



# MOMo-Maint



## Monitoring and Operating Module MOMo-Maint

Graphical Network Monitoring for *ACCESSNET*®

Graphical user interfaces have become generally established in the world of computers. User friendly machines without complicated syntax, but flexible in their application: as of now these advantages are also available for the management of *ACCESSNET*® systems, thanks to MOMo-Maint. MOMo-Maint is an online maintenance tool for network admin-

istrators which has been developed by R&S BICK Mobilfunk. The status of the network can be controlled on screen. Status changes are detected immediately and accurately aimed measures can be taken and hence implemented very effectively.

From installation, via configuration, to operation MOMo-Maint presents itself in a simple and clear manner.

Even if you manage several networks MOMo-Maint will be suitable. Different configurations in different networks can be managed without a problem. However, despite the functional diversity, the cost stays within certain limits, partly because of the low demands MOMo-Maints makes on the hardware. Trunked radio to view, it's no longer a dream of the future.



ROHDE & SCHWARZ



## What is MOMo-Maint?

MOMo-Maint is a maintenance tool for *ACCESSNET*<sup>®</sup> trunked radio systems. It is optionally available as a combined hardware and software packet or as a software packet on its own.

One of the highlights of MOMo-Maint is the graphical user interface. The states and the status changes of the *ACCESSNET*<sup>®</sup> trunked radio system components are visualised in the network topology display.

Displayed are exchanges, radio base stations and gateways to public telephone networks and other communication systems as well as the line states. Status changes or even faults can be located at a glance. Service functions can be triggered using MOMo-Maint which means that sites need only be visited in particular situations. In brief, MOMo-Maint will help you to utilize your existing resources in the best possible way and thus to cut

costs. However, that is not all MOMo-Maint can do: optionally it will log all status changes and back up this data in daily export files. Longterm records can thus easily be achieved. Due to the standard ASCII file format this data can later be analysed using common spreadsheet programs. The results will help you to carry out a fast, and most of all, well aimed network optimisation.

The graphical user interface of MOMo-Maint makes only very few demands on the hardware. A 386 33MHz processor is the minimum requirement to work with MOMo-Maint at an acceptable speed for smaller network topologies.

## Getting Started

A good start is half the business and with MOMo-Maint getting started is not a problem.

Simple from the word go and this naturally also applies to the installation. All you need is a configured PC, a power supply, the installation disk and a serial link to the system.

The software is installed using an integrated installation routine setting up all the required directories and copying the software to your machine.

Simple but still flexible, that is the connection to *ACCESSNET*<sup>®</sup>. In order to cater for all needs several variants are possible. MOMo-Maint knows the following connection types to the system:

- direct connection
- connection via OMC (operating and maintenance computer)
- connection via modem lines
- connection via modem lines and OMC.

Using combinations of the various connection options will also allow distributed network management. To achieve this MOMo-Maint can be operated centrally on the OMC and simultaneously on site by the service engineer.

These options enable you to select the connection best suited to your needs.



Diagram: MOMo-Maint network screen on laptop computer



Diagram: MOMo-Maint in edit mode

## An Overview of the Functions

The basic task of MOMo-Maint is to display the current states of *ACCESS-NET*® components. The functions can be divided into two groups: Visualisation and maintenance functions.

The states of the following components are visualised:

- Exchanges
- Main processors and peripheral modules such as:
  - Alarm cards (In/Out)
  - Serial interface cards
  - Radio clock
  - Mass memories (floppy disk drive, hard disks, SRAM and memory card)

- Interface modules
  - KRA
  - LIA
  - PIA
  - PID (B+D channels)
  - PRI (B + control channel)
  - MTS
  - PBC
  - SCU (compressed voice channels)

- Radio base stations
  - Transceivers
- Additional components
  - Line access units
  - Maintenance gate
  - OMC
  - MOMo
  - External systems (mailbox, RSA or ONSys)
- Connecting lines.

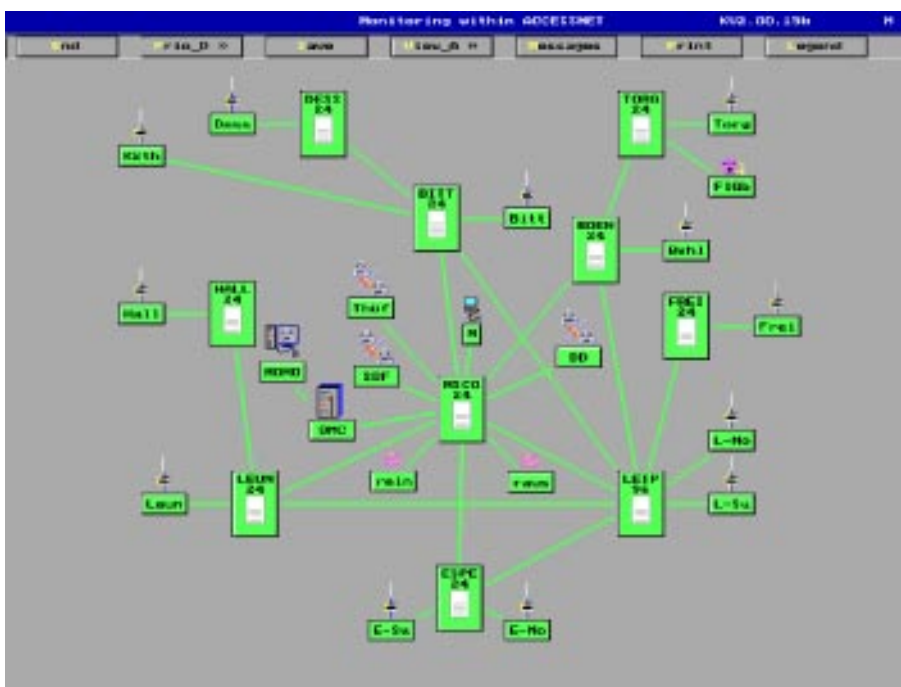


Diagram: MOMo-Maint network screen

In addition, MOMo-Maint visualises the operating modes of interface modules and connecting lines such as:

- Open channel
- Control channel
- Dynamic voice channel
- Subscriber download
- Registration upload.

The maintenance functions which can be triggered using MOMo-Maint comprise:

- Resetting the various operating modes of interface modules.
  - Open channel
  - Control channel
  - Dynamic voice channel
- Version queries for
  - OMC
  - Main processor
  - Network version
  - Subscriber data
  - DDI data
  - Firmware versions of interface modules
- Maintenance commands for interface modules
  - Disable
  - Enable
  - Reset
  - Selftest
  - Status query
- Maintenance functions for redundancy systems
- Memory query for mass memories
- Status query for gates
- Dispatch mode (aimed call setup)
- Open relay mode.

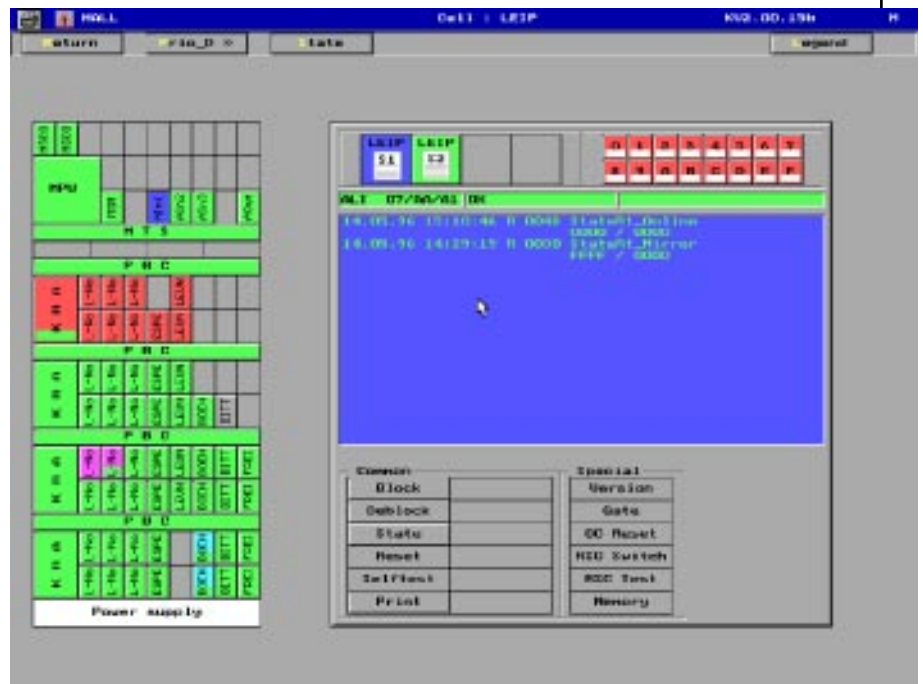


Diagram: MOMo-Maint component screen (view MMX-64)

## Visualisation

Clear and informative, that is how you will see the network screen of MOMo-Maint. However, when operating large networks there are limits to how much can be clearly displayed on a screen. Even large screens are incapable of displaying a nationwide *ACCESSNET*<sup>®</sup> network in full and still clearly.

In these cases you can switch between symbol and normal mode on the network screen of MOMo-Maint. If necessary radio cells can be hidden in order to limit the visualisation to exchanges only. If this is not enough the network display can be spread across up to 16 subscreens. Thus even large networks can be displayed.

Upon starting MOMo-Maint the network screen will be displayed. Double click on a symbol to see a detailed view as a component screen.

MOMo-Maint displays important messages such as alarm messages in the title bar of the display. This visualisation element ensures that the user is made aware of any alarm, regardless of which display he is viewing. Apart from visualising the alarm the name of the cell in which an alarm has occurred is also shown. Actions can therefore be taken quickly and more importantly accurately. This saves time and money. Apart from being visualised status messages can also be sent to a printer or printed to file. The output device is set by ticking the appropriate button in a dialog box displayed on the network screen.

The visualisation always shows the current status of the network. Using the printing option it is possible to create a timewise almost unlimited status report.



### The Maintenance Functions

MOMo-Maint's maintenance mode is password protected. In this mode additional buttons for maintenance functions are displayed on the screen. Service personnel can use these buttons to send maintenance commands to various *ACCESSNET*<sup>®</sup> components. As MOMo-Maint monitors the status of the network online the responses are immediately visible on the screen. With the help of the maintenance functions service engineers can respond even faster and thus even more effectively and this will save time and money.

### The Configuration

In order to work MOMo-Maint needs all data regarding the *ACCESSNET*<sup>®</sup> trunked radio system to be monitored. Instead of the laborious and time consuming task of entering the data using an editor the network structure file which is available for each *ACCESSNET*<sup>®</sup> system can be read in. It contains all data required by MOMo-Maint with the exception of the location data for the individual components with regard to their geographical position. These are entered on screen using the network editor.

### The Network Editor

Everyone has his/her own idea of what constitutes a clear display. MOMo-Maint therefore provides an user friendly and comfortable network editor. This editor is used to position the various symbols on the screen and to store this information. Individual symbols can be picked up and positioned anywhere on the screen. While they are being moved the existing connections are shown using the rubber band method which facilitates clear positioning. Once a configuration has been created it can be saved and reloaded or modified at a later stage. This function can be used to read in, modify and save various network data.

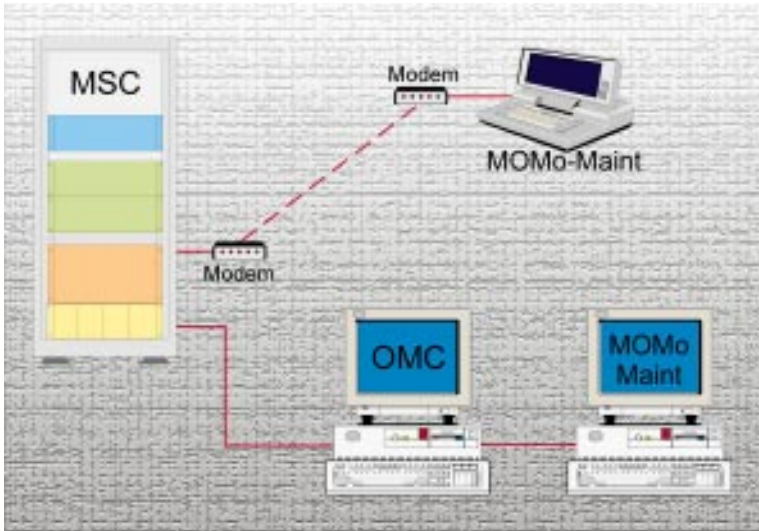


Diagram: MOMo-Maint connection options



#### Specification

Processor: ..... IBM compatible  
PC (min. 386/33)  
8 MB RAM  
256 kB Cache  
3.5" 1.44 MB Floppy Disk Drive  
500 MB Harddisk  
Keyboard, Mouse  
14" Monitor (colour monitor recommended)  
Dial-up Modem if required  
Printer  
DOS Operating System from Version 5

The processor specification depends on the size of the network to be managed. We are pleased to help.

#### Order Information

Name ..... Part No.  
MOM-401 - MOMo-MAINT (German) ..... 861.200.000.000  
MOM-401 - MOMo-MAINT (English) ..... 861.201.000.000  
per network for 1 - 2 users  
- graphical online network monitoring  
Service modem (various types) ..... upon request

...mobility for professionals



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