaction processes are aborted and modules enter the CONTROL state. |
| 17: STOP MODULE(S) | <ul style="list-style-type: none">* The OPMAN processes are terminated. (The module(s) must be in the PASSIVE or CONTROL state to accept this command.) |
-

3.3 SUBMENU 2: SYSTEM CHECKPOINT/BACKUP/RESTART

21: CHECKPOINT MODULE(S)/DB(S)
22: SET MODULE/DB CHECKPOINT INTERVAL
23: BACKUP MODULES/DBS
24: FINISH MODULE/DB BACKUP OPERATION
26: ROLLBACK MODULE(S)
27: RECOVER MODULE(S)

- 21: CHECKPOINT MODULE(S)/DB(S) * Let the module take a checkpoint of one or all of its databases.
- 22: SET MODULE/DB CHECKPOINT INTERVAL * Order the module to take a checkpoint of the given database periodically.
- 23: BACKUP MODULE(S)/DB(S) * Order the module to take a backup copy of the database(s). The module will enter the backup state.
(The effect of this command depends completely on the installation.)
- 24: FINISH MODULE/DB BACKUP OPERATION * Declare the backup operation of the given database, controlled by the addressed module, to be finished. If this backup operation is the only uncompleted operation, the module leaves the BACKUP state and assumes the previous state.
- 26: ROLLBACK MODULE(S) * Order the module(s) to roll back the given database, or all databases.
* Normally, all transaction processes will be aborted. If, however, the addressed module is executed in a "database declaration mode" the following happens:
- All user processes that have declared the database mentioned in the ROLLBACK command will be aborted.
 - All user processes that have not declared any database will be aborted.
 - The user processes which have declared other databases or no database (NO DB) may run uninterrupted.
- 27: RECOVER MODULE(S) * Order the module to perform recovery for the given database, or all databases.
* Normally, all transaction processes will be aborted. If, however, the addressed module is executed in a "database declaration mode" the result will be what is described above for the command ROLLBACK MODULE(S).

3.4 SUBMENU 3: SYSTEM STATUS CHANGES

31: RELEASE TRANSACTION TERMINALS. 32: RESERVE TRANSACTION TERMINALS. 33: UPDATE TIME AND CALENDAR. 35: SET PROGRAM FILE AVAILABLE. 36: SET PROGRAM FILE UNAVAILABLE. 37: DELETE REENTRANT PROGRAM.

- | | |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 31: RELEASE TRANSACTION
TERMINALS | <ul style="list-style-type: none">* Orders the module to release its transaction terminals and assume the PASSIVE state.* Relevant only when the module is in the CONTROL state. |
| 32: RESERVE TRANSACTION
TERMINALS | <ul style="list-style-type: none">* Orders the module to reserve its transaction terminals, thus assuming the CONTROL state.* Relevant only when the module is in the PASSIVE state. |
| 33: UPDATE TIME AND
CALENDAR | <ul style="list-style-type: none">* The given time is sent to the module(s), which update(s) the internal clock. Hence, the internal time will be nearly the same in all CPUs in a multi-computer system. |
| 35: SET PROGRAM FILE
AVAILABLE | <ul style="list-style-type: none">* The program file's access is set as follows: Public READ, friend READ/DIRECTORY, own READ/WRITE/APPEND/Common/DIRECTORY.* Default file type is PROG.* The command works for other file types as well, provided the file type is given as a part of the file name.* The command does not work for reentrant subsystems. |
| 36: SET PROGRAM FILE
UNAVAILABLE | <ul style="list-style-type: none">* The program file's access is set as follows: Public NONE, friend DIRECTORY, own WRITE/APPEND/Common/DIRECTORY.* Default file type is PROG.* The command works for other file types as well, provided the file type is given as a part of the file name.* The command does not work for reentrant subsystems. The command DELETE REENTRANT PROGRAM may be used in such cases. |
| 37: DELETE REENTRANT
PROGRAM | <ul style="list-style-type: none">* Delete the program dumped as a reentrant subsystem. |
-

3.5 SUBMENU 4: COMMUNICATION STATUS/BROADCAST

41: LIST MODULE(S)
 42: LIST COMMUNICATION STATUS
 43: LIST REQUEST MESSAGE
 44: LIST RESPONSE MESSAGE
 45: EXCLUDE MODULE
 46: INCLUDE MODULE
 47: BROADCAST TO TRANSACTION TERMINALS

- | | |
|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 41: LIST MODULES | <ul style="list-style-type: none"> * The names of the modules included in the TRUE system are listed. * If a name is enclosed in parentheses, the module resides on a lower hierarchical level. * The master modules on the top level have names that are not enclosed in parentheses. |
| 42: LIST COMMUNICATION STATUS | <ul style="list-style-type: none"> * The communication status produced by the command sent to the module(s) is listed. |
| Commands 42, 43 & 44 are made for debugging purposes only. | <ul style="list-style-type: none"> After a normal communication sequence, the status should be DISC-REQ RCVD, and the and disconnect codes should be <u>zero</u>. |
| 43: LIST REQUEST MESSAGE | <ul style="list-style-type: none"> * The content of the last message sent to a module(s) is listed. |
| 44: LIST RESPONSE MESSAGE | <ul style="list-style-type: none"> * The content of the last response message from a module is listed. |
| 45: EXCLUDE MODULE | <ul style="list-style-type: none"> * This command excludes a module from the module list of OPCOM. * The command should be used only when a module is not present in the system, or if it cannot be reached. * The command has no lasting effect. It must be given anew every time OPCOM is called. |
| 46: INCLUDE MODULE | <ul style="list-style-type: none"> * Reinstates the module name into the module list. |
| 47: BROADCAST TO TRANSACTION TERMINAL(S) | <ul style="list-style-type: none"> * Send a message to one or to all transaction terminals. * The message should be a character string. * The message will be displayed on every terminal that is either logged out, using TRUE's broadcast interface to FOCUS or COBOL, or reads and displays the message. |
-

3.6 SUBMENU 5: READ STATUS

51: READ MODULE STATUS
52: READ DATABASE STATUS
53: READ TRANSACTION TERMINAL STATUS
54: READ TRANSACTION BATCH PROCESS STATUS
55: READ PROGRAM FILE STATUS

- 51: READ MODULE STATUS * Read the state of the given module.
 * The module state has one of the following values: PASSIVE, CONTROL, OPERATING, HALT, SHUTDOWN, RECOVERY or BACKUP.
- 52: READ DATABASE STATUS * The response to this command is installation dependent. A character string (max. 38 characters) may be displayed.
 (Consult the system supervisor.)
- 53: READ TRANSACTION * Following information will be displayed:
 TERMINAL STATUS . Permanent or associated module membership.
 (A "+" indicates associated membership.)
 . The terminal/batch number.
 . The current process state, if the process is not active "P"=Passive, "I"=IDLE.
 . Which user is running at the moment,
 . Which mode (Command, User, RTWT or HOLD) is active,
 . How many CPU minutes are used while logged on, and
 . The program identification, or the last command given.
 . The database declared, if any.
 (If 0 is given as the terminal number, a list of all active terminal and batch processes is displayed. Terminals are indicated by a T, batch processes by a B.)
- 54: READ TRANSACTION BATCH * Information similar to the transaction
 PROCESS STATUS terminal information (see above) will be displayed.
 (If 0 is given as the batch number, a list of all active terminal and batch processes is displayed. Terminals are indicated by a T, batch processes by a B.)
- 55: READ PROGRAM * The status of the given file is displayed.
 FILE STATUS * Default file type is PROG.
 * The command may also be used for file types other than PROG files, provided the file type is given as a part of the file name.
 (The information obtained is the same as given by the SINTRAN III command FILE STATISTICS.)
-

3.7 SUBMENU 6: ACTIVATE/TERMINATE USER PROCESS

61: APPEND BATCH-JOB TO QUEUE
62: REMOVE BATCH-JOB FROM QUEUE
63: STOP BATCH-JOB
64: STOP TERMINAL
65: STOP PROGRAM

**61: APPEND BATCH JOB
TO QUEUE****Note:**

The file names should only be the possible abbreviations used when the previous entry was created !

- * Lets the addressed module enter the given batch job into the given queue.
- * If the batch number is equal to 0, then the module selects the first batch number in its batch number list for the given job.
- * The command works only when the module is operating.
- * The batch number, the batch job filename and the batch output file will be checked by the receiving module.
- * If a batch job in the time queue matches your versions of batch number, batch job input file and batch output file, the time queue entry will be deleted!
- * If a match is found in the interval table, the job will be scheduled for periodic execution.

**62: REMOVE BATCH JOB FROM
QUEUE**

- * An attempt is made to remove the specified batch job from the batch queue.
- * A positive response is given even if no job is actually removed.

63: STOP BATCH JOB

- * An attempt is made to stop the batch job actually running at the time.
- * If no user parameter is given, the default batch job user is assumed.

64: STOP TERMINAL

- * Stop the given transaction terminal process.

65: STOP PROGRAM

- * All transaction processes declared to be running the given program will be aborted.

3.8 SUBMENU 7: TIME FUNCTIONING

71: DISPLAY TIME AND DATE
72: SET BATCH JOB'S EXECUTION TIME
73: SET BATCH JOB'S TIME INTERVAL
74: RESET BATCH JOB'S EXECUTION TIME/INTERVAL
75: LIST TIME QUEUE
76: LIST INTERVALS

- | | |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 71: DISPLAY TIME AND DATE | <ul style="list-style-type: none">* The time and date will be displayed.* These values may be module dependent, since the TRUE system may include more than one CPU. |
| 72: SET BATCH JOB'S
EXECUTION TIME | <ul style="list-style-type: none">* Specify when a given batch job is to enter a given queue.* The batch number and the file names and execution time will be checked by the receiving module. The module must be operating.* The values will be stored in an entry in the module's time queue.* The new values may overwrite values stored earlier, if an exact correspondence between batch process numbers and both file names is found. |
| 73: SET BATCH JOB'S TIME
INTERVAL | <ul style="list-style-type: none">* Specify time interval for the given batch job. If the batch job is started later on, e.g. by the APPEND BATCH JOB TO QUEUE, the job will from then on be executed periodically. The batch number and file names will be checked by the receiving module.* The values will be stored in an entry in the module's interval table. The new values may overwrite values stored earlier if an exact correspondence between batch process numbers and filenames is found. |
| 74: RESET BATCH JOB'S
EXECUTION TIME/INTERVAL | <ul style="list-style-type: none">* Reset the time parameters set by the SET BATCH JOB'S EXECUTION TIME or SET BATCH JOB'S TIME INTERVAL commands, or by their corresponding library calls from the application programs. |
| 75: LIST TIME QUEUE | <ul style="list-style-type: none">* The contents of the time queue are displayed on the OPCOM terminal. |
| 76: LIST INTERVALS | <ul style="list-style-type: none">* The contents of the interval table are displayed on the OPCOM terminal. |

Note:

For commands 72 & 73 Use only the possible abbreviations used when the previous entry was created!

3.9 SUBMENU 8: EXIT

81: LOGOUT
82: EXIT TO SINTRAN III
83: EXIT TO TRANSACTION MENU
84: EXIT TO TEST PROGRAM
85: PAUSE

- | | |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 81: LOGOUT | * The OPCOM terminal is logged out. |
| 82: EXIT TO SINTRAN III | * OPCOM gives control to the SINTRAN III command processor. |
| 83: EXIT TO TRANSACTION MENU | * OPCOM gives the control to TRUE-SELECT.
* Be sure that TRUE-SELECT may be called from the OPCOM terminal before using this command. If not, the OPCOM program will restart, but in between messages to the four lowest lines <u>may</u> have been lost. |
| 84: EXIT TO TEST PROGRAM | * OPCOM gives the control to the test program TRUE-100-TEST.
* Be sure that TRUE-100-TEST may be called from the OPCOM terminal before using this command. If not, the OPCOM program will restart, but in between messages to the four lowest lines <u>may</u> have been lost. |
| 85: PAUSE | * OPCOM starts waiting for the predefined password.
* In some configurations, a switch to PAUSE may take place automatically if the terminal has been idle for a certain amount of time. |

—end of chapter—

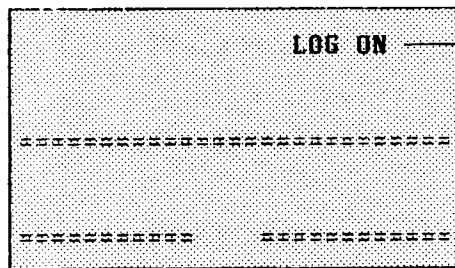
C H A P T E R 4
HOW TO RECORD OPCOM COMMANDS

.....

- **HOW TO RECORD OPCOM COMMANDS**
- **EXAMINING THE LOG**

4 HOW TO RECORD OPCOM COMMANDS

OPCOM may be executed in a mode that causes it to record the operator's commands in a file called TRUE-OPCOM:LOG. This file may be used to examine the interaction between the operator and the TRUE system.



TRUE Main Menu

when the LOG mode is on it will be indicated on the main menu

What is Recorded When the LOG mode is ON ?

Commands which interact with the TRUE modules are recorded

Commands which cause interaction between the operator and one or more modules, will be logged.

Local OPCOM commands are not recorded

Commands executed locally in OPCOM are not logged unless they affect OPCOM's way of module interaction.

Input parameters, time & return status are recorded

Commands are logged with their input parameters, the time when the commands were issued, and the return status values. The input parameters which are logged in the log file are those which OPCOM actually uses when the commands are given. For instance, if the operator selects the default module name by giving <CR>, the full module name is recorded in the log file. The command output parameters are not logged.

Messages are not recorded

Messages to the operator are not logged.

Recent commands are recorded

A number of the most recent commands will be logged. The maximum number is $2N-1$, where N is the number of 1K pages in the contiguous log file TRUE-OPCOM:LOG.

4.1 EXAMINING THE LOG

The program TRUE-LIST-LOG can be used to examine the operator's interaction with the TRUE system which is recorded in the file TRUE-OPCOM:LOG. The following screen picture is displayed when you run the program TRUE-LIST-LOG.

```

      {{{  T R U E  L I S T  O P C O M  L O G  }}}      VERSION B

LOG FILE NAME:
NUMBER OF ENTRIES FOUND:                                OPCOM PASSIVE
NUMBER OF ENTRIES TO BE WRITTEN:
OUTPUT FILE NAME:
FIRST/LAST/NEXT/PREVIOUS/MOVE/EXIT:                      ENTRY NUMBER:
=====

```

LOG FILE NAME	Default file name is: TRUE-OPCOM:LOG. If another file name is given, the log is copied to this file. This new file will then provide input to TRUE-LIST-LOG.
NUMBER OF ENTRIES FOUND	The number of log elements in the log file.
NUMBER OF ENTRIES TO BE WRITTEN	The number of elements to be written. If the number of elements to be written is given the value zero, the program asks for manual selection of the log elements to be displayed.
OUTPUT FILE NAME	If number of entries to be written ≥ 1 , the output file name should be given. An empty name means the terminal.
FIRST/LAST/NEXT/PREVIOUS /MOVE/EXIT	To display the required entry, or to exit.
ENTRY NUMBER	-1: the latest element, -2: the second latest element, and so on. The elements may suddenly be renumbered if OPCOM and TRUE-LIST-LOG are active simultaneously, and TRUE-LIST-LOG takes its input directly from TRUE-OPCOM:LOG.

TRUE-LIST-LOG fetches the module names and other system parameters from TRUE-USER-LIB. Thus, if your TRUE system is reconfigured, TRUE-LIST-LOG must be reloaded with the new library version.

end of chapter

C H A P T E R 5
THE TRUEMAN MAINTENANCE PROGRAMS

.....

- THE TRUEMAN MAINTENANCE PROGRAMS
- WHAT YOU SHOULD KNOW ABOUT THE TRUEMAN SYSTEM
- EDITING AND NAVIGATING IN THE SCREEN PICTURES
- AUTHORIZATION LEVELS
- MAINTENANCE OF TERMINALS
- MAINTENANCE OF TERMINAL USERS
- MAINTENANCE OF FUNCTION GROUPS
- MAINTENANCE OF APPLICATION PROGRAMS
- MAINTENANCE OF MENUS

5 THE TRUEMAN MAINTENANCE PROGRAMS

TRUEMAN is an optional extension of TRUE. One may, however, use TRUE without using TRUEMAN. TRUEMAN provides facilities for the definition and the execution of user systems. There are five maintenance programs.

The maintenance programs are available from a menu which is displayed when you type in the command TRUEMAN-MAINT+].

ND T R U E OPERATOR TERMINAL	Version B.															
<p>*** TRUEMAN MAINTENANCE ***</p> <table><tr><td>1.</td><td>TRUEMAN-MTERM</td><td>Terminals</td></tr><tr><td>2.</td><td>TRUEMAN-MUSER</td><td>Terminal Users</td></tr><tr><td>3.</td><td>TRUEMAN-MUGRP</td><td>Function Groups</td></tr><tr><td>4.</td><td>TRUEMAN-MAPPL</td><td>Application Programs</td></tr><tr><td>5.</td><td>TRUEMAN-MMENU</td><td>Menus/Functions</td></tr></table> <p>Enter Selection: . {0 = End}</p>		1.	TRUEMAN-MTERM	Terminals	2.	TRUEMAN-MUSER	Terminal Users	3.	TRUEMAN-MUGRP	Function Groups	4.	TRUEMAN-MAPPL	Application Programs	5.	TRUEMAN-MMENU	Menus/Functions
1.	TRUEMAN-MTERM	Terminals														
2.	TRUEMAN-MUSER	Terminal Users														
3.	TRUEMAN-MUGRP	Function Groups														
4.	TRUEMAN-MAPPL	Application Programs														
5.	TRUEMAN-MMENU	Menus/Functions														

- | | | |
|----------|----------------------|----------------------------------------------------------------------------------------------------|
| 1. MTERM | Terminals | To register terminals under TRUEMAN. |
| 2. MUSER | Terminal Users | To define users of individual systems under TRUEMAN. |
| 3. MUGRP | Function Groups | To define function groups for individual users. |
| 4. MAPPL | Application Programs | To define application programs for individual systems under TRUEMAN. |
| 5. MMENU | Menus/Functions | To define menus and their entries (i.e., sub-menus, functions and reports) for individual systems. |

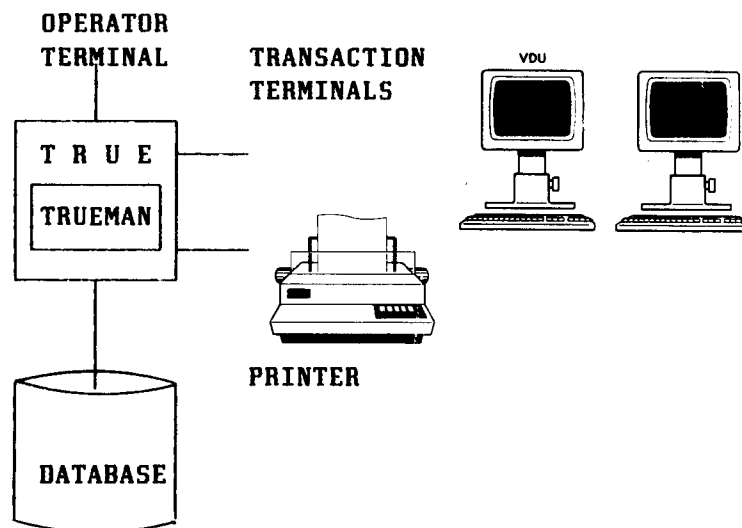
- | | | |
|------------------------------------------------------|----|--------------------------------------------------------------------|
| What you should know to use the maintenance programs | 1. | The configuration and the users of the TRUEMAN system. |
| | 2. | How to edit and navigate in the command pictures. |
| | 3. | How to assign authorization levels when using menus and functions. |

This is explained in the next sections.

5.1 WHAT YOU SHOULD KNOW ABOUT THE TRUEMAN SYSTEM

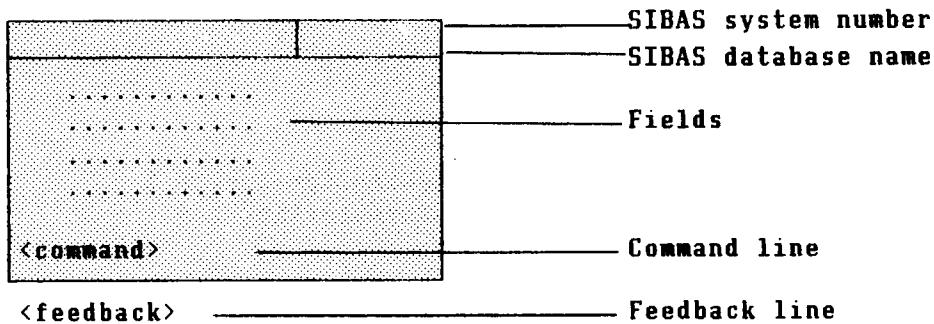
Here we will briefly describe what you should know to use the maintenance programs. The figure below shows a typical configuration of a TRUEMAN system, within TRUE, and the parameter identifications you should know:

What you should know about your TRUEMAN system:

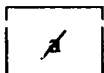


- . What are the terminal numbers ?
- . What are the terminal user names ?
- . What are the printer numbers ?
- . What are the menu/function numbers ?
- . What are the function group numbers ?
- . What are the user authorization levels ?
- . Which applications belong to which function groups ?
- . Which SIBAS process number controls the database ?
- . What is the name of the database ?

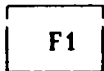
5.2 EDITING AND NAVIGATING IN THE SCREEN PICTURES



Here we mention some of the most frequently used editing/navigation keys.
For more details please refer to the FOCUS Reference Manual (ND-60.137.04).



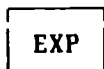
delete character



delete line



go from screen field
to <command> line



set/reset EXPAND mode

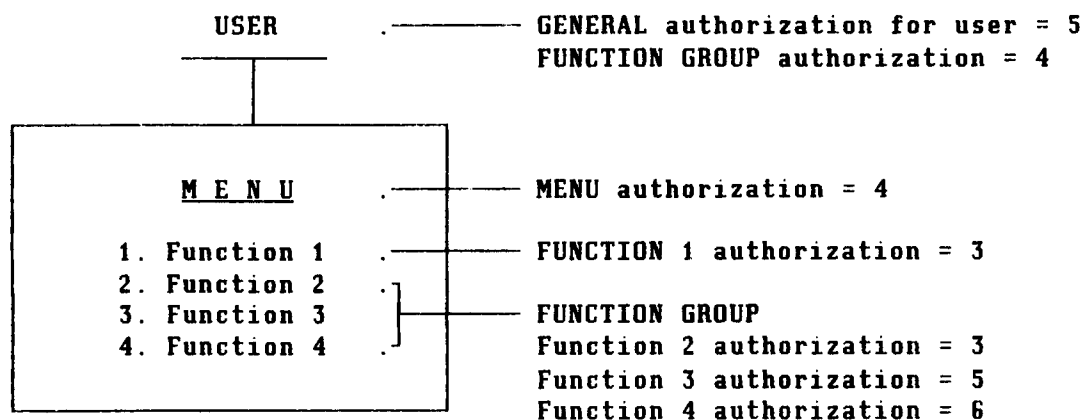


exit from program

5.3 AUTHORIZATION LEVELS

We will use an example to explain the authorization levels within menus, functions and function groups.

Authorization Levels: An Example.



USER → MENU
User can access Menu

In this example the user can access the MENU because his general authorization level is higher than or equal to the authorization level for the menu.

USER → FUNCTION 1
User can access Function 1

The user can also access FUNCTION 1 because it has a lower authorization level than his general authorization level.

USER → FUNCTION GROUP

If the user belongs to the function group in the example, he can only have access to function 2 which has a lower authorization level(3) than the user's function group authorization level(4).

NOTE:

A FUNCTION GROUP may be defined to consist of FUNCTIONS from different MENUS.

GENERAL RULE:

Users can access MENUS, FUNCTIONS and REPORTS which are at a lower authorization level.

5.4 TRUAMAN-MTERM - MAINTENANCE OF TERMINALS

You will be allowed to enter information for up to 128 terminals.

The following form is used by the TRUAMAN-MTERM application:

ND T R U E MAINTENANCE TERMINALS			27 Jan. 1985 11:04	SIBAS system number: .. Database name:
Terminal Number	Printer Number	Alt.Printer Number	Page: ..	
...		
...		
<command line>				

FIELD NAME: DESCRIPTION:

SIBAS System Number : Number of the SIBAS process which controls the database.

Database Name : Name of the SIBAS database.

Terminal Number : SINTRAN III device number for the terminal to be registered. Each terminal is given a unique number.

Printer Number : The use of this field is installation dependent. This field may be used to "connect" terminals to a printer.

Alternative Printer Number : The use of this field is installation dependent. This field may be used to "connect" terminals to a printer.

Page : Shows which page you are currently working on.

<command line>

N(ew) : Enter new terminals.

M(odify) : Modify registered terminals.

R(emove) : Remove terminals.

L(ist) : List other pages.

T(erminate) : Exit to the maintenance main menu.

Error Messages : Error messages are displayed at the bottom left corner of the screen and are self-explanatory.

5.5 TRUEMAN-MUSER - MAINTENANCE OF TERMINAL USERS

The following form is used by the TRUEMAN-MUSER application:

ND T R U E MAINTENANCE TERMINAL USERS	27 Jan. 1985 11:04	SIBAS system number: .. Database name:
User name : Authoriz. level: . Enter type: . Enter menu/func.: ... Function group no.: Function group aut.: . User-def. :		
<command line>		

FIELD NAME:	DESCRIPTION:
SIBAS System Number	: Number of the SIBAS process which controls the database.
Database Name	: Name of the SIBAS database.
UserName	: The terminal user's signature.
Authorization Level	: 0=no access, 9 is highest access. Enter the terminal users general authorization level for this user system.
Enter Type	: Use to indicate how the terminal user should enter TRUE. M: through menu; F: through a function.
Enter Menu/Func	: Enter the menu or function number that the user will start with when entering the TRUE system (max. 999 for a MENU and 9999 for a FUNCTION).
Function Group	: Used if the terminal user is to be a member of a function group (see section 5.7, TRUEMAN-MUGRP).
- Number	: Enter function group number and the terminal users
- Authorization:	authorization level inside this group.
User-Default	: The use of these fields are installation dependent. The values entered will be available for user application programs at runtime. These fields can be used to further define user access within user applications.
<command line>	
N(ew)	: Enter new terminal users.
D(isplay)	: Display registered terminal users.
T(erminate)	: Exit to the maintenance main menu.

5.6 TRUEMAN-MUGRP - MAINTENANCE OF FUNCTION GROUPS

The following form is used by the TRUEMAN-MUGRP application:

ND T R U E MAINTENANCE FUNCTION GROUPS	27 Jan. 1985 11:04	SIBAS system number: .. Database name:
Function group number :		
Applications in this group:		
.....		
.....		
<command line>		

FIELD NAME:	DESCRIPTIONS:
SIBAS System Number	: Number of the SIBAS process which controls the database.
Database Name	: Name of the SIBAS database.
Function Group Number	: Enter a unique number for this function group here.
Application in This Group	: Enter the TRUE application program numbers which the group consists of (see section 5.8, TRUEMAN-MAPPL).
<command line>	
N(ew)	: Register a new function group.
D(isplay)	: Display an existing function group.
T(erminate)	: Exit to the maintenance main menu.

5.7 TRUEMAN-MAPPL - MAINTENANCE OF APPLICATION PROGRAMS

This is used to record the connection between application numbers and their names. You will be allowed to record up to 1000 applications under one TRUE module. The application names should be entered exactly the same way that you would enter them under SINTRAN to run them. The current program number interval shows the lowest and highest application numbers recorded. The appropriate entries for the available to users question is Y or N.

The following form is used by the TRUEMAN-MAPPL application:

ND T R U E		27 Jan. 1985	11:04	SIBAS system number: ..
MAINTENANCE APPLICATION PROGRAMS		Database name:		
Current program number interval: -				Page: ...
Prog. Available				
No.:	To Users?	Program name:		
....	:		
....	:		
<command line>				

FIELD NAME:	DESCRIPTIONS:
-------------	---------------

SIBAS System Number	:	Number of the SIBAS process which controls the database.
---------------------	---	----------------------------------------------------------

Database Name	:	Name of the SIBAS database.
---------------	---	-----------------------------

Current Program Number Interval	:	Minimum and maximum numbers of application programs currently recorded.
---------------------------------	---	-------------------------------------------------------------------------

Page	:	Page number.	Program number 1 must be entered with Y for "Available to users" and with the "Program Name" TRUEMAN-SELECT.
Program No.	:	Number of the program.	

Available to Users	:	Indicates if the application program is available to users.
--------------------	---	-------------------------------------------------------------

Program Name	:	Name of the program.	Program number 11 must be entered with Y for "Available to users" and with the "Program Name" TRUEMAN-RORDR.
<command line>			

N[ew]	:	Enter new programs.
-------	---	---------------------

M[odify]	:	Modify registered programs.
----------	---	-----------------------------

R[emove]	:	Remove registered programs.
----------	---	-----------------------------

L[ist]	:	List other pages.
--------	---	-------------------

T[erminate]	:	Exit to the maintenance main menu.
-------------	---	------------------------------------

You may write the list of the registered programs to a file.

5.8 TRUAMAN-MMENU - MAINTENANCE OF MENUS

The program TRUAMAN-MMENU is used to define menus and functions for each TRUE module. When you run this program for the first time it will create the necessary top menu for the system. You can view this by displaying menu number 10. The following picture appears when you use the program:

ND T R U E		27 Jan. 1985	11:04	SIBAS system number: ..
MAINTENANCE MENUS/FUNCTIONS		Database name:		
Menu no.: ...	Menu text :	Page : .		
Entry no.: ...	Entry text :	Type : .		
<div style="border: 1px solid black; padding: 2px;"> <command line> </div>				

FIELD NAME:	DESCRIPTIONS:
SIBAS System Number	: Number of the SIBAS process which controls the database.
Database Name	: Name of the SIBAS database.
Menu Number	: Menu number (1 to 999, 10 is reserved for top menu).
Menu Text	: Menu text, descriptive name of the menu.
Entry Number	: Entry number in the menu. Between 1 and 20.
Entry Text	: A descriptive name of the menu-entry.
Type	One character. The legal values are: M (for Menu) : the entry is a submenu. F (for Function) : the entry is a function. R (for Report) : the entry is a report. All other characters are illegal.
<command line>	
D(isplay)	: Display a given menu number.
M(odify)	: Modify entries for a given menu number.
R(emove)	: Remove entries for a given menu number.
T(erminate)	: Exit to the maintenance main menu.

----->>>>>

When the Entry Type is M the lower window will be displayed like this:

Menu number : ...	Menu name :	Authorization level : .
-------------------	-------------------	-------------------------

Menu number : Submenu number.

Menu name : Menu name (maximum 8 characters) that may be used to select this submenu. Must be unique.

Authorization Level : Terminal users authorization level (0-9) for using this submenu.

When the Entry Type is F or R the lower window will be displayed like this:

Function no. :	Function name :	Authorization level : .
No. of appl. : .	Appl. numbers :

Function no. : The number of main function (application) for the entries.

Function Name : The function name, maximum 8 characters. Must be unique.

No. of Appl. : The number of applications in the function (max 6).

Appl. Numbers : Sequence of applications constituting the function, one entry for the number of applications given above. The main function number must be included.

Authorization Level : Terminal users authorization level (0 to 9) for using this function.

When the Entry Type is report (R), the function name and the authorization level in the lower window must be entered. The rest is automatically filled out by the system.

C H A P T E R 6
THE TRUUMAN REPORT SYSTEM

.....

- *THE TRUUMAN REPORT SYSTEM*
- *STATUS OF REPORTS*
- *HARD COPY OF REPORTS*
- *DELETION OF REPORTS*
- *START MANUAL REPORTS*
- *DEFINE REPORTS*
- *ORDERING REPORTS*
- *THE REPORT MONITOR*

6 THE TRUEMAN REPORT SYSTEM

The TRUEMAN report system contains options for defining, ordering, running, printing and deleting reports. It also has an option for examining the status of ordered reports. The TRUEMAN report menu should be placed under a user that only the TRUE operator has access to. The following menu is displayed when you give the command TRUEMAN-REPORT.

```
***  T R U E M A N  R E P O R T  M E N U  ***

1:  Status                      4:  Start Manual Reports
2:  Hard Copy                   5:  Define Reports
3:  Deletion                    6:  Exit.

Your choice: .
=====
```

Who can order
reports ?

Reports are ordered from individual user terminals running under TRUEMAN User Systems.

Reports may be ordered for periodical or once only execution. After the first order of a periodical report has been executed, the report system will automatically store a new order for the next running date. This is calculated by the system depending on the given period at the first order (e.g., daily, weekly, monthly).

A report can be defined to start automatically or manually. A report that is ordered to start automatically will be run automatically according to its start date and time. When starting a manual report, the Start Manual Reports option should be used.

Defining reports must be done from the operator's terminal.

Error messages

Error messages in the various functions are self-explanatory.

----->>>>>

6.1 STATUS OF REPORTS

This function is used to examine the status of the individual ordered, active and run(ning) reports under the TRUEMAN report system. The following picture (here with examples) appears on the screen:

TRUE Module Name :						
Reportstatus (W/A/O/E/'CR'=all) : .						
Report- name	List- serialno	Report- type	Ordered by	Run date	Report- status	Set for start
.....
.....
.....
.....
.....
.....
.....

FIELD DESCRIPTION

COL.NO.	FIELD NAME	MEANING
	TRUE Module Name	Enter the name of the TRUE module you want to review report status from.
	Report status Legal values	Enter a letter depending on what you want to view. W : List all ordered (waiting) reports. A : List all reports with status ACTIVE. Normally, there will be only one report. O : List all reports with status OK. E : List all reports with status ERROR. CR : Lists all ordered reports. (See column no. 7 for Report Status)
1	Report name	Short name of the report.
2	List serial no.	Number identifying the result lists belonging to this report.
3	Report type	PERIOD. : Report is ordered for periodical running. Else : Report is ordered for running once.
4	Ordered by	Name of the terminal user who has ordered the report.

----->>>>

- 5 **Run date** The date on which the report is to be run.
- 6 **Report** WAITING : The report is ordered, but not run.
 ACTIVE : Report is running.
 OK : Report has been run and terminated
 normally.
 ERROR : Report has been run, but interrupted
 because of an error during runtime.
- 7 **Set for Start** Marked Y (Yes) by the system if the report is set
 to run but waiting in a queue to be executed.
- More {N/+/-}** N : terminate and return to the next level.
 + : turn to next page (if there are more than 10
 reports.)
 - : turn to the previous page.
- Page no.** Shows which page you are currently on.

6.2 HARD COPY OF REPORTS

This menu option produces a hard copy of the reports from the result lists. The function will send result lists to a printer.

If the result list is to be printed out on nonstandard listing paper, a message about the required form is written out on the computers error device when the list is ready for printing. The printing starts when the operator has executed the SINTRAN command START-PRINT (see Appendix B) on the console.

The following screen picture (here with examples) is displayed.

[illegible]

FIELD DESCRIPTION

COL.NO.	FIELD NAME	MEANING
	TRUE Module Name	Enter the name of the TRUE module that you want to print reports from.
	Is previously written to be included ?	<p>Y : The names of all result lists previously printed will be displayed on the screen and may be sent for printing once again.</p> <p>N : Only result lists which have not been printed out previously are included in the picture.</p> <p>When this field has been filled in, the system automatically fills in the first five columns of the table below. The cursor moves through all the fields in the upper columns, so that they can be filled by the operator.</p>

- >>>>>

- | | | |
|---|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Report name | Short name of the report. |
| 2 | Ordered by | Signature of the terminal user who has ordered the report. |
| 3 | List serial number | Identification of the result lists belonging to this report. |
| 4 | Form | Form type connected to this result list. |
| 5 | No. pages | The number of pages generated by the report in this result list. |
| 6 | Print [Y/N] | Indicate here whether the result list is to be sent to a printer or not.
Y : YES, send this result list to a printer
N : NO, the result list is not to be printed. |
| 7 | No. copies | Give the number of hard copies required of the result list. (Default value: The number given when the report was defined. (See section 6.5.) |
| 8 | Printer name | The name of the printer to which the result list is sent.
Default value: the printer declared in the terminal user's function "Ordering of Reports". (See section 6.6.) |
| | More [N/+/-] | N : terminate and return to the next level.
+ : turn to next page (if there are more than 10 reports.)
- : turn to the previous page. |
| | Page no. | Shows which page you are presently on. |

6.3 DELETION OF REPORTS

This menu option is used to delete report orders and corresponding result lists, after the report has been run and is no longer current. This is useful because of the limited capacity in the computer's external storage. It should, therefore, be used every time a report is generated. Normally this will be used for reports with status OK or ERROR. It may also be used in error situations to delete reports with status WAITING or ACTIVE, but in such cases the system supervisor should be contacted first.

The following picture appears on the screen:

TRUE Module Name :						
Report status : .						
Report- name	List- serialno	Run- date	Ordered by	Report- status	All printed	Delete (Y/N)?
.....
.....
.....
.....
.....
.....
.....
.....
.....

FIELD DESCRIPTION

COL.NO	FIELD NAME	MEANING
--------	------------	---------

TRUE Module Name	Enter the name of the TRUE module that you want to delete reports from.
---------------------	-------------------------------------------------------------------------

Report status	<p>Type of reports to be listed.</p> <p>W : Waiting, ordered reports.</p> <p>A : Active, presently running reports.</p> <p>Use this only if a report is blocked in this status after an error!</p> <p>O : O.K. Reports are run and terminated normally.</p> <p>E : Error. Reports that are run, but interrupted because of an error.</p> <p>↵ : Normal. Reports that are run and terminated normally.</p>
---------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

After you fill in this field, the system fills in the six first columns of the main field. The cursor moves to column no. 7 for further input.

----->>>>>

1	Report name	Abbreviation of the report's name.
2	List serial number	Number identifying the result lists belonging to the report.
3	Run date	The date the report was run or ordered to run.
4	Ordered by	Identification of the terminal user who has ordered the report.
5	Report status	Status of this report. WAITING : The report is waiting to run. ACTIVE : The report is presently executing (or has terminated abnormally in this state). OK : The report has been run and terminated normally. ERROR : The report has been run, but interrupted because of an error during runtime.
6	All printed?	The field shows if all the reports' result lists have previously been sent to a printer.
7	Delete {Y/N}?	Are the report and corresponding result lists to be deleted?
	More {N/+/-}?	N : terminate and return to the next level. + : turn to next page (if there are more than 10 reports). - : turn to the previous page.
	Page no.	Shows which page you are presently on.

6.4 START MANUAL REPORTS

The menu option is used to order reports that are to be started manually. The following picture appears on the screen (here with examples). The first 4 columns in the main field are filled in by the system, the last 3 are filled in by the operator.

TRUE Module Name :						
The following reports are ordered for manual start :						
Report-name	List-serialno	Report-type	Ordered by	Starting (Y/N)?	Start-time Date	Hour
.....
.....
.....
.....
.....
						Pageno.: ..

FIELD DESCRIPTION

COL.NO.	FIELD NAME	DESCRIPTION
	TRUE Module Name	Enter the name of the TRUE module that you want to start manual reports from.
1	Report Name	Short name of the report.
2	List Serial Number	The identification of the result lists belonging to the report.
3	Report Type	PERIOD. :The report is ordered for periodical execution. Else :The report is ordered to run once.
4	Ordered by	Signature of the terminal user who has ordered the report.
5	Starting (y/n)?	Is the report to be started? Y : The report is set for start. N : The report will not be started.
6	Start Date	The date the report is to be executed.
7	Hour	The hour of execution.
	More (N/+/-)?	N : terminate and return to the next level. + : turn to next page (if there are more than 10 reports.) - : turn to the previous page.
	Page no.	Shows which page you are presently on.

6.5 DEFINE REPORTS

All reports must be defined before they can be ordered in the TRUUMAN report system. The system must have a description of the individual reports. This is done only once for each report, normally by the system supervisor at the time of initial installation. This menu option defines the reports. The following picture appears on the screen:

REPORT-SYSTEM DEFINITION OF REPORTS

TRUE Module Name :

Report name :
.....

Can be ordered for automatic start ? : .

Can be ordered for periodic execution ? : .

Run-group : . Form types : Appl. number:

Number of files : . No. of copies:
.....

Parameter-definitions

No Text	Min char.	Max char.	Ctrl. code	Values Lowest valid	Highest valid
.....
.....
.....
.....
.....
.....

FIELD DESCRIPTION

COL.NO.	FIELD NAME	EXPLANATION
	TRUE Module Name	Enter the name of the TRUE module that you want to define reports for.
	Report-Name	The report's short and full name. The short name should be the same as the function name used when defining the menu entry for the report. (See section 5.9, maintenance of menus.)
	Can be Ordered for Automatic Start	The field shows whether the report can be ordered for automatic or manual start. Legal values are: Y : The report may be ordered for automatic start. N : The report may be ordered for manual start.

----->>>>>

Can be Ordered for Periodic Start	Define whether the report can be ordered for periodic start. Legal values are: Y : Can be ordered for periodic start. N : Cannot be ordered for periodic start.
Appl. Number	The application number must be given here. Valid numbers are: 2-10, 12-9999.
Run-Group	Individual programs are associated with specific run-groups. The run-group defines the order in which the reports are run. For reports ordered simultaneously, the lowest run-group is processed first. Legal values are: 1 - 9
No. of Files	This defines the number of output (result listings) files the report will create. Accepted values : 0 - 5
Forms	For each result listing, give the form type. Accepted values: determined by the installation.
No. of Copies	The number of copies of each result listing which are to be produced on the printer is given here (this is controlled by menu option Hard Copy).
1 No.	This field is filled in automatically.
2 Text	The text supplied here will be written out as the parameter name when the report is ordered.
3 Min. Chars.	Minimum number of characters (or symbols) which must be typed in when ordering reports.
4 Max. Chars.	Maximum number of characters (or symbols) which can be typed in as the parameter when the report is ordered.

----->>>>>

- 5 **Contr. Code** System control code given to determine how the parameter will be registered.
Accepted values:
1 : numeric single integer (0 - 4 digits)
2 : numeric double integer (0 - 9 digits)
3 : numeric characters (0 - 18 digits)
4 : date (YYMMDD) (6 digits)
5 : Year/week (4 digits)
6 : Year/Month (4 digits)
7 : date (DDMMYY) (6 digits)
10: alphabetic characters (0 - 18 chars)
11: alphanumeric chars. (0 - 18 chars)
12: code Y/N (1 char)
- NOTE: If the control code is given a minus sign, this will mean that the parameter will be of the same type and size as the parameter on the line above, but the value will be larger or the same. Additional control codes may be defined at each installation.
- 6 **Lowest Permitted** The lowest value permitted for the parameter should be given here.
- 7 **Highest Permitted** The highest value permitted for the parameter should be given here.
- <COMMAND>** The permitted commands can be entered in this field.
They are:
New/Remove/Display/Modify/Update/Terminate
- To get to the command field from another field in the picture, press the FUNC key followed by the HOME (↵) key.

6.6 ORDERING REPORTS

You can order reports from any user terminal running under TRUEMAN. Each TRUE module has a set of defined reports.

When a report has been selected, the following picture appears on the user terminal:

Report-name :			
Periodic ?	:	.	Period (D,W,M) : . Automat/manual?:.
Start-date	:	Printer-name :
Ordered by	:	on terminalno. : .. the at....
Listing-reference	:	
Name	Value	Name	Value
.....
.....
.....
.....
.....
.....

FIELD DESCRIPTION

FIELD NAME	DESCRIPTION
Report Name	The field is automatically filled in with the name of the chosen report. First comes the abbreviated name followed by the report's full name.
Periodic?	<p>The field is used to order reports for periodic running. If the report is ordered for periodic running, the report system automatically creates a new order for the report after each run.</p> <p>The period's length is given in the adjoining field. Accepted values are: Y : Order for periodic execution. N : One run ordering (this is default, and does not need to be entered).</p>

----->>>>

Automatic/ Manual	Define whether the report is to be run automatically or to be started later from the operator's terminal. A report can be ordered for automatic start only if it has been defined for this. (See section 6.5 Definition of reports.) Legal values are: A : Automatic startup. M : Must be started manually from the operator's terminal.
Start-Date	The date and time of the required runtime is given here if the report is defined for automatic start.
Period (D,W,M)	When the field Periodic? has been filled in as Y (Periodic), the period length for the running of the report must be given. Legal values are: D : Daily report (the report is run every day Monday through Friday). W : Weekly report (the report is run weekly, on the day for which the first time point was given). M : Monthly report (the report is run monthly on the date the first start time was given for). If the last day of the month was requested, the report will always be run on the last day of every month.
Printer-Name	Here the name of the printer is required to define where listing is to come out. For reports with manual startup, this can be defined when the report is print by the Hard Copy option. Automatic reports come out on the registered printer automatically. If nothing is written into the field, the listing must be printed with the help of the Hard Copy option.
Ordered by	This field is filled in automatically by the system with the user's name, after the order has been made.
On Terminal no.	These fields are automatically filled in by the system with the date and time when the order was made.
List Reference	This field is automatically filled in by the system when the order is made, with the associated identification for the listings.
Parameter Name	The field is automatically filled in by the system with the name for all parameters which must be supplied when the report is ordered.

----->>>>

Value The parameter values the report is required to run with are given here. The system will check that the supplied values are valid for the parameters. Checking is defined in the Definition of reports.

<COMMAND> The field where this program writes out the valid commands that the user may choose from.

Commands :

- N (New) : Registration of a new order.
- D (Display) : Look at previously registered order.
- R (Remove) : Remove a previously registered order.
- M (Modify) : Change fields in a previously registered order.
- U (Update) : Create registered or changed order.
- T (Terminate) : Exit from the function.

One may go to the command field from another field in the picture by pressing the FUNC key and then the HOME (^) key.

6.7 THE REPORT MONITOR

Each TRUE module in a CPU has its own report monitor. The report monitor runs as a batch process. It is automatically started by it's TRUE module and has as its function the job of running ordered reports. When the TRUE module terminates, it stops it's report monitor too.

end of chapter

.....

A P P E N D I X

.....

A P P E N D I X A
THE TRUE COMMANDS

MAIN MENU

- 1: SYSTEM START/STOP
- 2: SYSTEM CHECKPOINT/BACKUP/RESTART
- 3: SYSTEM STATUS CHANGES
- 4: COMMUNICATION STATUS/BROADCAST
- 5: READ STATUS
- 6: ACTIVATE/TERMINATE USER PROCESS
- 7: TIME FUNCTIONS
- 8: EXIT

SUBMENU .1.

SYSTEM START/STOP

- 11: START MODULES
- 12: INITIATE MODULES
- 13: HALT MODULES
- 14: CONTINUE MODULES
- 15: SHUTDOWN MODULES
- 16: ABEND MODULES
- 17: STOP MODULES

SUBMENU .2.

SYSTEM
CHECK/BACKUP/RESTAR

- 21: CHECKPOINT MODULES/DATABASES
- 22: SET MODULE/DATABASE CHECKPOINT INTERVAL
- 23: BACKUP MODULES/DATABASES
- 26: ROLLBACK MODULES
- 27: RECOVER MODULES

SUBMENU .3.

SYSTEM STATUS CHANG

- 31: RELEASE TRANSACTION TERMINALS
- 32: RESERVE TRANSACTION TERMINALS
- 33: UPDATE TIME AND CALENDAR
- 35: SET PROGRAM FILE AVAILABLE
- 36: SET PROGRAM FILE UNAVAILABLE
- 37: DELETE REENTRANT PROGRAM

SUBMENU .4.

COMMUNICATION
STATUS/BROADCAST

- 41: LIST MODULES
- 42: LIST COMMUNICATION STATUS
- 43: LIST REQUEST MESSAGE
- 44: LIST RESPONSE MESSAGE
- 45: EXCLUDE MODULE
- 46: INCLUDE MODULE
- 47: BROADCAST TO TRANSACTION TERMINALS

SUBMENU .5.

READ STATUS

- 51: READ MODULE STATUS
- 52: READ DATABASE STATUS
- 53: READ TRANSACTION TERMINAL STATUS
- 54: READ TRANSACTION BATCH PROCESS STATUS
- 55: READ PROGRAM FILE STATUS

SUBMENU .6.

ACTIVATE/TERMINATE
USER PROCESS

- 61: APPEND BATCH-JOB TO QUEUE
- 62: REMOVE BATCH-JOB FROM QUEUE
- 63: STOP BATCH-JOB
- 64: STOP TERMINAL
- 65: STOP PROGRAM

----->>>>

SUBMENU .7.

TIME FUNCTIONS

71: DISPLAY TIME AND DATA
72: SET BATCH JOB'S EXECUTION TIME
73: SET BATCH JOB'S TIME INTERVAL
74: RESET BATCH JOB'S EXECUTION TIME/INTERVAL
75: LIST TIME QUEUE
76: LIST INTERVALS

SUBMENU .8.

EXIT

81: LOGOUT
82: EXIT TO SINTRAN III
83: EXIT TO TRANSACTION MENU
84: EXIT TO TEST PROGRAM
85: PAUSE

A P P E N D I X B
G L O S S A R Y

.....

abend An abnormal ending of a program due to illegal operations or inappropriate requests of the operating system.

application program A program run under the control of TRUE to do the actual processing of a transaction.

backup A copy of the database, taken regularly and used to restore the database if it is destroyed.

batch processing The processing of data that has been collected over a period of time, to be processed later in a single run of the application program. In SINTRAN batch processing is done by the SINTRAN batch processor.

checkpoint A point in the machine run at which data is saved in case a restart is necessary later.

menu A picture on a display terminal showing which applications are available to the terminal user and allowing him to choose one of them.

recovery The process of restoring a database after a system failure by a rapid updating from a checkpoint or backup copy. The point-of-start after recovery is at the last transaction checkpoint. In transaction processing the term "recovery" often refers to the operation of a rollback and a reprocessing of the call logg.

----->>>>>

reentrant program

The facility of a program to be used by several users at the same time. Each user has his own data area, but only one copy of the program is needed.

rollback

The process of restoring the database to its state at a checkpoint. This is done by undoing the updating after the checkpoint. The point-of-start after rollback is at the last synchronized checkpoint.

SIBAS

The database management system (DBMS) to be used with TRUE.

system restart

The process of starting the TRUE system after a system failure. Restarting the system may require repairing the damage done to the database, restoring the database to a consistent state and restarting the transaction processing.

transaction

A transaction is a database operation that transforms a database from one consistent state to another consistent state. The consistency of the data is maintained both before and after a transaction, but not during the transaction. If a transaction is successful, a new consistent state of the database prevails. If a transaction is not successful, the old consistent state of the database is maintained. But, the effect of a transaction can only be changed by other transactions.

transaction processing system

An online computer system providing the facilities needed for the immediate access to a database, either to update the database or to retrieve information from it.

—end of glossary—

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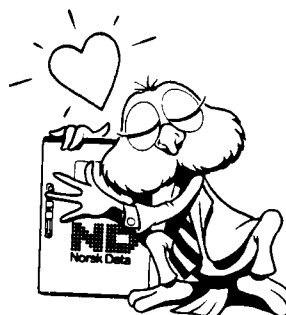


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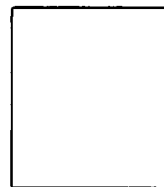
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