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1. About this manual

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Release: C/2005

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1.3. General

This manual describes the installation of MicroSCADA Pro Distribution Management System DMS 600 (later in this manual DMS 600) software. The DMS 600 *4.1 is
direct successor to DMS 600 *4.0 and Open++ Opera 3.3. Existing Open++ Opera installations can be upgraded directly to DMS 600 *4.1.

This document complies with the program version 4.1.

Additional information such as Release Notes can be found on the program distribution media.

1.4. Use of symbols

This publication includes warning, caution, and information where appropriate to point out safety related or other important information. It also includes tip to point out useful hints to the reader. The corresponding symbols should be interpreted as follows:

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Exclamation Mark]</td>
<td>Caution icon indicates important information or warning related to the concept discussed in the text. It might indicate the presence of a hazard, which could result in corruption of software or damage to equipment/property.</td>
</tr>
<tr>
<td>![Information]</td>
<td>Information icon alerts the reader to pertinent factors and conditions.</td>
</tr>
<tr>
<td>![Light Bulb]</td>
<td>Tip icon indicates advice on, for example, how to design your project or how to use a certain function.</td>
</tr>
</tbody>
</table>

Although warning hazards are related to personal injury, and caution hazards are associated with equipment or property damage, it should understood that operation of damaged equipment could, under certain operational conditions, result in degraded process performance leading to personal injury or death. Therefore, comply fully with all warnings and caution notices.

1.5. Document conventions

The following conventions are used for the presentation of material:

- The names of menus and menu items are boldfaced. For example, the **File** menu.
- The following convention is used for menu operations: `MenuName > MenuItem > CascadedMenuItem`. For example: select **File > Coloring > Topology by Feeders**.
- The **Start** menu name always refers to the **Start** menu on the Windows® Task Bar.
- System prompts/messages and user responses/input are shown in the Courier font. For example, if you enter a value out of range, the following message is displayed: **Entered value is not valid. The value must be 0 to 30.**
- The names of push and toggle buttons are boldfaced. For example, click **OK**.
- The words in names of screen elements (for example, the title in the title bar of a window, the label for a field of a dialog box) are initially capitalized.
Capital letters are used for the name of a keyboard key if it is labeled on the keyboard. For example, press the ENTER key.

Lowercase letters are used for the name of a keyboard key that is not labeled on the keyboard. For example, the space bar, comma key, and so on.

Press CTRL+C indicates that you must hold down the CTRL key while pressing the C key (to copy a selected object in this case).

Press ESC E C indicates that you press and release each key in sequence (to copy a selected object in this case).

The names of the directories and files (for example, Opera/Settings.exe) are initially capitalized and shown in the italic font.

The names of MS Access tables, queries and fields are capitalized (for example CODE field in INFOCODE table).

### 1.6. Terminology

The following is a list of terms associated with the DMS 600 that you should be familiar with.

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ActiveX</td>
<td>A set of technologies that enable software components to interact with one another in a networked environment, regardless of the language in which the components were created.</td>
</tr>
<tr>
<td>Application Program Interface; API</td>
<td>A set of routines that an applications program uses to request and carry out lower-level services performed by a computer operating system.</td>
</tr>
<tr>
<td>DMS 600 Network Editor; DMS 600 NE</td>
<td>The DMS 600 Network Editor (DMS 600 NE) is a program primarily used to model the distribution network onto the network database.</td>
</tr>
<tr>
<td>DMS 600 Server Application; DMS 600 SA</td>
<td>DMS 600 Server Application (DMS 600 SA) is used for data exchange between MicroSCADA and instances of DMS 600 WS.</td>
</tr>
<tr>
<td>DMS 600 Workstation; DMS 600 WS</td>
<td>DMS 600 Workstation (DMS 600 WS) is a program for the operative personnel of electric companies to monitor and operate their medium and low voltage distribution networks.</td>
</tr>
<tr>
<td>Free data form</td>
<td>Free data forms are the way to define the layout and content of data forms.</td>
</tr>
<tr>
<td>Free database object</td>
<td>Free database objects are user defined object types, which can be added to the network database.</td>
</tr>
<tr>
<td>Generic form control</td>
<td>Generic Form Control is an ActiveX control, which can present data from a DAO database table, or query in a user defined layout. See also ActiveX and Data Access Objects.</td>
</tr>
</tbody>
</table>
### Hot stand by; HSB
A system to secure database connection with two servers, which are capable to continue service alone, if connection to the other is lost.

### Internet Protocol; IP
The messenger protocol of TCP/IP, is responsible for addressing and sending TCP packets over the network. IP provides a best-effort, connectionless delivery system that does not guarantee that packets arrive at their destination or that they are received in the sequence in which they were sent. See also Transmission Control Protocol.

### IP address
Internet address (for example 127.0.0.1)

### Local Area Network; LAN
A group of computers and other devices dispersed over a relatively limited area and connected by a communications link that enables any device to interact with any other device on the network. See also Wide Area Network.

### MicroSCADA monitor
MicroSCADA monitor enables interaction with the operator and the base system computer. The monitor may be of Visual SCIL or X-monitor type. MicroSCADA monitors are always connected to SYS 500 or SYS 600. MicroSCADA Monitor Pro is a new application that can show the new graphics of SYS 600.

### MicroSCADA OPC Server
The MicroSCADA OPC Data Access Server is an implementation of the interface specification OPC Data Access Custom Interface Standard, Version 2.05A, on the MicroSCADA system.

### Network database
Relational MS Access based network database of DMS 600 (Network.mdb).

### DMS 600 database
Dynamic MS Access based database of DMS 600, which contains for example the real time states of switches (Opera.mdb).

### OPC item
OPC item is index for MicroSCADA process object containing the whole path with an application number. OPC item has properties (process object attributes) like alarms and time stamps.

### Opera Interface Package
Opera Interface Package is a tool added to LIB 500 Application Library used to cross-connect MicroSCADA and DMS 600.

### Protocol
A set of semantic and syntactic rules that determine the behavior of functional units in archiving communication.

### SCIL API
MicroSCADA API for C programmers used to connect DMS 600 to MicroSCADA.

### Support System Interface; SSI
A standardized method of transferring data between the applications.

### Temporary network file
The file containing temporary network data (Tempnet.dat).
Transmission Control Protocol; TCP

A software protocol developed by the Department of Defense for communications between computers. This is a connection-based Internet protocol responsible for breaking data into packets, which the IP protocol sends over the network. This protocol provides a reliable, sequenced communication stream for network communication. See also Internet Protocol.

Transmission Control Protocol/Internet Protocol; TCP/IP

This is a set of networking protocols that provide communications across interconnected networks made up of computers with diverse hardware architectures and various operating systems. TCP/IP includes standards for how computers communicate and conventions for connecting networks and routing traffic. See also Transmission Control Protocol and Internet Protocol.

Wide Area Network; WAN

A communications network that connects geographically separated areas. See also Local Area Network.

### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>API</td>
<td>Application Program Interface.</td>
</tr>
<tr>
<td>DMS</td>
<td>Distribution Management System</td>
</tr>
<tr>
<td>DMS 600</td>
<td>MicroSCADA Pro Distribution Management System DMS 600</td>
</tr>
<tr>
<td>dxf</td>
<td>Vector file format</td>
</tr>
<tr>
<td>HSB</td>
<td>Hot stand by</td>
</tr>
<tr>
<td>IP</td>
<td>Internet Protocol</td>
</tr>
<tr>
<td>LAN</td>
<td>Local Area Network.</td>
</tr>
<tr>
<td>LIB 500</td>
<td>MicroSCADA Application Library</td>
</tr>
<tr>
<td>LIB 510</td>
<td>MicroSCADA MV Application Library</td>
</tr>
<tr>
<td>LV</td>
<td>Low voltage</td>
</tr>
<tr>
<td>MicroSCADA</td>
<td>MicroSCADA SYS 500 version 8.4.2, 8.4.3, 8.4.4 or 8.4.5 or MicroSCADA Pro Control System SYS 600 version 9.x</td>
</tr>
<tr>
<td>MV</td>
<td>Medium voltage</td>
</tr>
<tr>
<td>SCADA</td>
<td>Supervisory Control And Data Acquisition</td>
</tr>
<tr>
<td>SSI</td>
<td>Support System Interface</td>
</tr>
<tr>
<td>SYS 600</td>
<td>MicroSCADA Pro Control System SYS 600 version 9.x</td>
</tr>
<tr>
<td>TCP</td>
<td>Transmission Control Protocol</td>
</tr>
<tr>
<td>TCP/IP</td>
<td>Transmission Control Protocol/Internet Protocol</td>
</tr>
<tr>
<td>WAN</td>
<td>Wide Area Network</td>
</tr>
</tbody>
</table>
1.8. Related documents

Table 1.8-1 MicroSCADA Pro DMS 600 related documents

<table>
<thead>
<tr>
<th>Name of the manual</th>
<th>MRS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>MicroSCADA Pro DMS 600 *4.1</td>
<td>1MRS755272</td>
</tr>
<tr>
<td>System Overview</td>
<td></td>
</tr>
<tr>
<td>MicroSCADA Pro DMS 600 *4.1</td>
<td>1MRS755273</td>
</tr>
<tr>
<td>Integration with SYS 600</td>
<td></td>
</tr>
<tr>
<td>MicroSCADA Pro DMS 600 *4.1</td>
<td>1MRS755274</td>
</tr>
<tr>
<td>Operation Manual</td>
<td></td>
</tr>
<tr>
<td>MicroSCADA Pro DMS 600 *4.1</td>
<td>1MRS755276</td>
</tr>
<tr>
<td>System Administration</td>
<td></td>
</tr>
<tr>
<td>MicroSCADA Pro SYS 600 *9.1</td>
<td>1MRS7555409</td>
</tr>
<tr>
<td>Installation and Administration manual</td>
<td></td>
</tr>
</tbody>
</table>

1.9. Document revisions

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision number</th>
<th>Date</th>
<th>History</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
<td>30.6.2004</td>
<td>Document created. This document replaces all versions of document 1MRS 751466-MUM.</td>
</tr>
<tr>
<td>C</td>
<td>4.1</td>
<td>28.2.2005</td>
<td>Changes for software revision 4.1.</td>
</tr>
</tbody>
</table>
2. Requirements for installation

2.1. System requirements

The minimum software and hardware requirements for the DMS 600 system are listed in the System Overview.

2.2. Other requirements

The operation system software required is Microsoft® Windows 2000 with service pack 3 or later, or MS Windows XP with service pack 1 or later, or Windows Server™ 2003.

MS Access 2000 or MS Access 2002 relational database software (for more information about MS Access versions, see “MS Access” on page 43) should be installed on the fileserver computer. MS Access 95 or 97 can still be used in the case of upgrading existing installation to DMS 600 version 4.1. In this case, the databases remain in their existing format. DMS 600 can be installed with MicroSCADA, without SCADA or with other SCADA systems using OPC Data Access interface, but if DMS 600 will be used with MicroSCADA, SYS 500 version 8.4.2, 8.4.3, 8.4.4, 8.4.5 with LIB 500 Application Library and LIB 510 MV Application Library version 4.0.2, 4.0.3 or 4.0.4 or MicroSCADA Pro Control System SYS 600 version 9.x with LIB 500 Application Library and LIB 510 MV Application Library version 4.1 must be installed on the server computer before the installation of DMS 600. MicroSCADA workstation and the Hummingbird™ Exceed version 5.1.3 or later may be used on the workstation computers.

In order to install the full DMS 600 system, the MS Windows user needs to have Administrator privilege. This is needed to update the MS Windows registry settings.

It is advised to define a shared directory in the fileserver computer before the installation of the DMS 600 primary or secondary fileserver.

If more than one operating system is used and the disk is shared, DMS 600 must be installed on the disk of the operating system.

In order to be able to use a resource that is not administered by the local computer (for example a Hot stand by-server), the “MicroSCADA” user name must be defined on the remote computer that administers that resource. The password of the MicroSCADA user has to be the same on the different computers as well.

It is required to shutdown the MicroSCADA application before installing DMS 600 Server (including the MicroSCADA interface) to a computer having an existing DMS 600 Server installation. The reason is that the processes and other components cannot be updated if they are in use. (In Hot stand by systems the installations must be done to both computers changing the hot MicroSCADA server between installations.)
Licenses

DMS 600 is initialized using a license file (for more information about DMS 600 licenses, see System Administration). License contains two files, License Information Customer.txt and License.ini, which are delivered by ABB. The file license.ini is needed during the full installation of the DMS 600. Updating of license information after installation is made via different setting program (for more information about updating of license information, see “License updating” on page 31). License Information Customer.txt file contains the license information in text form.

DMS 600 can be installed with a special demonstration license. To achieve full functioning license can be added later on.
3. Installation of DMS 600

3.1. Alternative methods to install DMS 600 to server computers

Drive names are just examples. Programs in one computer can also be installed in the same drive.

Alternatives 3, 4 and 5 describe how redundant server system (i.e. Hot stand by system) can be installed.

Alternative 1:
- C:\Scada
- D:\OperaSA
- D:\File Server1

Alternative 2:
- C:\Scada
- D:\OperaSA

Alternative 3 (HSB):
- C:\Scada
- D:\OperaSA
- D:\File Server1

Alternative 4 (HSB):
- C:\Scada
- D:\OperaSA

Alternative 5 (HSB):
- C:\Scada
- D:\OperaSA

Figure 3.1-1 Alternative methods to install DMS 600

The Setup program installs DMS 600 on the computer. It copies the required files to the selected destination folder and constructs a correct directory tree. It adds the required menu items and adjusts the required MS Windows registry settings.
The Setup program creates the MS Windows environmental variable OPERA. This variable stores the working directory of the DMS 600 programs. Additionally, the working directory is added to the MS Windows Path variable. This enables the start-up of DMS 600 Workstation (DMS 600 WS) and DMS 600 Network Editor (DMS 600 NE) from the MicroSCADA window when MicroSCADA SYS 500 version 8.4.2, 8.4.3, 8.4.4 or 8.4.5 is used with DMS.

When terminal services are used alternative 1 or in case of HSB alternative 3 are normally used. In this case no workstation installations are required since Windows Remote Desktop connection or terminal server client is used in workstation. However, there can be standard client installations used in parallel with terminal server clients. For advanced automatic operations like automatic fault restoration and creating HTML documents, usage of separate workstation is recommended.

3.2. Demo package

The demo package is included in the installation package. The Setup program includes the MicroSCADA application (directory name Aplopera), which is modified from the LIB 500 demo application. This program includes all definitions for the MicroSCADA - DMS 600 interface. The easiest way to get DMS 600 to properly communicate with MicroSCADA is to install this application. Of course, it is possible to use any application available by making all the required actions. In this case, see more detailed description in the Integration with SYS 600. Demo installation also installs demo package for DMS 600 (for example databases and background maps). Demo installation package is designed to be as easy as possible for a single computer. If the demo program is to be used in several workstation systems, use settings program (Settings.exe) to define fileserver names (for more information about defining fileserver names, see "Server settings" on page 30).

3.3. Starting Setup program

Even if the Setup program retains the original databases, it is still recommended that you make backup copies of the original databases, which contain valuable data, before starting the Setup program.

Before reinstalling or upgrading this product, make sure that all DMS 600 programs are quitted. When updating a DMS 600 fileserver or a DMS 600 Server Application (DMS 600 SA) all workstation connections should be ended, i.e. all DMS 600 programs and MS Access should be quitted. It is also strongly recommended to exit all Windows programs before running the Setup program.

In Windows 2000 Server, Windows XP and Windows Server 2003 install DMS 600 in the following way:

1. Open Control Panel.
2. Click Add/Remove Programs. Add/Remove Programs dialog opens.
3. Select Add new programs.
4. Click CD or Flobby button. An installation wizard opens.

5. Install DMS 600 according to the wizard.

In Windows 2000, the Control Panel can also be used for installing. For those operating systems, it is also possible to install the DMS 600 by double-clicking the file Setup.exe or running the Setup.exe program from the RUN menu by typing the file name and path.

3.4. Installation wizard

This Wizard will guide you through the installation of DMS 600. The dialogs to be opened during the installation mode depend on the selections in the beginning of the installation. If some dialog is not opened, go to the next. Click the Next > to continue with the installation. The < Back enables the return to previous dialog boxes. Click Cancel if you want to cancel the installation. After Cancel has been clicked, the Setup program displays a dialog box. This dialog box asks the user to confirm the cancel command by clicking Exit Setup. Resume continues the installation.

Help button in some dialogs opens a help window for different options or fields.

3.4.1. Welcome to DMS 600 Setup program

A Welcome dialog box is displayed with a short description of the product that will be installed.

3.4.2. Open++ Opera information

If a previous version of DMS 600 (Open++ Opera) has been installed on the computer, a dialog box with product information about the installed version will open.

Click Next > to overwrite the existing version.

3.4.3. Open++ OperaSA information

If a previous version of DMS 600 SA (Open++ OperaSA) has been installed on the computer, a dialog box with program information about the installed version will open.

Click Next > to overwrite the existing version.

3.4.4. Open++ OperaNE information

If a previous version of DMS 600 NE (Open++ OperaNE) has been installed on the computer, a dialog box with program information about the installed version will open.

Click Next > to overwrite the existing version.
3.4.5. **Open++ OperaWS information**

If a previous version of DMS 600 WS (Open++ OperaWS) has been installed on the computer, a dialog box with program information about the installed version will open.

Click **Next >** to overwrite the existing version.

3.4.6. **MS - Opera interface information**

If a previous version of MicroSCADA Opera Interface Package has been installed on the computer, a dialog box with interface information about the installed version will open.

Click **Next >** to overwrite the existing version.

3.4.7. **Read me file**

A **Read Me File** dialog box shows the last-minute notes and comments of DMS 600.

3.4.8. **Destination location**

**Destination Folder** contains the path of the working directory (for example C:\Opera). It is recommended that this directory is shared or it is located under the shared directory. This information is saved in the OPERA environmental variable of MS Windows.

The share permissions of the directory can be viewed in Windows Explorer. Select the directory and click the right mouse button. Select the Sharing from the popup menu. Click **Shared as** option and next click **Permissions** button. Check that **Full Control** is selected in the **Type of access** field.

When setting up a new installation, it is possible to change the destination directory by clicking **Browse**. During updating a previous installation, **Browse** is unavailable. The default installation directory is then taken from the previous installation.

3.4.9. **Select components**

A **Select Components** dialog box gives the following information:

- All DMS 600 installation options.
- Disk space required for each option and total required disk space.
- Disk space remaining on the selected destination drive.

**Table 3.4-1 Check box options in Select Components dialog**

<table>
<thead>
<tr>
<th>Option:</th>
<th>Functioning:</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Server 1 – Primary</td>
<td>If checked, DMS 600 is to be installed on a computer, which will act as a primary fileserver.</td>
</tr>
</tbody>
</table>
### File Server 2 – Secondary
If checked, DMS 600 is to be installed on a computer, which will act as a secondary fileserver.

### Server Application
If checked, DMS 600 SA is to be installed on a computer, which will run DMS 600 SA (MicroSCADA base system computer).

### Workstation
If checked, DMS 600 WS is to be installed on a computer using the services of fileservers and DMS 600 SA.

### Network Editor
If checked, DMS 600 NE is to be installed on a computer using the services of fileservers and DMS 600 SA.

### Pdf Documents
If checked, DMS 600 document files (pdf files) are to be installed on a computer. Online help files are installed during DMS 600 File Server installation.

### Data Access Objects (DAO 3.5)
If checked, the data access objects 3.5 are to be installed on a computer. DAO is needed for database handling.

### Free Form Control (DAO 3.6)
If checked, free form control is to be installed on a computer. Free Form Control is an ActiveX control, which can present data from a DAO database table, or query in a user defined layout. Free Form Control is needed in implementation of a free database, free data forms and so forth.

### Demo
When the check box is selected, many other check boxes are selected automatically and a demo program is to be installed on a computer.

---

File Server 1 and File Server 2 cannot be selected at the same time.

After installing the DMS 600 Server Application, the installation must be completed as described in the Integration with SYS 600. In case of updating from Open++ Opera version 3.1 the action program starting DMS 600 NE should also be updated to achieve support for Terminal Services.

If your working directory is not in C disk or Aplopera application is not used as application number 1, you have to go to DMS Grouping Tool, update the working directory and press the **Apply** button (for more information about DMS Grouping Tool, see Integration with SYS 600).
3.4.10. Define servers

It is recommended that fileserver directories are shared directories and given in the format `\Computer_name\<Shared directory name>`. Fileservers directories can be defined as “not shared” (e.g. `C:\Opera`) but note that the correct use of DMS 600 WS and DMS 600 NE requires that the both disk resources of DMS 600 fileservers can be mapped from the workstation.

In Windows 2000 and Windows XP, local network shares cannot be used if the PC is disconnected from network. To use the system without network connection for demo purposes the file server directory must be defined e.g. as `C:\Opera`.

Table 3.4-2 Boxes in the Define Servers dialog

<table>
<thead>
<tr>
<th>Option:</th>
<th>Functioning:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary File Server</td>
<td>Contains the address of the primary DMS 600 fileserver, which is the same as the destination folder. When updating a previous installation, the default value is obtained from the settings of the earlier installation.</td>
</tr>
<tr>
<td>Primary Server Application</td>
<td>Contains the computer name where the primary DMS 600 SA is run. When updating a previous installation, the default value is obtained from the settings of the earlier installation. The DMS 600 SA can be located in a different computer than the fileserver (See “Alternative methods to install DMS 600” on page 15).</td>
</tr>
<tr>
<td>Computername</td>
<td></td>
</tr>
<tr>
<td>Redundant Server System (HSB)</td>
<td>Can be checked to copy all necessary files to the second server during installation. In the single server system, there is only one DMS 600 fileserver and one DMS 600 SA, but the redundant server system consists of two DMS 600 fileservers and two DMS 600 SA. Requires Hot Stand by sublicense.</td>
</tr>
<tr>
<td>exists</td>
<td></td>
</tr>
<tr>
<td>Secondary File Server</td>
<td>Contains the address of the secondary DMS 600 fileserver. When updating a previous installation, the default value is obtained from the settings of the earlier installation.</td>
</tr>
<tr>
<td>Secondary Server Application</td>
<td>Contains the computer name where the secondary DMS 600 SA is run. When updating a previous installation, the default value is obtained from the settings of the earlier installation. The DMS 600 SA can be located in a different computer than the fileserver.</td>
</tr>
<tr>
<td>Computername</td>
<td></td>
</tr>
</tbody>
</table>
The DMS 600 NE uses only one static network database also in a redundant server system. Therefore, the primary fileserver path of each DMS 600 WS and DMS 600 NE must be addressed to the primary server not to the secondary one.

Setup program will check if the file server directories exist. The program also checks the permissions of the directories. If the directory of the file server is not found or the permissions are not sufficient, the message dialog is displayed. In that case, use the Back button to return to the previous dialog. Define the file server name again or share the directory manually. The sharing of the primary file server directory can also be done with the Do sharing button, which is displayed in message dialog if primary file server directory does not exist. If the Redundant Server System (HSB) exists check box is selected, the existence and the permissions of the secondary file server directory is checked. Leaving this check box empty will bypass the checking process of secondary server. The check box is automatically selected if the File Server 2 - Secondary check box is selected in Select Components dialog.

You can change DMS 600 file servers and Server Application computer names after installation by the setting up program (for more information about servers, see "Server settings" on page 30).

### 3.4.11. Select install options

In a Select install options dialogs different install options are displayed. Options depend on previously selected items and whether previous installation is found.

#### Table 3.4-3 Options in Select install options dialog

<table>
<thead>
<tr>
<th>Option:</th>
<th>Selections:</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose network editing application</td>
<td>Network Editor or Integra</td>
<td>Open++ Integra is a network information system program requiring an own license.</td>
</tr>
<tr>
<td>Network presentation</td>
<td>Geographical or schematic</td>
<td>Option is displayed only if the previous installation is not found.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The geographic presentation of a network is mostly used for electric utilities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schematic presentation can be used to represent, for example, the electrical network of an industrial company.</td>
</tr>
<tr>
<td>Replace font file Opera.ttf</td>
<td>Yes or no</td>
<td>Option is displayed only, if the font file has been installed previously.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If you choose Yes, all possible modifications will disappear.</td>
</tr>
</tbody>
</table>
### Patch current databases

| Yes or no | Option is displayed only if the previous installation is found. If you choose **Yes**, your current databases Network.mdb and Opera.mdb are patched during installation according to model databases. This will take some time. If you choose **No**, you should patch databases after installation using AccPatch program in order DMS 600 to work properly. |

It is recommended that the user does not modify the Opera.ttf file. If the user would like to have own symbols, it is recommended that a new True Type Font file be created to be used in the program. For more information, see System Administration. New model databases Network.mdb and Opera.mdb with a new structure are installed into `Data\Dbmodels` subdirectory of the working directory. In a new installation, model databases are also installed into data directory.

#### 3.4.12. HTML Help support

DMS 600 HTML help requires MS Internet Explorer™ 3.02 or later to be installed (version 4 or later is recommended) in a destination computer.

If Internet Explorer 3.02 or later is not installed on the destination computer, **Install setup files for Internet Explorer?** dialog is displayed. Select **Install setup files for IE** button and use **Browse** button to determine the destination folder for Internet Explorer setup files. Run **Setup.exe** for Internet Explorer after DMS 600 setup.

The update means updating of help support part of Internet Explorer, not updating of the whole Internet Explorer.

#### 3.4.13. Configuring demo installation for OPC interface

MicroSCADA Pro Control System SYS 600 version 9.x and MicroSCADA SYS 500 version 8.4.5 has a new communication feature based on OPC Data Access. All the process objects of MicroSCADA are exposed by the server as OPC items and all the attributes of process objects as OPC item properties. OPC Data Access interface of DMS 600 can be used parallel with SCIL API in some communication tasks.

During the demo installation, the MicroSCADA configuration file `Sys_bascon.com` appears to an editor. The installation program defines application to Aplopera and application number to 1, because the predefined OPC item names have the application number 1 as one part of the name.
If any other application number as 1 will be used, OPC configuration has to make again.

3.4.14. Can not find MicroSCADA installation

If MicroSCADA installation is not found, user is asked whether Server Application shortcut is put to startup menu.

If MicroSCADA version number is not found in registry, user is asked for version number.

3.4.15. Select license

The selections in the dialog depend on the existing of the License.ini file. The alternatives are:

- **Install demo license** to install a demo license.
- **I have a new "License.ini" file**, select the folder by the **Browse** button and press Next button to install the new license from the selected folder. The selected folder must contain the new License.ini file delivered by ABB.
- **I want to use the file "License.ini" already installed on my computer** and press Next button to make no changes to the existing license information.

3.4.16. Select Start Menu group

The Setup program adds DMS 600 items to the selected Start Menu group.

3.4.17. Backup replaced files

The Setup program can create backup copies of all files replaced during the installation. Select the directory where the replaced files will be copied using **Backup File Destination Directory**. It is possible to change the destination directory by clicking **Browse**.

If a DMS 600 fileserver has been installed previously in the same working directory, the existing setting files and databases are always copied to the backup files during installation (the choice in the **Backup Replaced Files** dialog box has no effect on this function).

**Table 3.4-4 File names for backup files**

<table>
<thead>
<tr>
<th>File</th>
<th>Backup copies to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opera.prm</td>
<td>Opera&lt;installation_time&gt;.prm</td>
</tr>
<tr>
<td>Data\Common.prm</td>
<td>Data\Common&lt;installation_time&gt;.prm</td>
</tr>
<tr>
<td>Data\Opera.mdb</td>
<td>Data\Opera_&lt;installation_time&gt;.mdb</td>
</tr>
<tr>
<td>Data\Network.mdb</td>
<td>Data\Network_&lt;installation_time&gt;.mdb</td>
</tr>
<tr>
<td>Data\Genlang.mdb</td>
<td>Data\Genlang_&lt;installation_time&gt;.mdb</td>
</tr>
</tbody>
</table>
The names of the backup files are for example Opera_1999-08-23_15-15-18.mdb,

### 3.4.18. Start installation

The file-copying portion of the installation will start when all selections have been
made and Start has been clicked in the Start Installation dialog box.

The Installing dialog box shows the progress of the installation with a percentage
value and a graphics bar. The text label above the graphic bar shows the files that are
being copied at that moment. Clicking the Cancel will open the exit setup dialog box
with the option of stopping the copying before it is finished. In this case, the files that
have already been copied must be deleted manually.

If the warning dialog about bad image concerning Ole2.dll file is displayed
during installation just press OK. The warning is generated outside the DMS
600 Setup program.

### 3.4.19. Installation complete

A successful installation or upgrade ends with the information dialog box. Click
Finish to complete the installation.

Open++ programs require at least version 5.81 of Comctl32.dll. This is checked after
Open++ programs are successfully installed. If older version of Comctl32.dll is found
in destination computer, message is displayed in dialog and Microsoft installer
program 50comupd.exe will be run when Finish is clicked.

When the Setup program finishes, programs menu will consists of the following
(depending on the selection in the beginning of installation):

- Release Notes.
- Settings
- Load Curve
- Server Application
- Network Editor (or Integra)
- Workstation

### 3.4.20. Binary database update

After installation of DMS 600, the DMS 600 NE/Integra is recommended to start first,
since DMS 600 NE/Integra updates the binary network file if needed. The binary
database is updated in DMS 600 NE/Integra by answering Yes to question "Read
network from database?" or by selecting the File > Update Network Database
command and answering Yes to the question. Network.dat is needed to start DMS 600 SA and DMS 600 WS. If DMS 600 SA or DMS 600 WS is started first and Network.dat is incompatible, the text "Binary database (Network.dat) must be updated" will be shown and the program quits.

If a previous version of DMS 600 (Open++ Opera version 3.2 or older) has been installed on the computer, updating of Network.dat may take a long time. Updating process can be speeded up, but this is only recommended for advanced users! If you hesitate at any point, let DMS 600 NE/Integra do the updating as described above.

Instructions to speed up updating process (for advanced users only!):

1. Before starting any DMS 600 programs use MS Access to open empty Network.mdb model database that is installed in subdirectory \Data\Dbmodels.
2. Open Network.mdb database that contains network information.
3. Open table LV_SECTION in design mode in both databases. Using model table as an example create field LV_SECTION_ID. Set data type to AutoNumber. Save changes. This generates id numbers automatically.
4. Open table LV_SECTION in design mode again. Set data type of LV_SECTION_ID to Number and set field properties as in model database. Save changes.
5. Open table MV_SECTION in design mode in both databases. Using model table as an example create field MV_SECTION_ID. Set data type to AutoNumber. Save changes. This generates id numbers automatically.
6. Open table MV_SECTION in design mode again. Set data type of MV_SECTION_ID to Number and set field properties as in model database. Save changes.
7. Open tables LV_SECTION, MV_SECTION and SECTIONNUMBER. Copy the highest number in field LV_SECTION_ID in table LV_SECTION to the field LV_SECTION_ID in table SECTIONNUMBER. Copy the highest number in field MV_SECTION_ID in table MV_SECTION to the field MV_SECTION_ID in table SECTIONNUMBER. Save changes and close databases.
8. Open DMS 600 NE/Integra and update binary network file by answering Yes to question "Read network from database?" or by selecting the File > Update Network Database command and answering Yes to the question. This should take less time now since MV/LV section id numbers are already generated.

### 3.4.21. Username and password

Username and password are required for successful login in DMS 600 programs. After installation use username “ADMIN” and password “Admin” to log in DMS 600 programs. For more information about user management, see System Administration.

Just after installation the password of the username "ADMIN" must be changed to prevent unauthorized access to the system.
4. Setting up DMS 600

4.1. General about setting up

The separate program (*Settings.exe*) for setting up DMS 600 after installation is provided. The program can be found in the MS Windows *Start* menu (by default in "MicroSCADA Pro DMS 600" group) under title *Settings*. The program can be used to set up:

- General settings (e.g. optional functions inside the licenses).
- Map settings.
- Server settings.
- License updating.

Running of the *Settings.exe* program opens the DMS 600 *Settings* dialog box. You can select one check box or all check boxes at a time.

Remember to restart DMS 600 application(s) after you have changed settings.

4.2. General settings

**DMS 600 / General Settings** dialog box contains check boxes for activating and deactivating optional functions. For example during project execution functions can be disabled before preparations like server connections are ready. Most of the items are dependent on optional licenses. License dependencies are explained in table below. You can select all check boxes freely but the function is in use only if the appropriate license exists.

*Table 4.2-1 Boxes of the General Settings dialog*

<table>
<thead>
<tr>
<th>Check box:</th>
<th>Meaning:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documents</td>
<td>Selected when document archive properties are to be used in DMS 600. Requires Extended Data Management license.</td>
</tr>
<tr>
<td>Free Database Objects</td>
<td>Selected if the free database objects are to be used in DMS 600. The free database object functions also require the <em>Generic Form Control</em> check box to be selected in the <em>Select Components</em> dialog box during installation (for more information about installation, see &quot;Select components&quot; on page 18). Requires Extended Data Management license.</td>
</tr>
<tr>
<td>Free Form</td>
<td>Selected if the free data forms are to be used in DMS 600 NE. The free data form functions also require the <em>Generic Form Control</em> check box to be selected in the <em>Select Components</em> dialog box during installation (for more information about installation, see &quot;Select components&quot; on page 18). Requires Extended Data Management license.</td>
</tr>
<tr>
<td>Feature</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Free Form for WS</td>
<td>Selected if the free data forms are to be used in DMS 600 WS. Requires Extended Data Management license.</td>
</tr>
<tr>
<td>Queries</td>
<td>Selected if the database analysis is to be used in the system. Requires Extended Data Management license.</td>
</tr>
<tr>
<td>Estimation</td>
<td>Selected if the load estimation is to be used in the system. Requires Network Analysis license.</td>
</tr>
<tr>
<td>Use Velander factors</td>
<td>Velander factors or load curves are used in calculation of peak power values. Requires Network Analysis license.</td>
</tr>
<tr>
<td>Use load curves</td>
<td></td>
</tr>
<tr>
<td>Field Crew</td>
<td>Selected if the field crew management is to be used in DMS 600 WS. Requires General extensions sublicense.</td>
</tr>
<tr>
<td>Temporary Network Data</td>
<td>Selected if the temporary network data management is to be used in DMS 600. Requires General extensions sublicense.</td>
</tr>
<tr>
<td>Customer Information</td>
<td>Selected if the customer data is to be used. Requires General extensions sublicense.</td>
</tr>
<tr>
<td>Only One Instance in WS</td>
<td>Prevents starting several DMS 600 WS programs to one workstation. Requires General extensions sublicense.</td>
</tr>
<tr>
<td>SCIL API Interface</td>
<td>Selected if SCIL API interface is in use between DMS 600 and MicroSCADA.</td>
</tr>
<tr>
<td>OPC Interface</td>
<td>Selected if OPC Data Access interface is in use between DMS 600 and SCADA.</td>
</tr>
<tr>
<td>Use SCADA Graphics</td>
<td>Selected if MicroSCADA monitor is used.</td>
</tr>
</tbody>
</table>
4.3. Background map parameters

The **Map Settings** dialog box is a tool to set background map parameters of DMS 600.

The program does not check the accuracy of the information entered except for the minimum and maximum values of co-ordinates. The user, therefore, is responsible for the accuracy of the information entered. Erroneous information may result in the incorrect operation of a DMS 600 program.

**Table 4.3-1 Boxes of the Background Map Parameters dialog**

<table>
<thead>
<tr>
<th>Field or check box:</th>
<th>Meaning:</th>
</tr>
</thead>
<tbody>
<tr>
<td>xmin_default</td>
<td>The boxes contain the minimum and maximum default values of the x- and y-coordinates of the display in meters. The program checks that the values are within the accepted range ±1999999. In industrial applications, these values are much smaller (i.e. about 1000 = 1 km). When updating a previous installation or setting system parameters, the default value is obtained from the corners of a created network or adjusted maps.</td>
</tr>
<tr>
<td>xmax_default</td>
<td></td>
</tr>
<tr>
<td>ymin_default</td>
<td></td>
</tr>
<tr>
<td>ymax_default</td>
<td></td>
</tr>
<tr>
<td>Enable manual check of DXF-conversion coordinates</td>
<td>Defines if the DXF-conversion program asks the user for the values to be added to the x- and y coordinates at the beginning of the DXF conversion in DMS 600 NE.</td>
</tr>
</tbody>
</table>
### 4.4. Server settings

**Server Settings** dialog box is a tool to set server settings for DMS 600 and MicroSCADA SCIL API connection.

The DMS 600 files server and DMS 600 SA computername fields are described in "Define servers" on page 20. The secondary server and computer names are used if the Hot stand by sublicense exists. If the secondary fields are defined to be empty, the redundant server system is not used even if the Hot stand by sublicense exists.

<table>
<thead>
<tr>
<th>X_scale_factor (DXF-conversion)</th>
<th>The boxes contain the factors, by which the x- and y-coordinates of a DXF-file are multiplied during DXF-conversion in DMS 600 NE. The unit of the coordinate of the converted map must be 1 meter. The conversion is made using the scale factor. The value of scale factor is found by dividing the unit of coordinate of the original map material with 1 meter. For example, if the x-coordinate of the original DXF-map is 1 millimeter, the X_scale_factor must be 0.001. The value of x_scale_factor should be $\geq 0$ and the value of y_scale_factor should be $\neq 0$.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y_scale_factor (DXF-conversion)</td>
<td></td>
</tr>
<tr>
<td>x_add_in_DXF_conversion (m)</td>
<td>The boxes contain the default values for the parameters, which are added to the x- and y-coordinates at the beginning of the DXF conversion in DMS 600 NE if the Enable manual check of DXF-conversion coordinates check box is selected. The values are given in meters. The user can change the values after prompting for the parameters during conversion. For example, if the x_add_in_DXF_conversion parameter is set to 100000 the X-coordinates of the original DXF map will be moved 100000 meters left. When updating a previous installation, or setting system parameters, the default value is obtained from the settings of the earlier installation.</td>
</tr>
<tr>
<td>y_add_in_DXF_conversion (m)</td>
<td></td>
</tr>
</tbody>
</table>
It is recommended that fileserver directories are shared directories and given in the format `\Computer_name\<Shared directory name>`. Fileserver directories can be defined as “not shared” (e.g. `C:\Opera`) but note that the correct use of DMS 600 WS and DMS 600 NE requires that the both disk resources of DMS 600 file servers can be mapped from the workstation.

In Windows 2000 and Windows XP, local network shares cannot be used if the PC is disconnected from network. To use the system without network connection for demo purposes the file server directory must be defined e.g. as `C:\Opera`.

Server Settings program will check if the directories of the file servers exist. The program also checks the permissions of the directories. If the directory of the file server is not found or the permissions are not sufficient, the message dialog is displayed. Share the directory manually or define the file server name again. If the Secondary File Server field is left empty, the checking process of secondary server is bypassed.

MicroSCADA SCIL API connection addresses can also be changed with this dialog. The fields are described in ”Setting up DMS 600 SA” on page 31. These fields are used if the SCADA connection sublicense exists.

### 4.5. License updating

Use **License Updating** to install or update DMS 600 license information after the program installation.

The selections in the dialog depend on the existing of the `License.ini` file. The alternatives are:

- **Install demo license** to install a demo license.
- **I have a new "License.ini" file**, select the folder by the **Browse** button and press **Next** button to install the new license from the selected folder. The selected folder must contain the new license.ini file delivered by ABB.
- **I want to use the file "License.ini" already installed on my computer** and press **Next** button to make no changes to the existing license information.

If there is no license installed, the starting of DMS 600 generates the 'No License' error message.

### 4.6. Setting up DMS 600 SA interfaces

#### 4.6.1. Setting up SCIL API interface

After DMS 600 SA start up, DMS 600 SA specific Support System Interface settings can be changed in the following way:
1. Click **Settings > SCIL API Parameters** command. The **Settings** dialog opens.
2. Define the settings of the following table.

### Table 4.6-1 Support System Interface settings

<table>
<thead>
<tr>
<th>Box</th>
<th>Function</th>
<th>Notes</th>
</tr>
</thead>
</table>
| Username                               | Username for the Support System Interface                                 | 1...20 characters
|                                        |                                                                          | Default: ABB                                                         |
| Password                               | Password for the Support System Interface                                 | 1...20 characters
|                                        |                                                                          | Default: Opera                                                      |
| IP-address (Primary MicroSCADA)        | IP-address of the primary MicroSCADA (normal state hot)                   | Default: 127.0.0.1
|                                        |                                                                          | Used only if the SCADA Connection sublicense is included.            |
| TCP-port (Primary MicroSCADA)          | TCP-port of the primary MicroSCADA (normal state hot)                     | Default: 1333
|                                        |                                                                          | Used only if the SCADA Connection sublicense is included.            |
| IP-address (Secondary MicroSCADA)      | IP-address of the secondary MicroSCADA (normal state warm)               | Default: 127.0.0.1
|                                        |                                                                          | Used only if the SCADA Connection sublicense is included.            |
| TCP-port (Secondary MicroSCADA)        | TCP-port of the secondary MicroSCADA (normal state warm)                 | Default: 1333
|                                        |                                                                          | Used only if the SCADA Connection sublicense is included.            |
| Data transfer intensity level          | Defines DMS 600 SA frequency of operation and its internal waiting times |                                                                      |

IP-address “127.0.0.1” is an address, which means the same computer. Because MicroSCADA base system is always running on the same computer it is not needed and not possible to change the address from default value.

Analog username, password, IP-address and TCP-port settings are defined in DMS Grouping Tool (for more information about DMS Grouping Tool, see Integration with SYS 600).

Updating connections to MicroSCADA server computers is made via different program (for more information about updating MicroSCADA connection, see "Server settings” on page 30).
4.6.2. Setting up OPC interface

MicroSCADA Pro Control System SYS 600 version 9.x and MicroSCADA SYS 500 version 8.4.5 has a new communication feature based on OPC Data Access, which can be used parallel with SCIL API interface.

After DMS 600 SA start up, DMS 600 SA specific OPC Data Access interface settings can be changed in the following way:

1. Click Settings > OPC Parameters command. The Settings dialog opens.
2. Define the settings of the following table.

Table 4.6-2  OPC interface settings

<table>
<thead>
<tr>
<th>Box</th>
<th>Function</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data transfer intensity level</td>
<td>Defines functionality of OPC interface.</td>
<td>1…5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default: 3 = most delays and waiting times are 1000 ms</td>
</tr>
<tr>
<td>Position indication updateinterval</td>
<td>Defines how often all OPC items of the position indication group are updated (s).</td>
<td></td>
</tr>
<tr>
<td>Measurement indication updateinterval</td>
<td>Defines how often all OPC items of the measurement indication group are updated (s).</td>
<td></td>
</tr>
<tr>
<td>Alarm indication updateinterval</td>
<td>Defines how often all OPC items of the alarm indication group are updated (s).</td>
<td></td>
</tr>
<tr>
<td>Burst timeout</td>
<td>If amount of new events from OPC Server are so high that DMS 600 SA cannot handle them all during given Burst timeout, DMS 600 SA will enter burst situation state.</td>
<td>Burst situation state means that all data values are updated only to memory and display, not into database.</td>
</tr>
</tbody>
</table>
5. Hot stand by support (HSB)

5.1. Installing hot stand by support (HSB) afterwards

If primary server has been used before installation of the secondary server, databases and files are no empties. The secondary server installation installs empty databases and empty files to the secondary server. The data inserted using the primary server has to be copied to secondary server.

Install the secondary server of HSB system afterwards in the following order:

1. The installation needs Hot Stand by sublicense. If you do not have license, contact vendor.
2. Install secondary server by checking the File Server 2 – Secondary check box during installation (for more information about installation, see "Select components” on page 18).
3. Copy manually Opera.mdb, Common.prm, Genlang.mdb and License.ini (including HSB license) from Data directory of primary server to Data directory of secondary server.
4. Copy manually the maps from Map directory of primary server to Map directory in secondary server.
5. Use Settings tool (Settings.exe) to update server settings in every workstation (for more information about settings, see "Server settings” on page 30).

DMS 600 WS and DMS 600 SA can be used with primary or secondary server. DMS 600 WS and DMS 600 SA update Opera.mdb in both servers. When server is reconnected, DMS 600 SA or DMS 600 WS notices this and update data automatically.

DMS 600 NE/Integra can only be used when primary server is connected. Network.mdb is only at primary file server i.e. network editing and some administrative tasks can be done only when primary server is connected.
6. Uninstallation of DMS 600

6.1. General about uninstallation

The Uninstallation Program (Unwise.exe) uninstalls DMS 600 from the computer. The success of uninstallation process depends on in how many parts the installation process has been done. The fewer parts there are, the better uninstallation process. After executing the uninstallation program it may be necessary to remove the rest installed parts manually (for more information about checking, see "Manual checking" on page 39.

6.2. Starting Uninstallation Program

In Windows 2000 Server, Windows XP and Windows Server 2003 uninstall DMS 600 in the following way:

1. Open Control Panel.
2. Click Add/Remove Programs. Add/Remove Programs dialog opens.
3. Select Change or remove programs.
4. Select DMS 600 *4.1.
5. Click Change/Remove button. An uninstallation wizard opens.
6. Uninstall DMS 600 according to the wizard.

In Windows 2000, the Control Panel can also be used for uninstalling. For those operating systems, it is also possible to uninstall the DMS 600 by double-clicking the file Unwise.exe, which is located in installation destination folder (for more information see “Destination location” on page 18), or by running the Unwise.exe program from the RUN menu by typing the file name and path.

6.3. Uninstallation wizard

This Wizard will guide you through the uninstallation of DMS 600. The dialogs to be opened during uninstallation depend on the selections in the beginning of the uninstallation. If some dialog is not opened, go to the next. Click Next > to continue with the uninstallation. < Back enables the return to previous dialog boxes. Click Cancel if you want to exit uninstallation. After Cancel has been clicked, the Uninstallation Program displays a dialog box to confirm the exit.

6.3.1. Select uninstall method

A Select Uninstall Method dialog box is displayed for the selection of the uninstallation method.
Select the method to be used in the uninstallation process. An **Automatic** uninstallation removes the default uninstall options. The **Custom** selection enables the selection of the files to be removed. **Repair** option performs reinstall i.e. re-edits the registry, re-edits or recreates .INI files, reinstalls all files, and re-self-registers files.

### 6.3.2. Select private files to remove

The **Select Private Files to Remove** dialog box is opened if the customized uninstallation method has been selected. Select the files or click **Select All** to select all listed files to be removed. **Select None** selects none of the listed files to be removed.

### 6.3.3. Select system files to remove

The **Select System Files to Remove** dialog box is opened next if the customized uninstallation method has been selected. Select the files or click **Select All** to select all listed files to be removed. **Select None** selects none of the listed files to be removed.

⚠️ Use caution when removing system files, they may be used by other programs.

### 6.3.4. Select directories to remove

The **Select Directories to Remove** dialog box is opened next if the customized uninstallation method has been selected. Select the directories or click **Select All** to select all listed directories and all files and directories within these directories to be removed. **Select None** selects none of the listed directories to be removed.

### 6.3.5. Select INI files to remove

The **Select INI Files to Remove** dialog box is opened next if the customized uninstallation method has been selected. Select the files or click **Select All** to select all listed files to be removed. **Select None** selects none of the listed files to be removed.

### 6.3.6. Select INI items to edit

The **Select INI Items to Edit** dialog box is opened next if the customized uninstallation method has been selected. Select the items or click **Select All** to select all listed items to be changed back. **Select None** selects none of the listed items to be changed back.

### 6.3.7. Select registry keys to remove

The **Select Registry Keys to Remove** dialog box is opened next if the customized uninstallation method has been selected. Select the registry keys or click **Select All** to select all listed registry keys to be removed. **Select None** selects none of the listed registry keys to be removed.
6.3.8. **Select sub-systems to remove**

The **Select Sub-Systems to Remove** dialog box is opened next if the customized uninstallation method has been selected. Select the sub-systems or click **Select All** to select all listed sub-systems to be removed. **Select None** selects none of the listed sub-systems to be removed.

6.3.9. **Perform uninstall**

The file-removing portion of the uninstallation will start when **Finish** has been clicked in the **Perform Uninstall** dialog box.

The dialog box then shows the progress of the uninstallation with a graphics bar. The text label above the graphic bar shows the files that are being removed at that moment. Clicking **Cancel** will open the dialog box with the option of stopping the removing of files before it is finished.

![Information icon]

The restarting of the computer is recommended if the new installation of DMS 600 is to be performed after the uninstallation.

6.3.10. **Manual checking**

The complete uninstallation of DMS 600 assumes the following steps to be carried out by the Uninstallation program or manually:

- Deletion or renaming of the DMS 600 directories.
- Deletion or renaming of the DMS 600 registry settings. The registry settings can be changed from the RUN menu by typing `Regedit`. Check the following registry keys:
  - `HKEY_LOCAL_MACHINE\software\ABB\Opera\Packages\MS-OPERA INTF`
  - `HKEY_LOCAL_MACHINE\software\ABB\Opera\Packages\OPERANE`
  - `HKEY_LOCAL_MACHINE\software\ABB\Opera\Packages\OPERASA`
  - `HKEY_LOCAL_MACHINE\software\ABB\Opera\Packages\OPERAWS`
  - `HKEY_LOCAL_MACHINE\software\ABB\Products\Opera`  
- Deletion or renaming of OPERA environment system variable. The system variable can be changed by clicking the **System** icon of the **Control Panel**. Click the **Environment** tab and select the OPERA variable for deleting or renaming.
- Deletion of the OPERA variable from MS Windows Path variable. The Path variable can be changed by clicking the **System** icon of the **Control Panel**. Click the **Environment** tab and delete character string “%Opera%” from Path variable.
- Customization of the **Start** and **Programs** menus by editing `C:\WINNT\Profiles\All Users\Start Menu` or `C:\Documents and Settings\All Users\Start Menu\Programs`. 
7. The computer network

7.1. Backups of network database

Original network database is saved to the primary fileserver. Original network database is not replicated to secondary fileserver. The backups of network database must be assured by the system administrator.

7.2. Regional servers

DMS 600 can be optimized for slow network connections. This feature is useful if there is a slow Wide Area Network (WAN) connection instead of a LAN between central and district offices and terminal services are not used. Additional regional servers can be used to store network data locally to keep the start-up time of the programs reasonable. These regional servers can store the binary network file and online help information. The local workstations can use the data from the regional server. The regional servers must be switched on all the time or at least when network data update is done at central office. If these regional servers are specified in the system, DMS 600 NE also updates network data to these servers. For performance reasons updating of binary network file data should be done only in a central office where the network database server has been located.

Direct editing of Common.prm and Opera.prm files has to be made with special care.

EXAMPLE:

The additional servers are defined manually to the section [Additional_Servers] of the Common.prm file.

[Additional_Servers]
number=2
1=\\server1\opera\testdir1
2=\\server2\opera\testdir2

For each workstation using an additional server, the directory for the network data is defined manually to the [General] section of the Opera.prm file.

[General]
Server1_Netdata=\\server1\opera\testdir1

7.3. Terminal services

Normally DMS 600 is using client-server architecture, which means that e.g. DMS 600 WS applications are run using the client computer processor and memory. The network model is loaded to the main memory of the client workstation.
However, DMS 600 programs can be run in a terminal session using Windows 2000 Server or Windows Server 2003 (these include Terminal Services). This is advantageous e.g. in case of slow network connections or when using dial-up modems.

With MicroSCADA Pro SYS 600 new monitor type (MicroSCADA Monitor Pro) terminal services instead of Exceed are used to spread applications to workstations at least when the new graphics and tools are used. In this case also DMS 600 shall be run under terminal services so that the integration of user interfaces can work.

DMS 600 supports running several instances of DMS 600 WS in the same workstation computer. This applies to standard Windows 2000 and Windows Server 2003 workstations. In standard workstation only one DMS 600 NE is allowed but in terminal services each session can run one DMS 600 NE.

During installation, the DMS 600 should be installed as a common application for all users using Control Panel Add/Remove Programs.

The functionality in case of terminal services can be affected by the parameter Only One Instance in WS, which can be set with the setting program (for more information about setting up, see “General settings” on page 27).
8. **MS Access**

8.1. **General about MS Access**

MS Access relational database software may be required for the fileserver computer (or in both fileserver computers in the case of a Hot stand by (HSB) environment) to configure databases and troubleshoot. Other computers, i.e. instances of DMS 600 WS, do not need MS Access, because DMS 600 can use databases directly after proper installation with the Setup program.

In the case of new installation, MS Access 2000 is the required version. MS Access ® 95 or 97 can still be used in the case of upgrading existing installation to DMS 600 version 4.1. In this case, the databases remain in their existing format. However, it must be noticed that localization (language translation of the user interface strings) can be done only using Access 2000.

**Installation of Access 2000**

In the installation of Access 2000, the advanced wizards should be included to have the linked table manager installed.

**Installation of Access 95 or Access 97**

In the first dialog box of the MS Access Installation Program, you must select the **Custom installation** option. In the next dialog box, all components (also Advanced wizards in MS Access 97 or Development tools 2496 kb in MS Access 95) must be selected in order to install the Linked Table Manager needed in DMS 600.

The language of MS Access can be English or a localized version.
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