



Operating instructions BlueEdit-Config

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1 Introduction

Introduction

BlueEdit-Config is used to configure the software package BlueEditOPCServer. The software package BlueEditOPCServer is an OPC server in accordance with the OPC specification DA 3.0. This manual only describes the configuration of the BlueEditOPCServer software package and not the OPC specification.

To ensure trouble-free operation of BlueEditOPCServer - especially in remote environments -, it might be necessary to change the DCOM settings of the PC accordingly. For example: how the settings are changed for a PC with Windows XP (Service Pack 2), is briefly described in DCOM settings (☞ see page 67).

Should the functionality of BlueEditOPCServer ever become inadequate, additional OPC servers with extended possibilities will be available shortly.

Supplied by MSIndustrie software GmbH. As soon as available, corresponding information will be provided under <http://www.msindustrie.de>

1.1 Installation

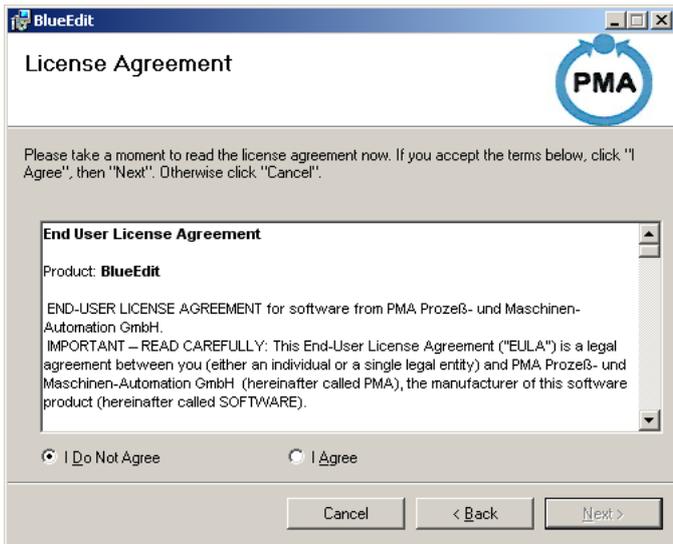
Installation

The program is installed together with the BlueEditOPCServer package. As the program is not protected by a serial number, it can be copied onto several PCs if required. Although the program itself does not require a serial number, it is activated by means of the program BlueEdit-Config. Activation of both programs is done via the menu item 'Help' in the sub-menu 'Licensing'.

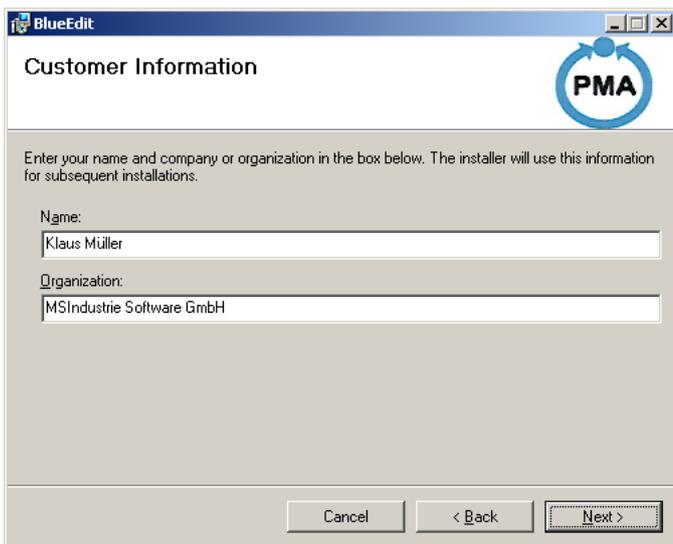
Program activation (see page 9)

Normally, the program comes on a CD, but it can also be downloaded via the Internet. If the software has been downloaded, everything is packed into the 'Setup.exe' file. On the CD, the program consists of several files, whereby 'Setup.exe' must be started manually. The 'Setup.exe' program can be found in the folder BlueEditOPCServer-Setup\English (for the English version of the software) or BlueEditOPCServer-Setup\German (for the German version of the software). As soon as 'Setup.exe' has been started automatically or manually, several initializations are carried out first. To begin with, several files are temporarily copied to the PC, which will be removed at the end of the installation. When initialization has been completed, the following display appears on the screen:



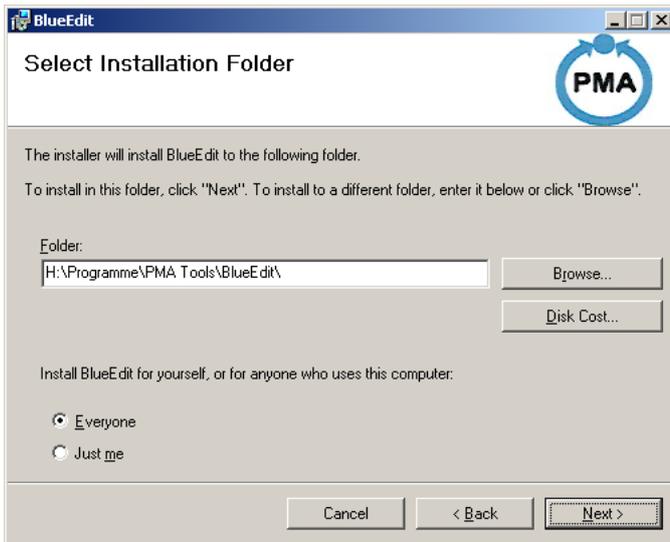


The End User License Agreement (EULA) shown here should be read carefully. A copy of the License Agreement is also included in the Appendix of this operating manual (page 49). After reading and accepting the License Agreement, click the 'Continue' button to call the next display.

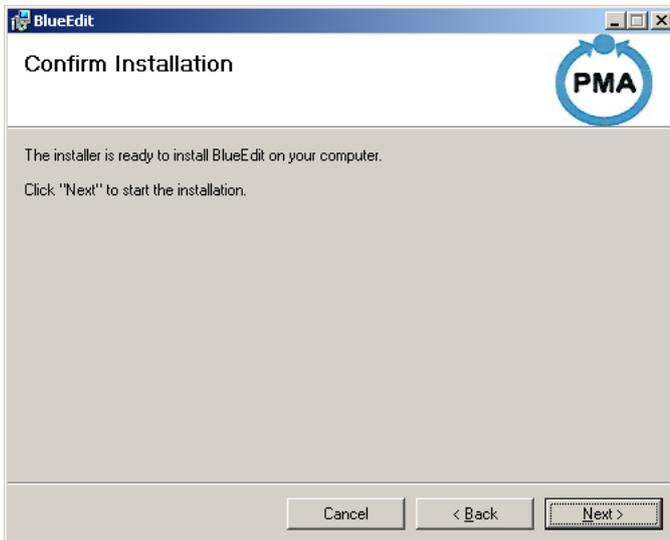


Enter the user name (Name and Company) and the 16-digit serial number in this template. If no serial number is available, and the BlueEditOPCServer is only intended to be used as a demo version, 0000000000000000 (16 zeros) can be entered as serial number.

When all the valid entries have been made and the 'Continue' button has been clicked, the installation path can be determined:



Naturally, if you do not want to use the default path, you can define a different path by clicking the 'Change' button. Click the 'Continue' button to proceed to the next display:



The software is now ready to be installed. The display shows a summary of all the important installation information. Should you want to make a change, simply click the 'Back' button. After clicking the 'Complete' button, all the temporary files are removed, which completes the installation.

1.2 System requirements

System requirements

The software runs under Windows 2000 and XP. As it has not been tested under Windows NT, 95, 98, and ME, MSIndustrie software GmbH provides no support for these operating systems. Apart from the correct operating system, it is also important that .NET Framework (Version 1.1 upwards) has been installed. Apart from the above, at least the following hardware platform is recommended:

- PC (Pentium IV \geq 2 GHz)
- \geq 1024 Mbyte RAM
- \geq 40 Gbyte hard disk
- CD or DVD drive
- Optionally a CD or DVD burner for data backup
- VGA card and monitor (resolution 1024 x 768 pixels and 256 colours or better)
- Serial interface(s) (if RS 232, then also a converter to RS 422)
- Profibus card(s) if Profibus devices are to be connected
- Ethernet port

1.3 Supported devices and protocols

Supported devices and protocols

BlueEdit-Config supports the software configuration for the following equipment groups and types:

1. Controllers and indicators from PMA GmbH, Kassel (ISO 1745 protocol)

Controllers: KS 92, KS 94, KS 98, KS 98-1

2. Devices with ModBus RTU interface

BluePort controllers from PMA GmbH Kassel

(e.g. KS 90-1 programmer)

3. Devices with ModBus On TCP/IP interface

KS 108 easy

1.4 General operating instructions

General operating instructions

When working with the configuration program, the following hints should be observed, as they simplify program use. Usually, the program displays several windows.

The program has a menu bar for calling the most important functions. Below the menu bar there is a toolbar. If the mouse pointer is positioned over one of the toolbar icons, a short tool text is displayed, which describes the icon's function. Clicking the left mouse key executes the function.

Below the toolbar is the program display that is divided into several sections. Every section has a title bar describing the relevant function. Wherever necessary, every section has an own context menu that is displayed as a popup when the right mouse key is clicked in the relevant section.

For this, position the mouse pointer in the corresponding window and click the right mouse key. As the configuration program does not save the changes automatically, this should be done manually after a few changes have been made. This enables possible errors to be detected and corrected at an early stage.

In general, the program can be operated via the toolbar icons. However, some functions are only available in a context menu. Context menus are called by positioning the mouse pointer in a table, line of a table, or on a graphical element, and clicking the right mouse key.

Configuration Designer toolbar

With a new (empty) Project, the Configuration Designer displays the following toolbar:



When an existing Project is called, the toolbar might have the following appearance:



The individual icons have the following functions:

-  Starts a new Project.
-  Opens an existing Project
-  Deletes an existing Project
-  Saves all changes made in a Project
-  Copies the selected device or the selected communication protocol (incl. all associated devices) into the internal clipboard.
-  Inserts the device(s) from the clipboard into the configuration.
-  Deletes the selected device or the selected communication protocol (incl. all associated devices) from the configuration.
-  Calls the configuration of the graphic display for the analog outputs.
-  Calls the configuration of the graphic display for the digital outputs.
-  Hides/displays the toolbox icon.

 Display of product information.

Toolbar with inactive Configuration Designer

If the Configuration Designer is not active, only the following icons are displayed:



The left-hand icon has the following function:

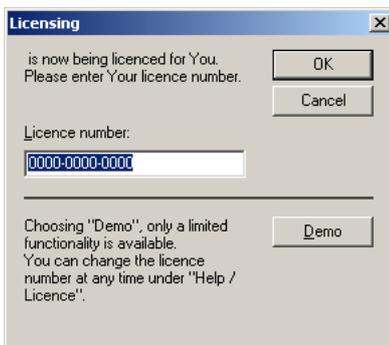
 Calls the Configuration Designer.

2 Software license

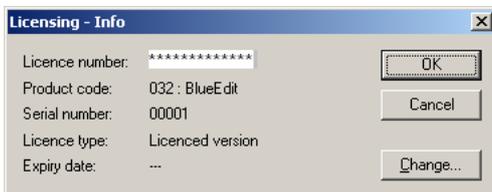
Licensing

The BlueEdit-Config program itself does not need to be licensed or activated. However, to obtain the full functionality of BlueEdit, you need a license number. This number can be entered either in BlueEdit or in BlueEdit-Config. Proceed as follows to enter the license number:

1. Select 'License info' in the menu item 'Help'.
2. The following dialog box appears in which you can enter the license number (assuming that no license number has yet been entered):



3. After entering a valid license number, the following window appears. The entered license number is shown in the white field.



2.1 Demo version

Demo version

Instead of a valid license number, the software can be used as a demo version. However, the demo version is not able to communicate with the devices in BlueEdit.

License number with limited validity period

License numbers are also available for BlueEdit, which are only valid for a period of max. 3 months. These license numbers permit BlueEdit to communicate with real devices.

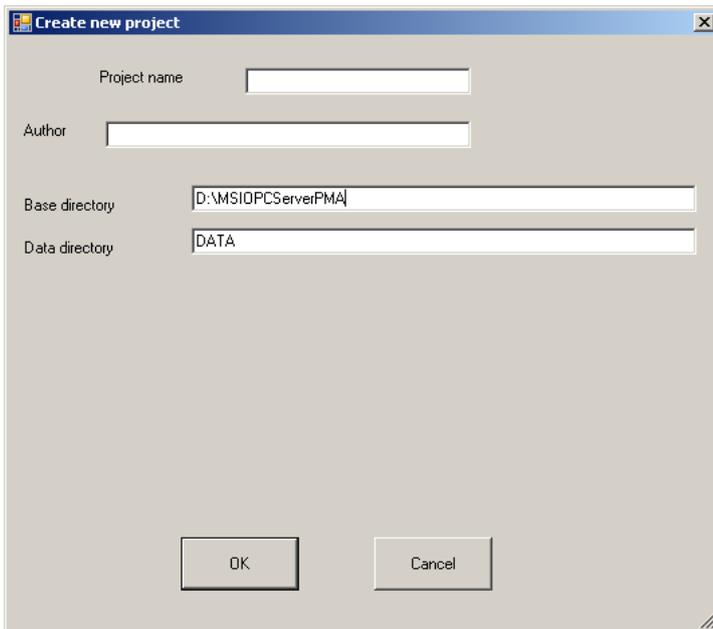
3 Configuration

Configuration

The following Chapters describe the configuration procedure in detail. Although certain parts have already been mentioned above under 'Getting started', some of them will be repeated here.

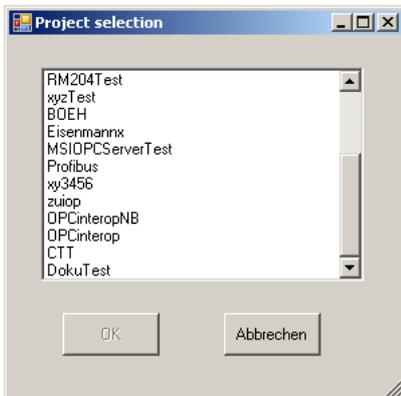
It is possible to configure either the currently active Project, which is named in the status bar (bottom line of BlueEdit-Config), a new Project or an existing Project.

A new Project can be created by clicking the icon  in the program's toolbar, which opens the following template for new Projects:



Communication protocols and devices can now be added to the Project.

If an existing Project - but not the currently active one - is to be configured, click the icon  in the program's toolbar, which opens the following template for all available Projects:



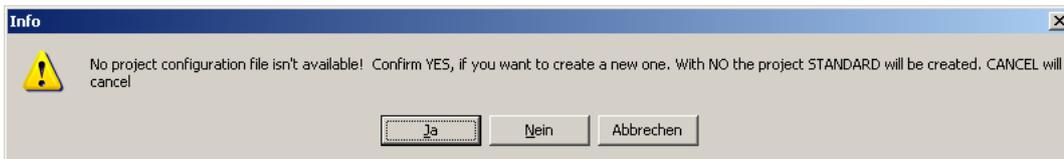
Select the required Project and click the OK button. The Project can now be configured. If the Project already contains a configuration, it will be displayed graphically in the Designer or as a table in the Explorer. The existing configuration can be changed and expanded by means of additional communication protocols and devices.

3.1 Getting started

Getting started

Before you can start generating recipes with BlueEdit, several basic settings must be made.

- Opening the BlueEdit Configurator. You can find the configuration program via the Windows 'Start' button under <Start><Programs><PMATools><BlueEdit><BlueEdit-Config>. When the program is started the first time, the following dialog appears:



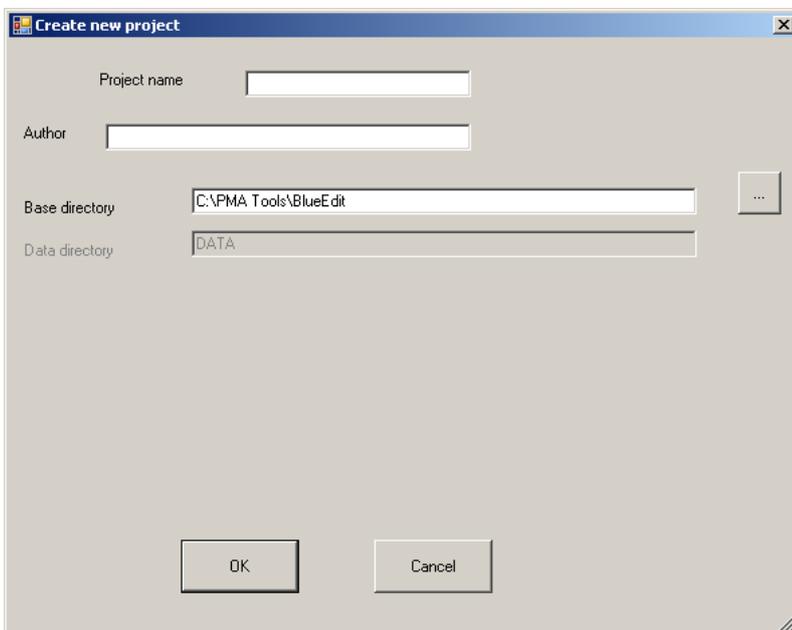
- After confirmation with 'Yes', you can enter a Project name. Also enter an author and a basic directory.

Note:

Adding further Projects or opening existing Projects is done via <File><New Project> or <File><Open Project>

Calling Help via the menu

Should you require online help, simply click on 'Help' >"Contents"...



Use the above template to enter the required Project name, the Author (compiler), and the basic directory.

The default setting for the basic directory is the same directory in which BlueEdit-Config has been installed. If you wish that BlueEdit will also be able to read the data from other directories at a later time, a corresponding basic directory can be

specified whenever required.

3.1.1 Configuration Programmer

Configuring a Project

First, you must create a Project. Of course, you can also use the Project that was created when the Configurator was started. Normally, this is the Project named 'Standard', which must always be created, as it contains several standard settings after the initial installation. In particular, this involves the settings for the analog and digital outputs for BlueEdit.

However, if you wish to create a different Project, either click on the icon  or select the menu item <File> <New Project>. This opens a template in which the corresponding entries must be made.

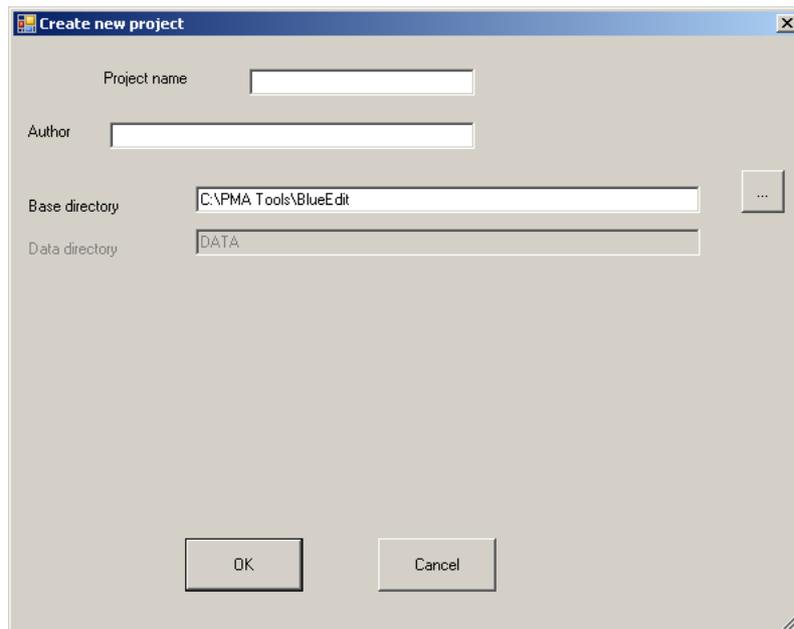


Fig.: Creating a Project

After clicking 'OK', an empty configuration window (full-screen) is opened. The name of the active Project is shown in the status line at the bottom of the screen.

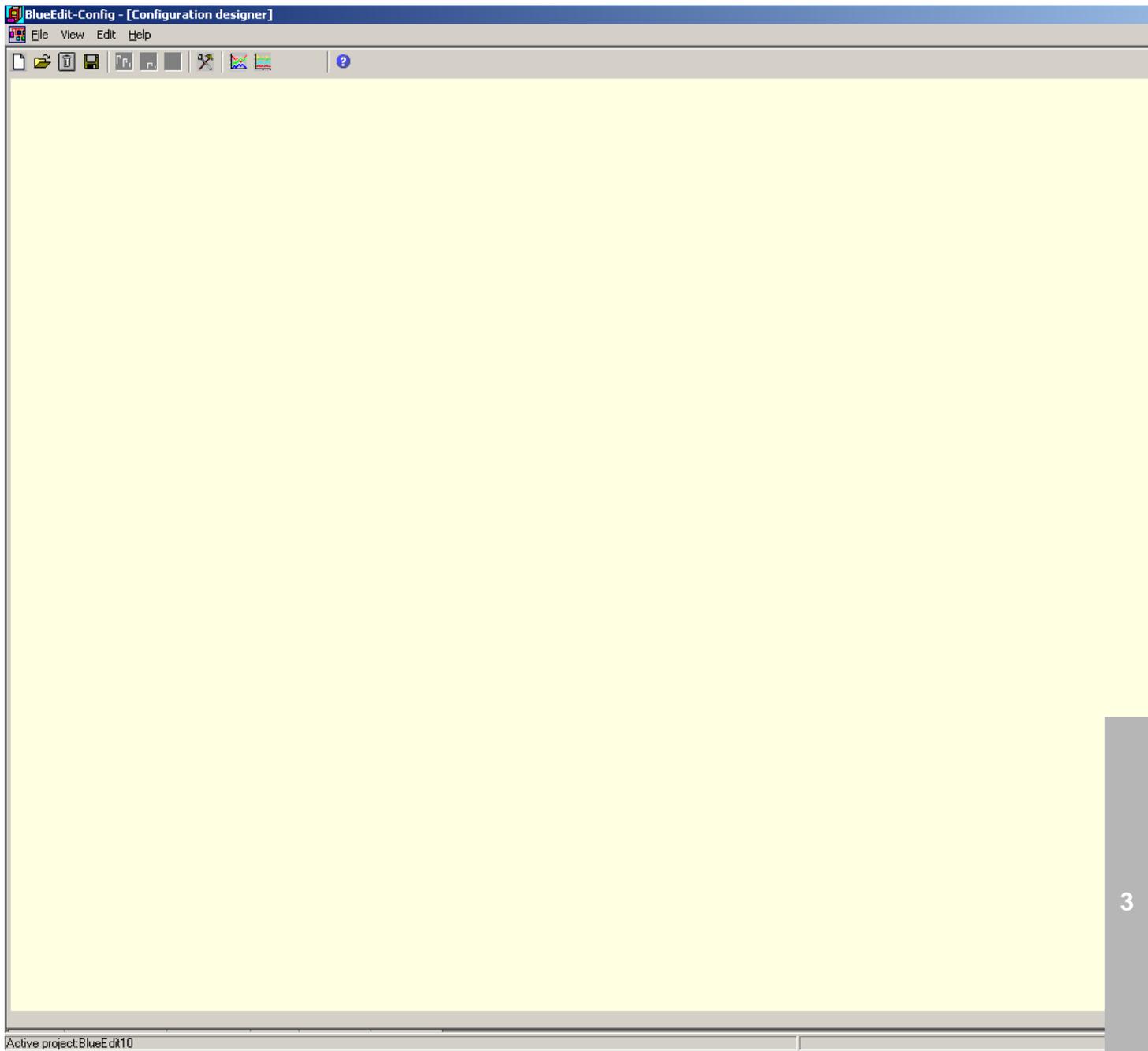


Fig.: Empty configuration window

This configuration window is used to enter the required recipe structures. The next screenshot gives an example.

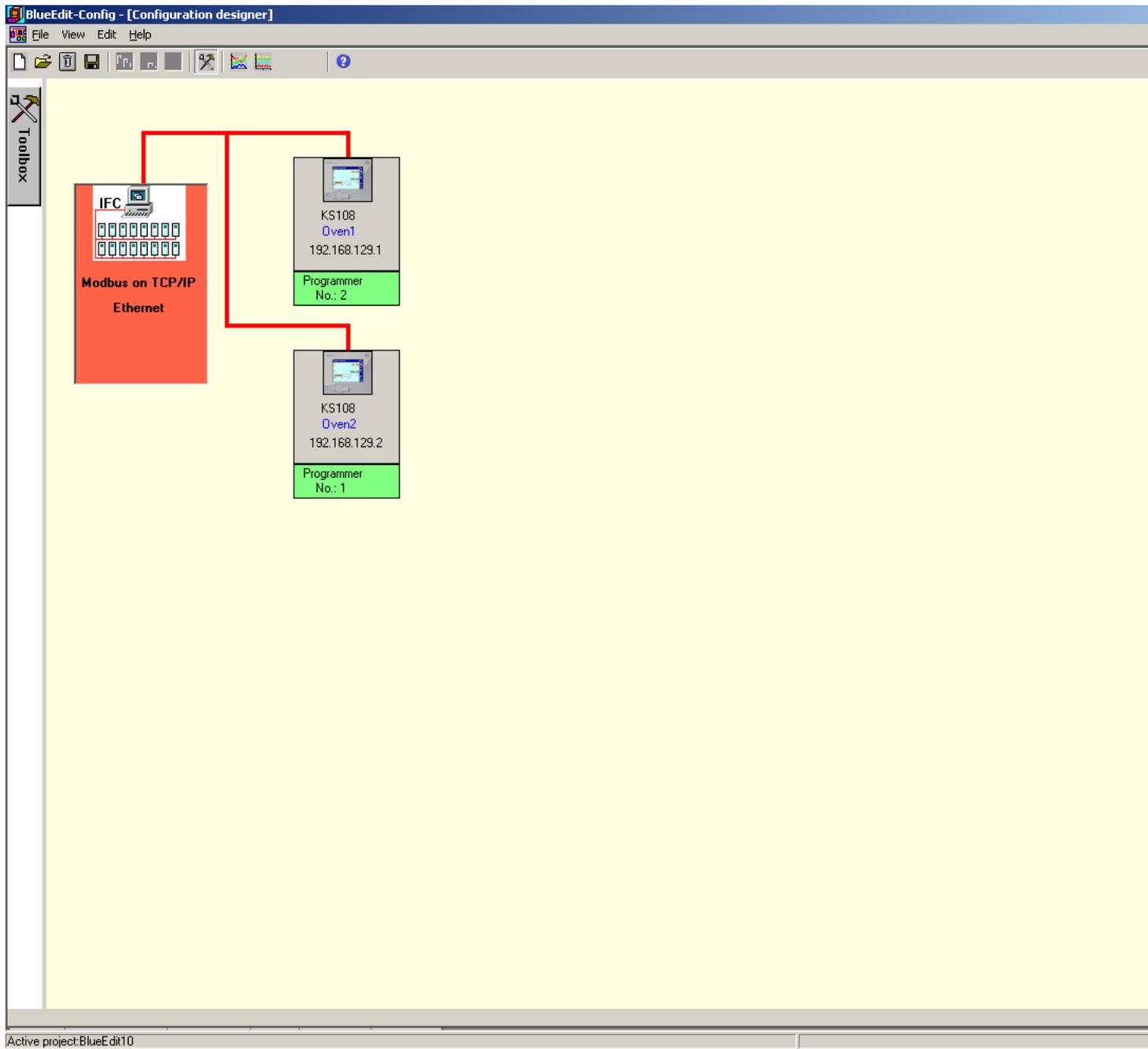


Fig.: Comprehensive configuration - several KS 108easy controllers with partially different programmers

Now you can call the 'Configuration toolbox' (with a mouse click on the icon  or via the menu bar <View><Toolbox>).

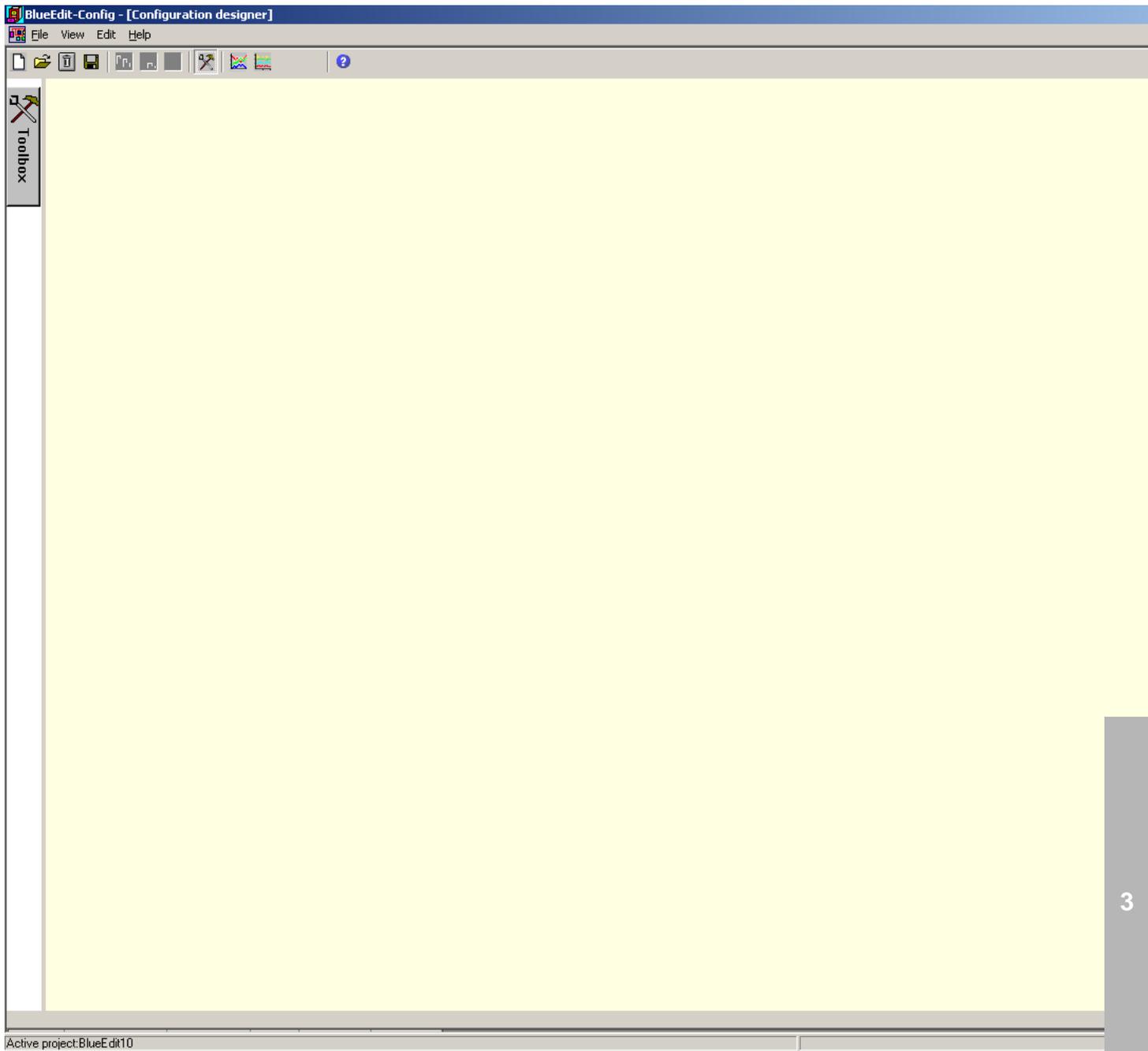


Fig.: 'Toolbox' icon displayed

Position the mouse pointer on the 'Toolbox' button. This opens a list of available communication protocols.

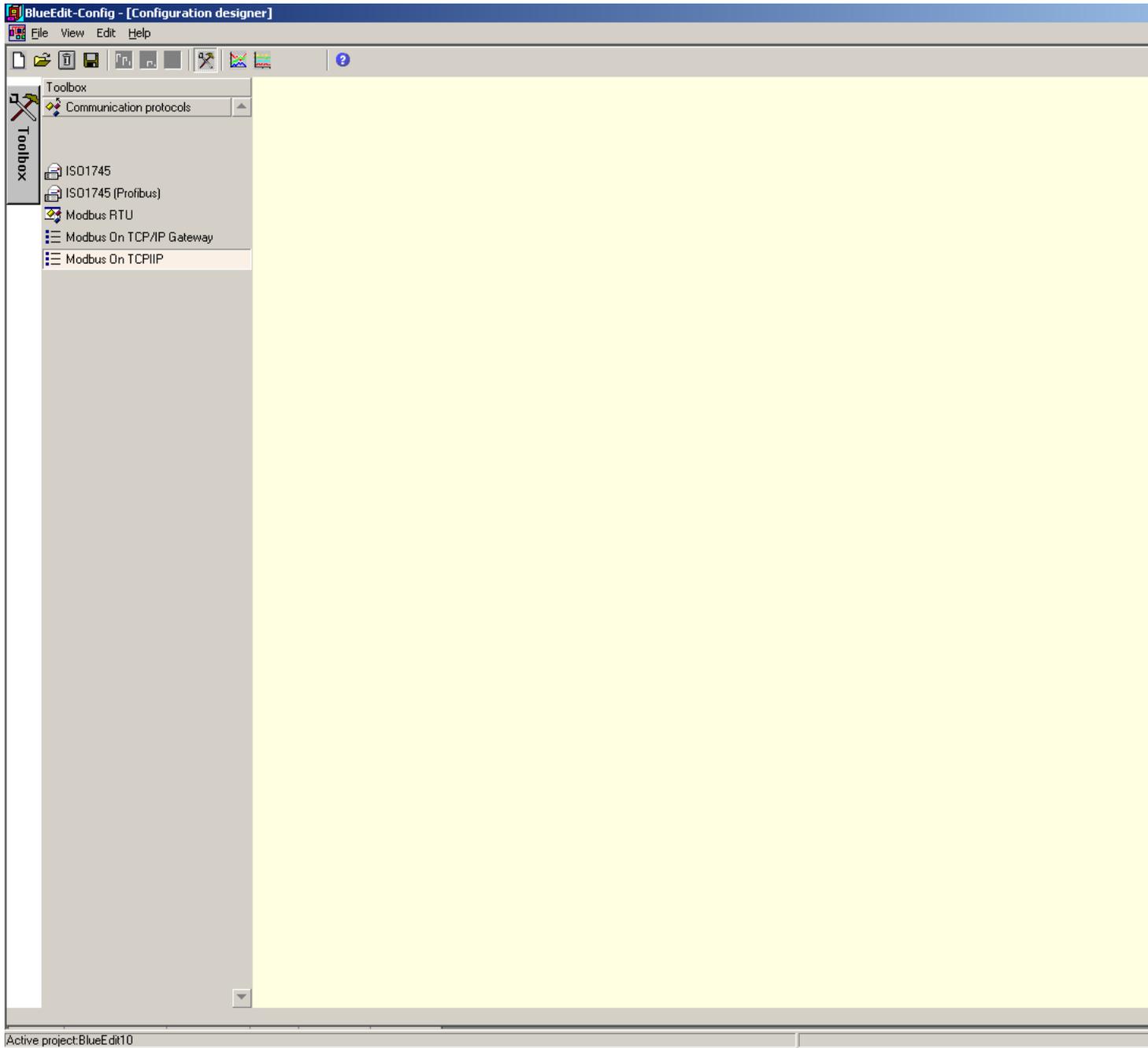


Fig.: List of available communication protocols

Now select the protocol needed to communicate with the target device (e.g. KS 108easy). 'Modbus on TCP/IP' has been selected in the example.

Keep the left mouse key pressed and drag the selected protocol to the right into the workspace. The necessary interface will be implemented and is shown graphically.

Use the same procedure to select/implement additional interfaces (e.g. ISO 1745, etc.).

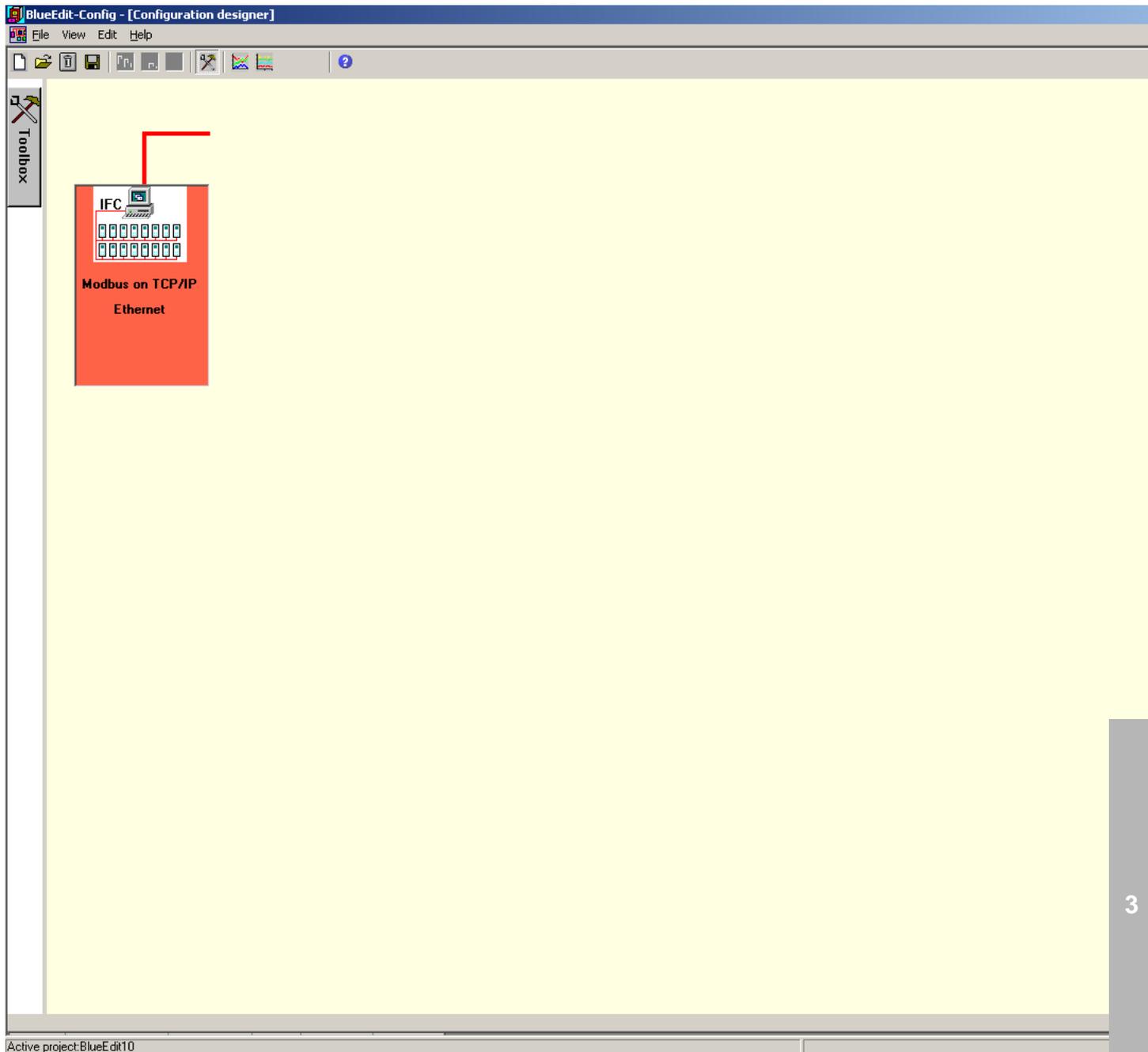


Fig.: Implementing an interface

Select the target device: When the communication method has been determined, the target device in which the programmer is running must be added (e.g. KS 108easy, KS 98 family, KS 90-1).

Mark the interface with the left mouse key (icon color changes to black).

If you move the mouse pointer over the 'Toolbox' button, a list with all available target devices is displayed.

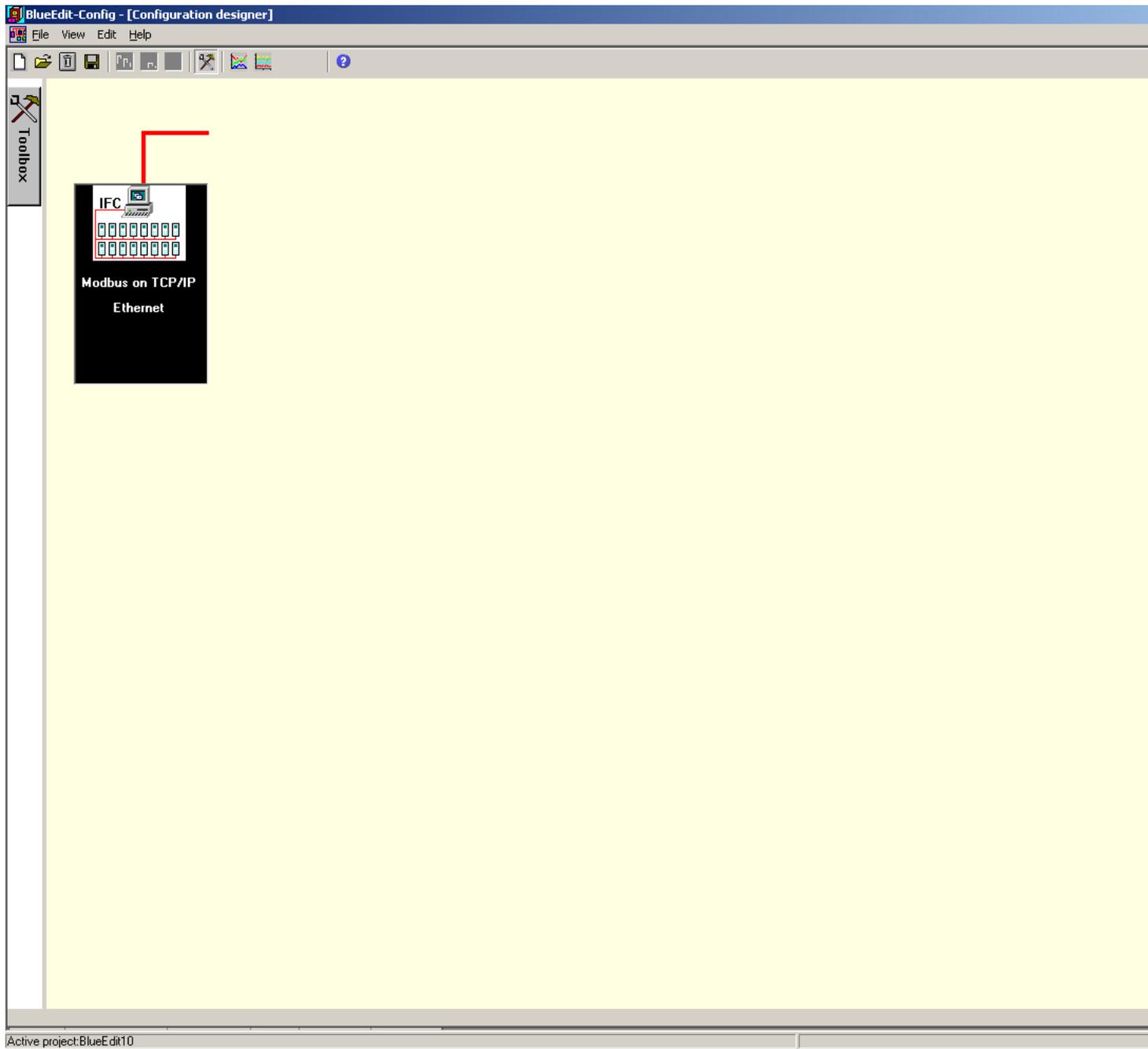


Fig.: Selected interface

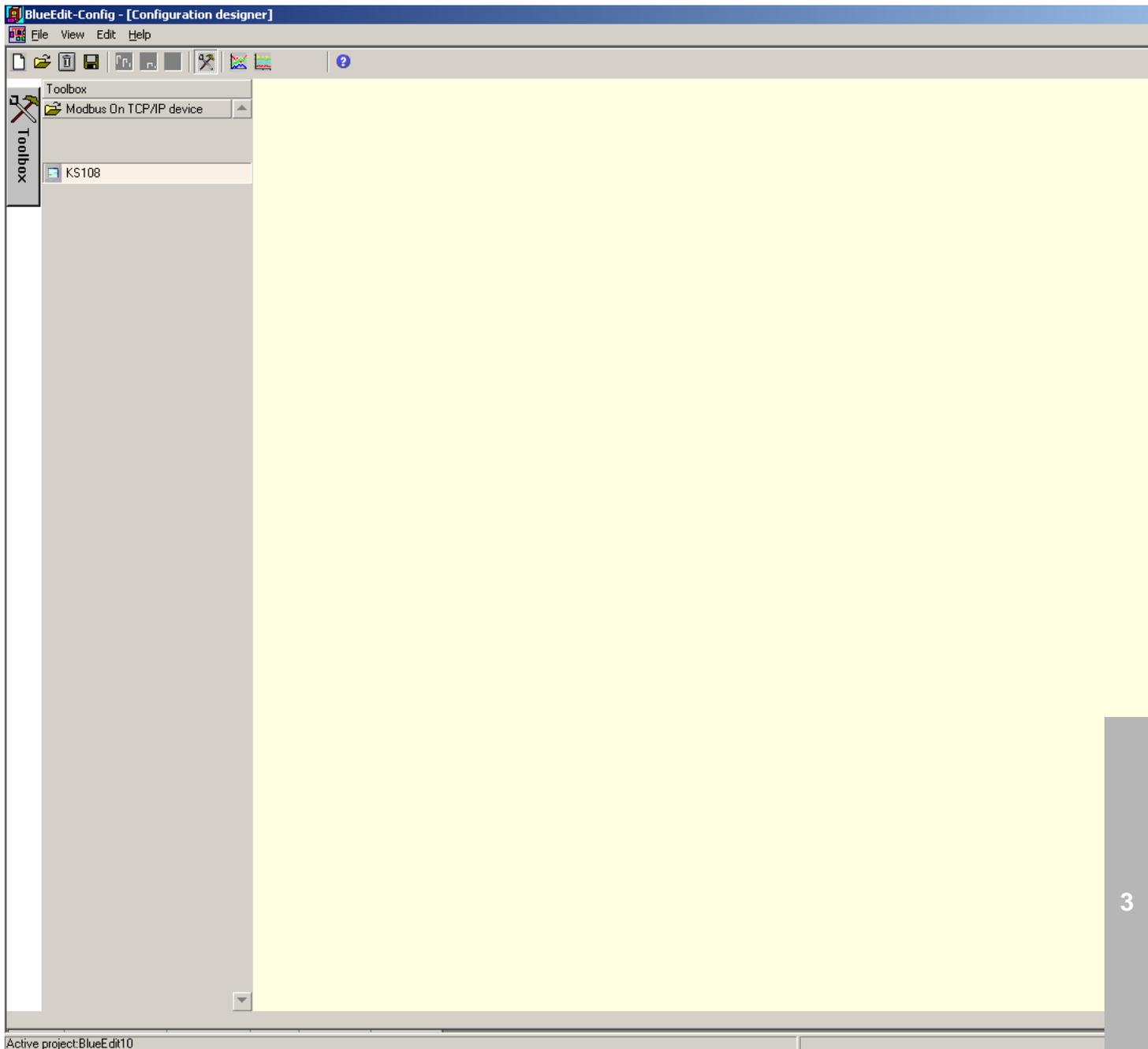


Fig.: Available target devices

Mark and drag one of the listed devices (KS 108) into the workspace with the left mouse key. A template for the device settings (device description, etc.) is opened.

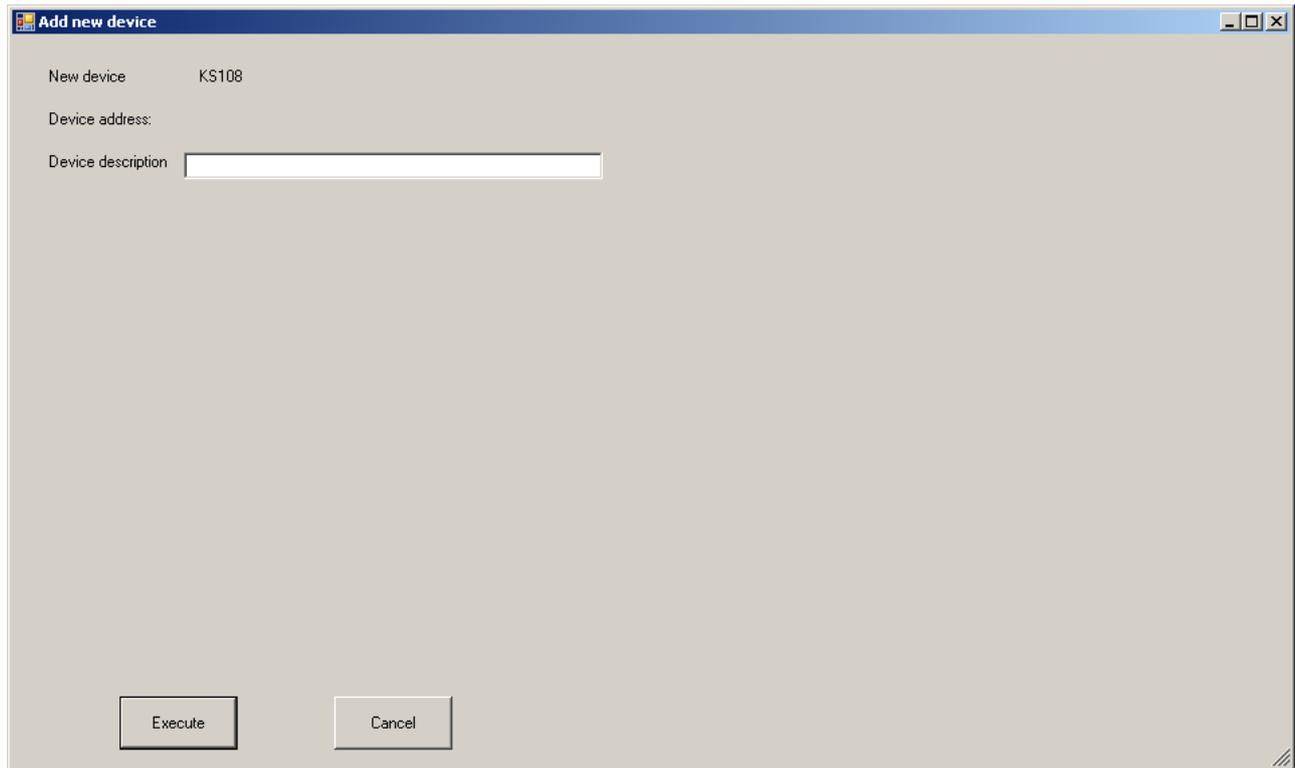


Fig.: Name for target device

After clicking the 'Execute' button, the selected device appears in the Configurator.

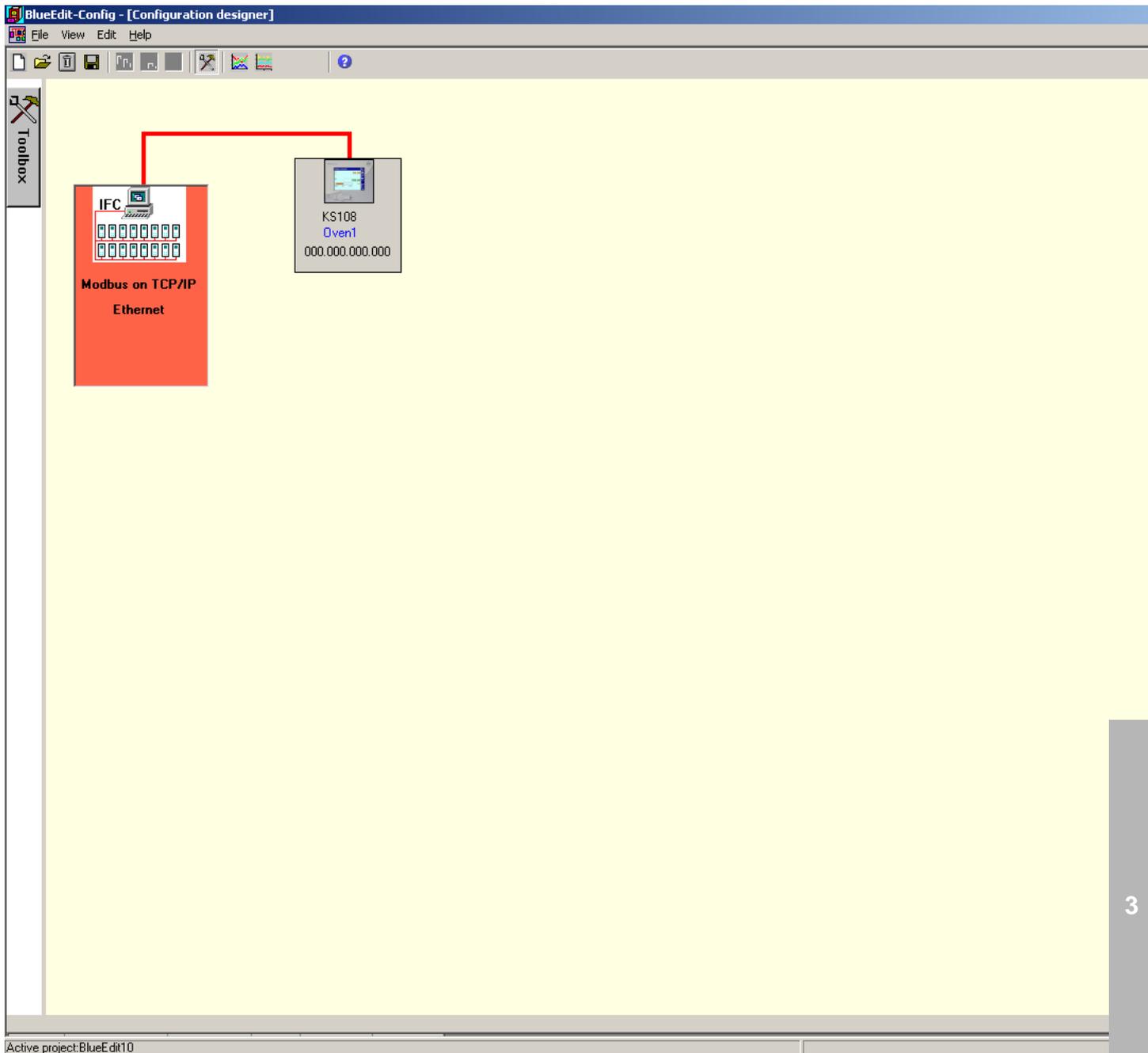


Fig.: Interface and (target) device KS 108easy

Setting up the (target) device

1. Mark the device with the left mouse key (icon color changes to black).
- The interface settings (e.g. IP address) are displayed at the right.
 - The associated hierarchy (Modbus; Explorer view) is displayed below.

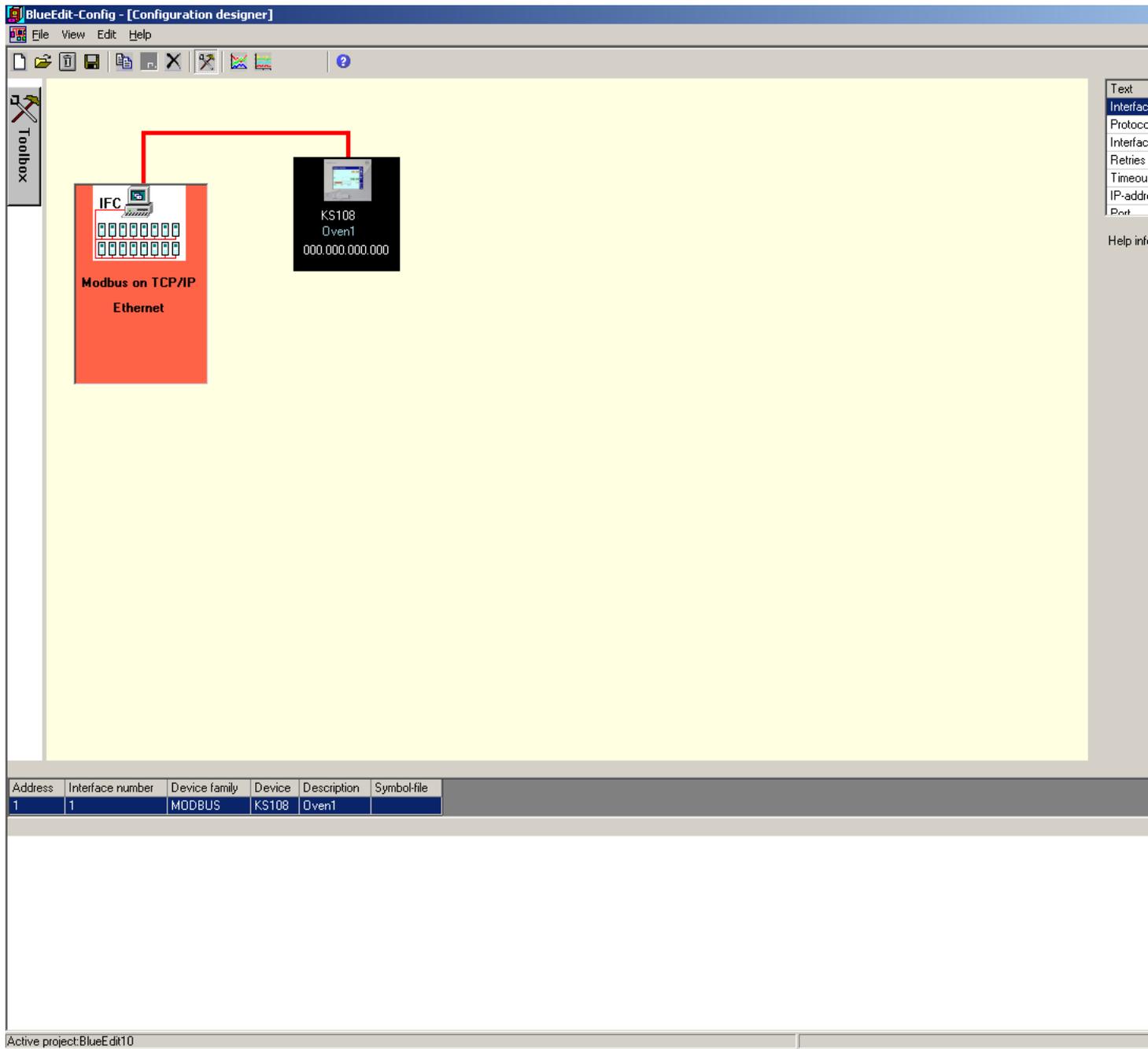


Fig.: Screenshot of the Configurator

2. Setting up the interface for the target device

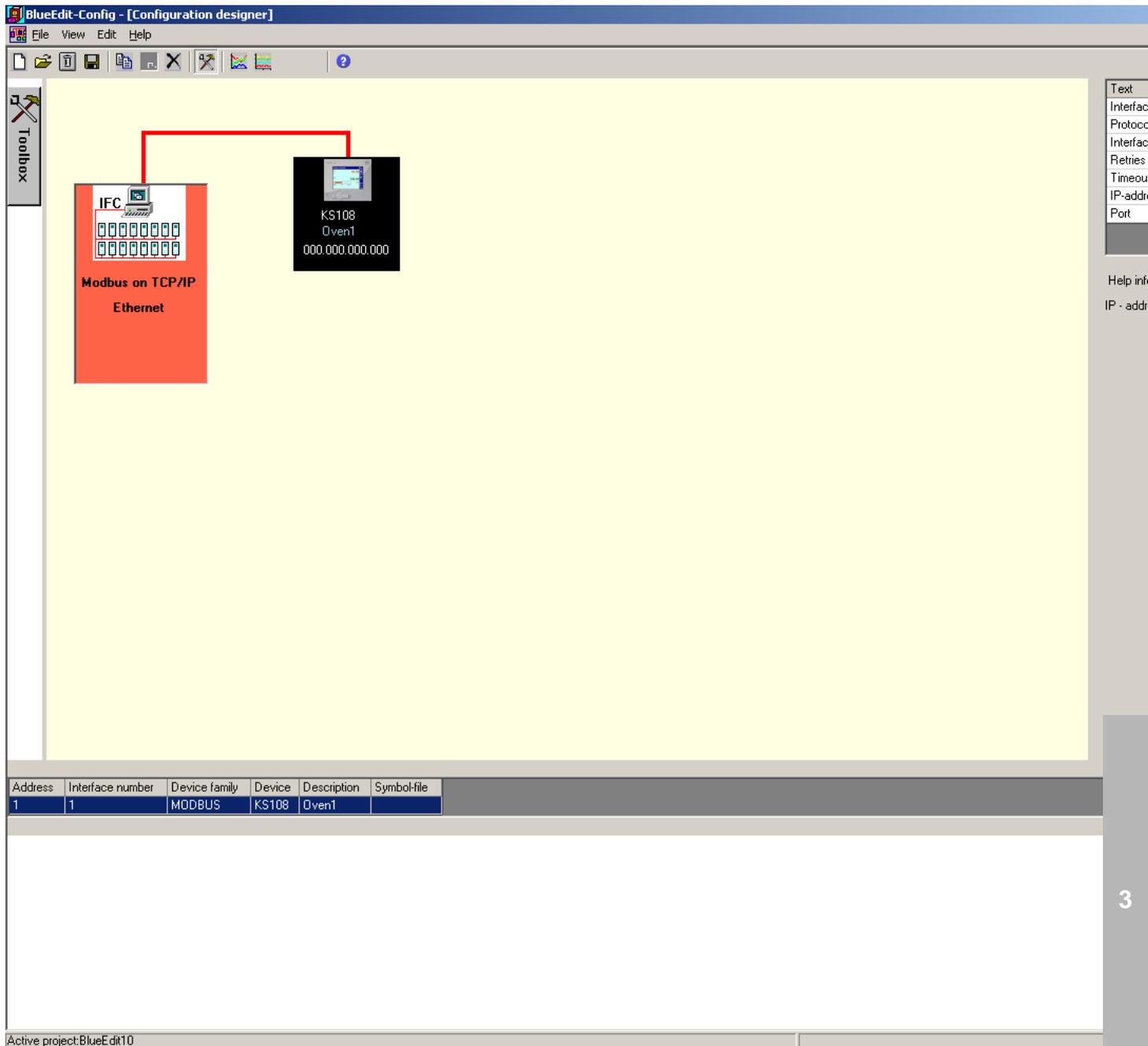


Fig.: Setting up the interface for the KS 108easy

Adding a programmer

Mark a device, and position the mouse pointer on the 'Toolbox' button. This opens a list of available applications (programmers).

Mark and drag the required application into the workspace with the left mouse key. A template for additional settings is opened.

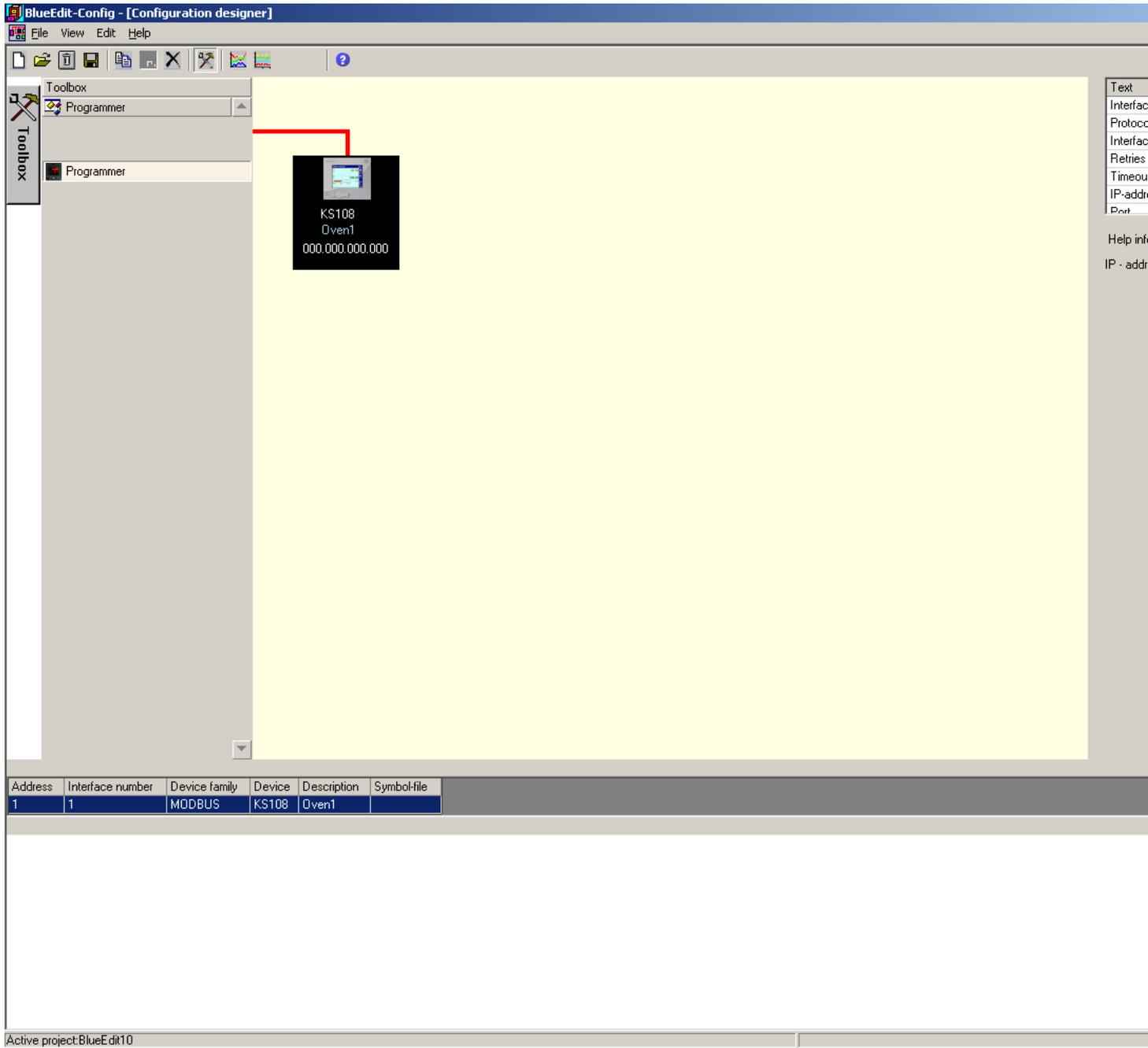


Fig.: Adding a programmer

Recommendations:

Set 'Options' to "Import programmer from Engineering symbol file" (see screenshot on next page). Then select the corresponding symbol file.

Precondition: A symbol file (XML file) must have been created previously from the Engineering of the target device (KS 108easy).

Notes:

E.g., for an Engineering of the KS 108easy, the symbol file (XML) is created with BlueDesign in the commissioning mode under <Extras><Symbol file>, and saved in the PC.

3

Selection of a programmer is done by double-clicking on the required programmer function block in the displayed Engineering hierarchy (available programmers).

Existing programmers can be deleted in the right-hand window (selected programmers) by double-clicking on the corresponding entry.

Confirm the settings by clicking the 'Execute' button.

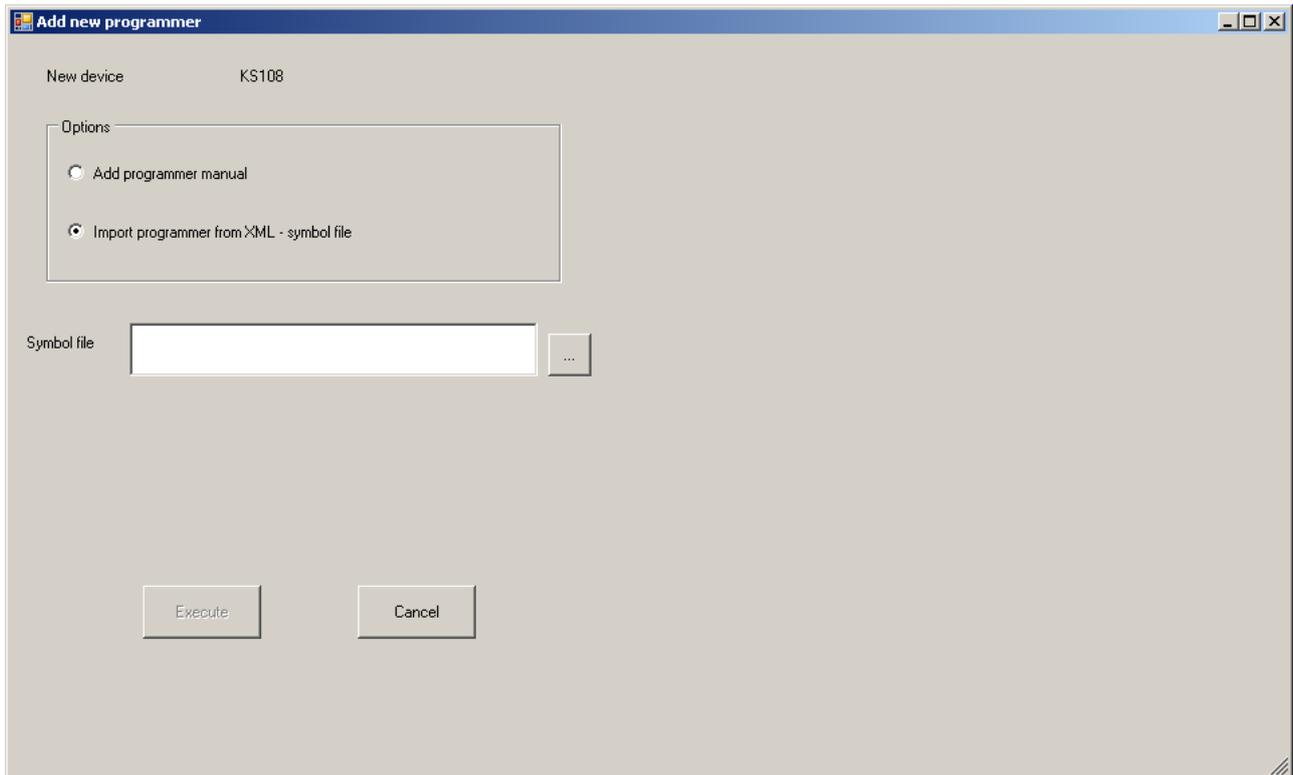
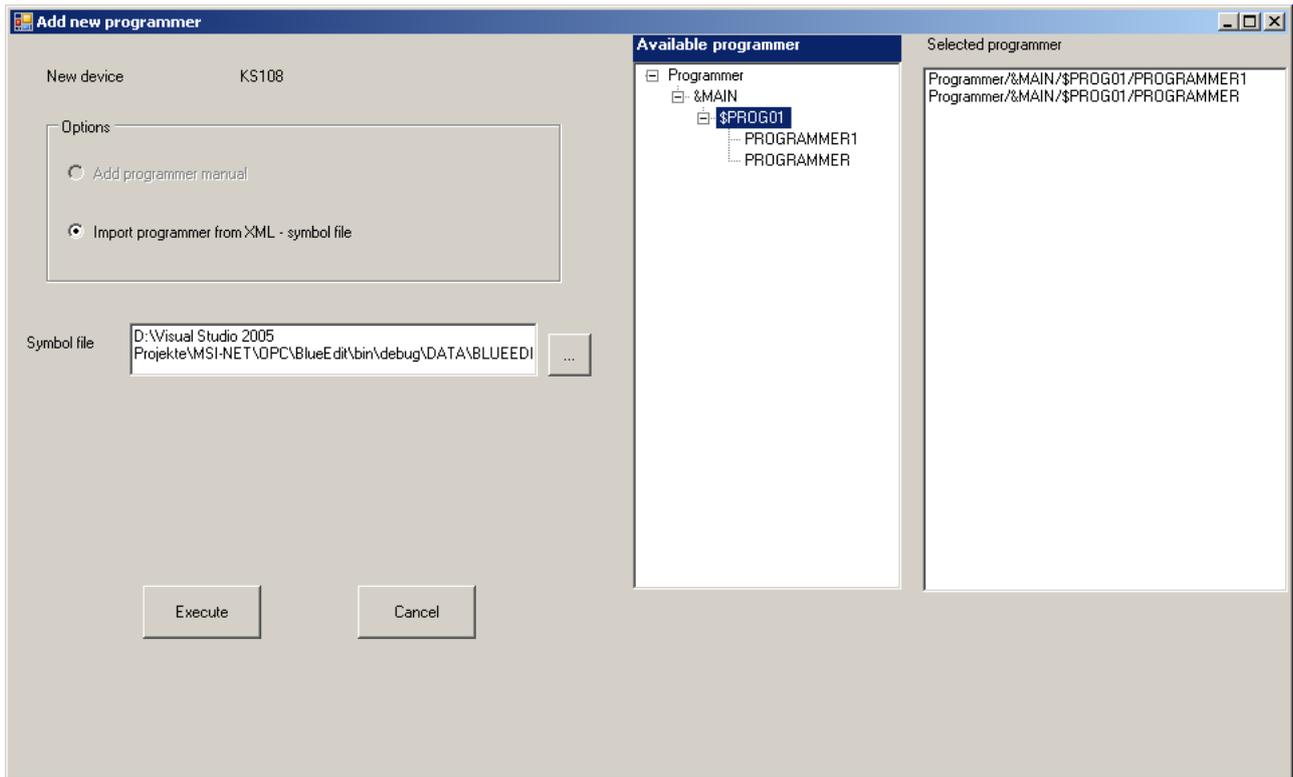


Fig.: Dialog window with settings



Setting up a programmer

When the symbol file has been entered, another window is opened with additional settings for the programmer:

Here, you must make the following entries:

The programmer name in the Editor (Recommendation: Enter the programmer name from the KS 108 Engineering).

The PC directory for saving recipes, settings, etc.

The file name in the PC (Recommendation: Should coincide with the recipe file in the KS 108).

Recipes are saved in a database in the PC under the entered file name. Every recipe in such a database is given a unique number between 1 and 999, which can be specified in the KS 108 Engineering for recipe selection.

Automatic presets from the Engineering symbol file.

Number of analog and digital outputs (must coincide with the KS 108 Engineering).

Names of the outputs.

The engineering unit with analog outputs.

Recipe directory for saving in the KS 108 (must coincide with the KS 108 Engineering).

Confirm the settings with 'Execute'. An application (programmer) is marked 'green' in the device symbol.

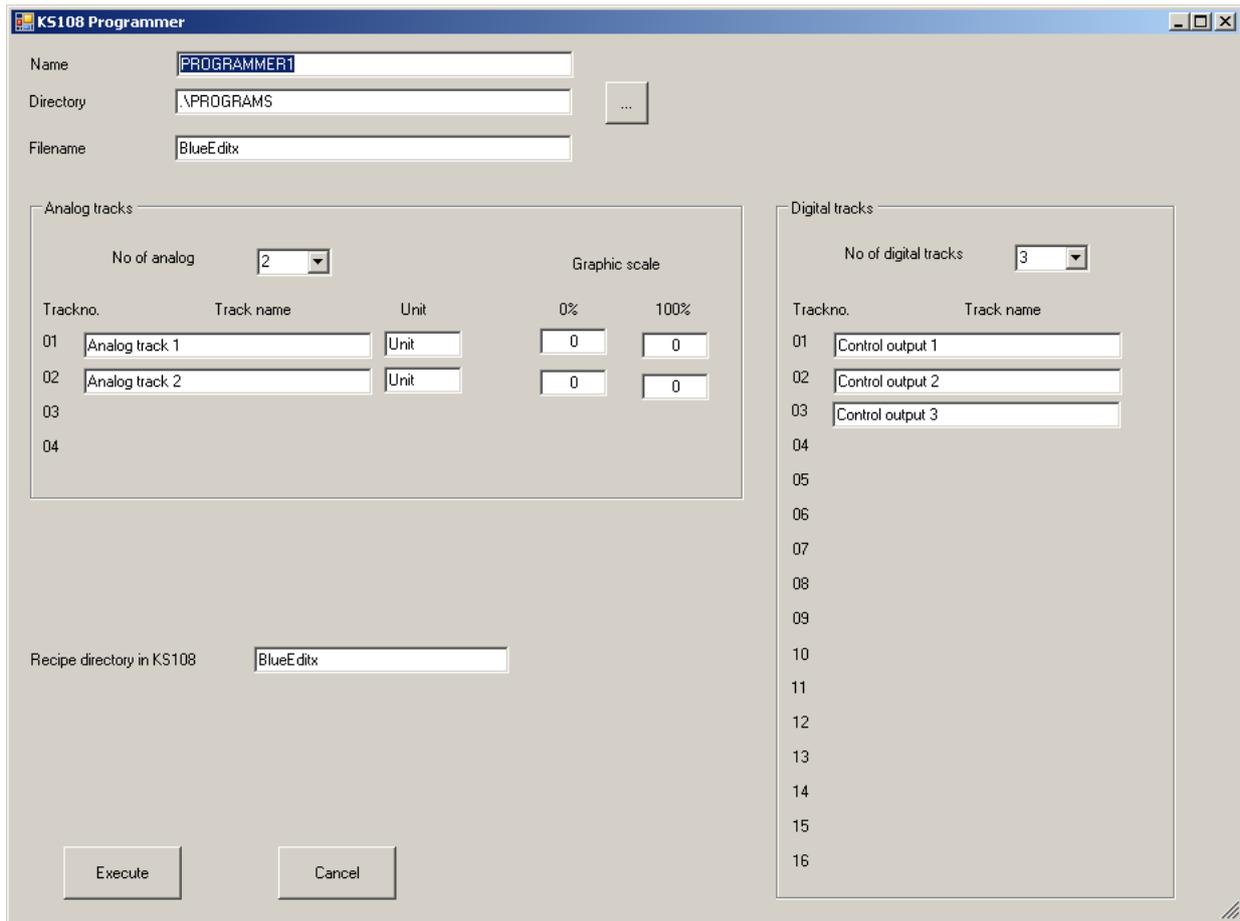


Fig.: Programmer settings

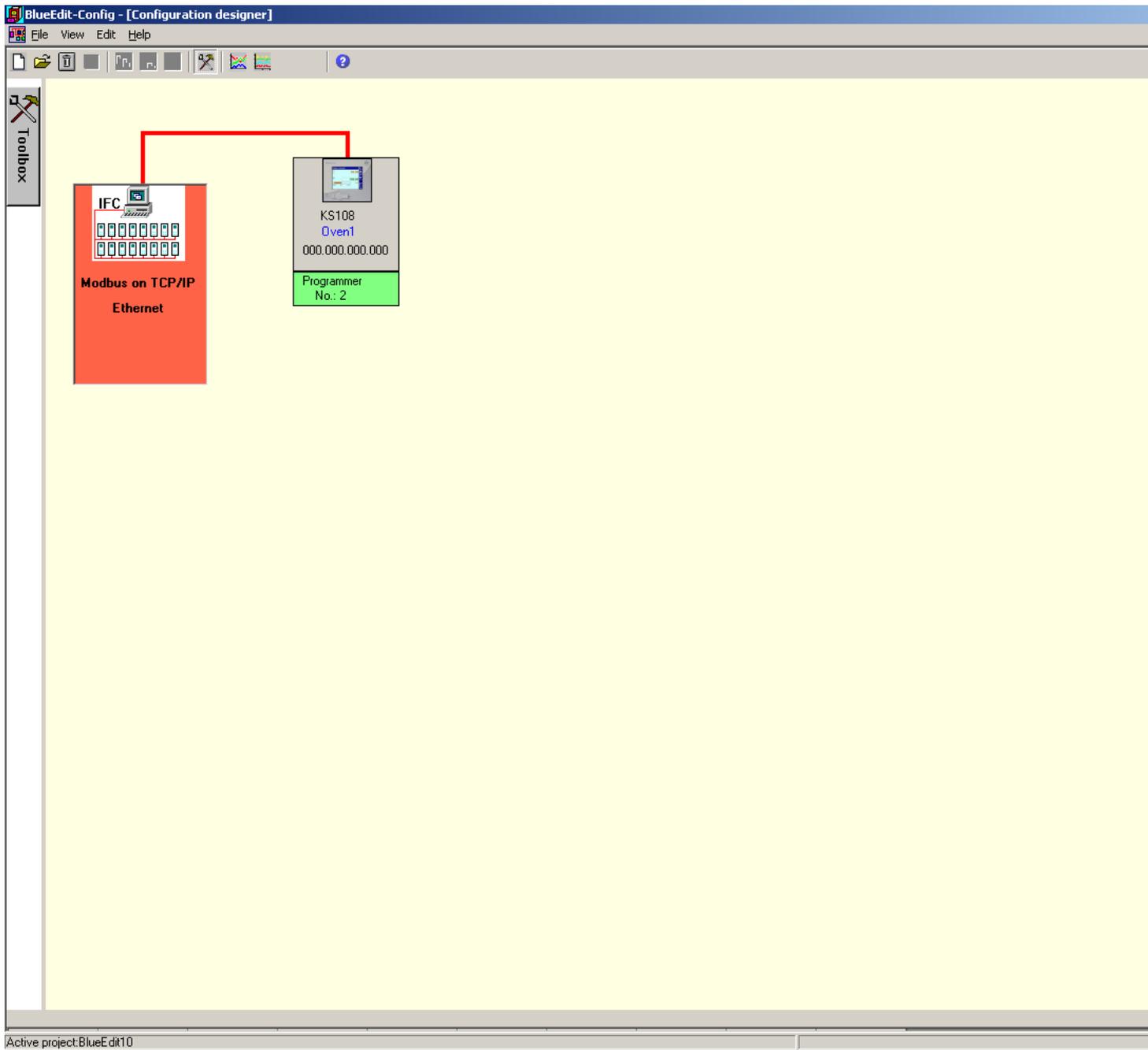


Fig.: KS 108 with programmer (green)

Checking/changing the entries

Clicking the left mouse key in the green area (programmer) displays a line in the lower part of the screen, which contains all the entries. Changes can be made either directly in the line or in the dialog window at the right of the screen, which is opened by clicking on a programmer in the column 'ProgID' in the line at the bottom.

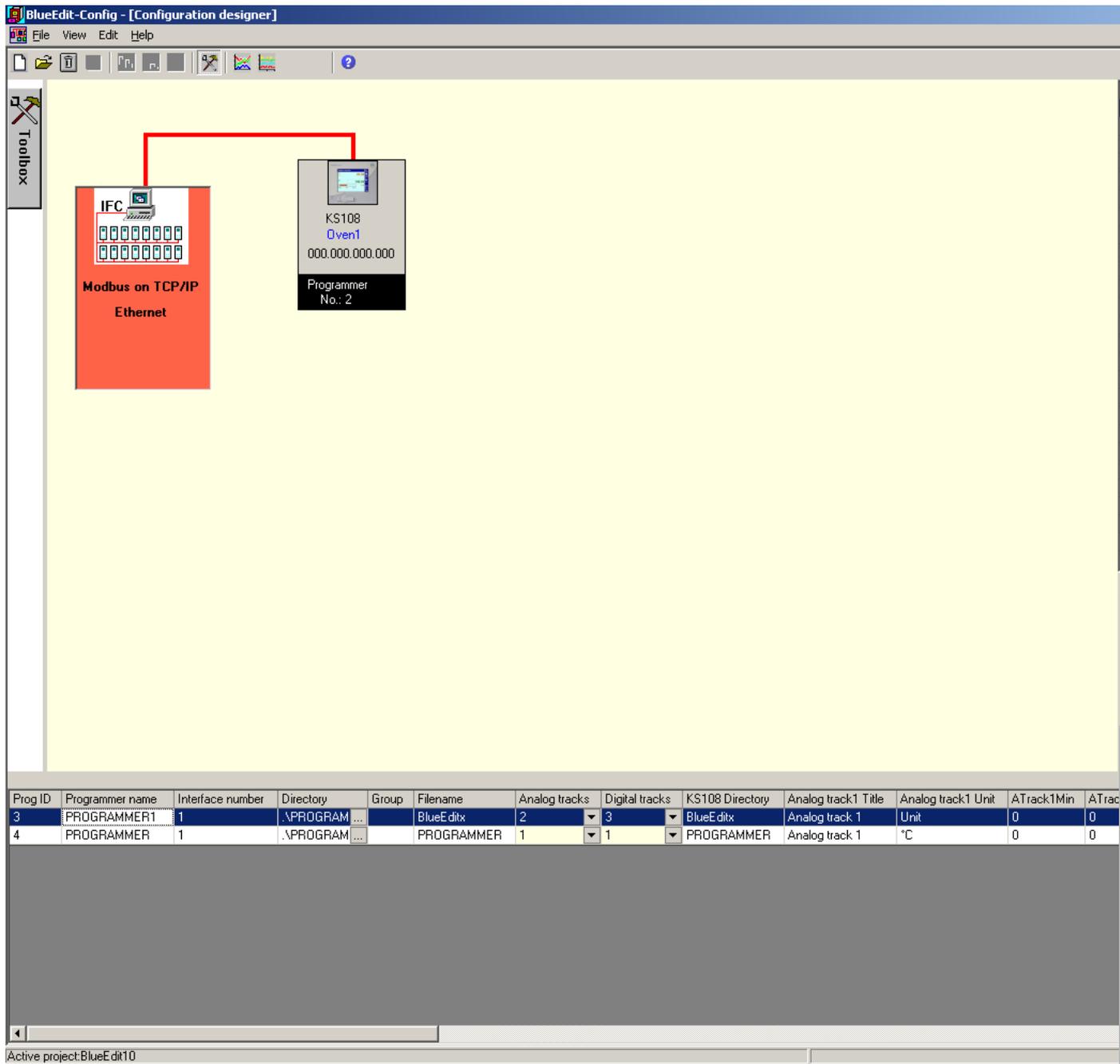


Fig.: Checking/changing the entries

The text lines in the dialog window for the basic programmer settings have the following meaning (only the important items are explained below):

ProgID

Sequential number(s) of the individual programmer(s). They are assigned automatically by the Configurator and cannot be changed.

Interface number

Every time that an interface module is installed (e.g. Modbus with the first device), and for every additional device, a sequential number is assigned automatically.

Directory

The directory in the PC, in which the database with the generated recipes is stored.

File name

Name of the recipe database

KS 108 directory

Name of the KS 108 recipe directory, which is also entered in the Engineering.

Time of Output 1

If the associated checkbox is activated, the segment times of the Master output (Output 1) will be automatically copied to the segment times of the corresponding Slave output. In this case, the column 'Time' for this Slave output will not be displayed in the Program Editor of BlueEdit.

Deleting and copying

Clicking the right mouse key into a programmer line at the bottom of the screen opens a context menu for deleting/copying a programmer. If the programmer is copied, all its settings are also copied. Alternatively, you can right-click on the device itself (upper grey part of the device symbol) to delete/copy the device.

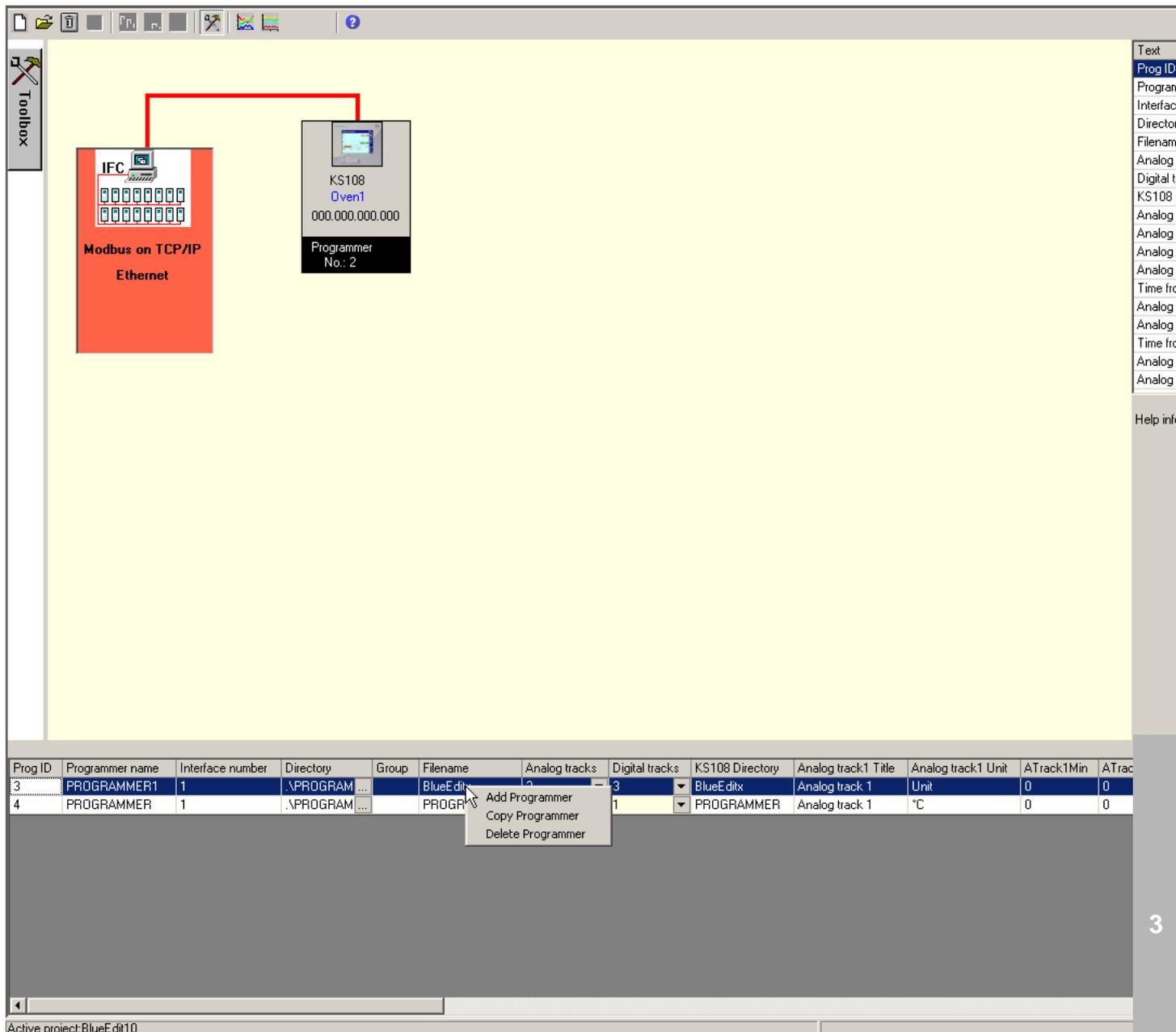


Fig.: Deleting or copying

Saving the configuration

Changes are not saved automatically. They must be saved manually, either via the menu item (<File><Save Project>) or by clicking on the icon .

3.2 Configuration Designer

Configuration Designer

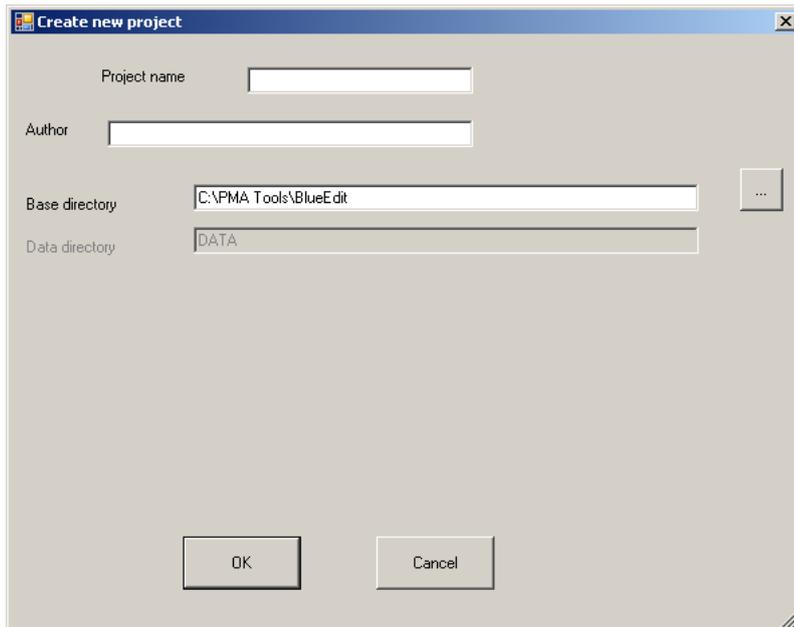
The simplest way of configuring the software is to use the Designer, which represents the configuration as a simple graphic display. The Designer has a toolbox, with which the possible communication protocols and devices can be selected. These are simply positioned in the workspace by means of drag & drop.

In the following, a detailed description is given how to add or modify communication protocols, device, and Items.

3.2.1 Creating a new Project

Creating a new Project

If a new Project is to be created, and the necessary function is active, a corresponding icon is visible in the program's toolbar. Clicking on the icon opens the template shown below (it is same template as described in the previous chapter).



The screenshot shows a dialog box titled "Create new project". It has a standard Windows-style title bar with a close button. The dialog contains the following fields and controls:

- Project name:** An empty text input field.
- Author:** An empty text input field.
- Base directory:** A text input field containing "C:\PMA Tools\BlueEdit". To its right is a small button with three dots "...".
- Data directory:** A text input field containing "DATA".
- Buttons:** "OK" and "Cancel" buttons are located at the bottom of the dialog.

Here you must enter the required Project name, the Author (compiler), and the basic directory.

The default location of the basic basic directory is the same directory in which BlueEdit-Config has been installed. If you wish that BlueEdit will also be able to read the data from other directories at a later time, a corresponding basic directory can be specified whenever required.

3.2.1.1 Save Project

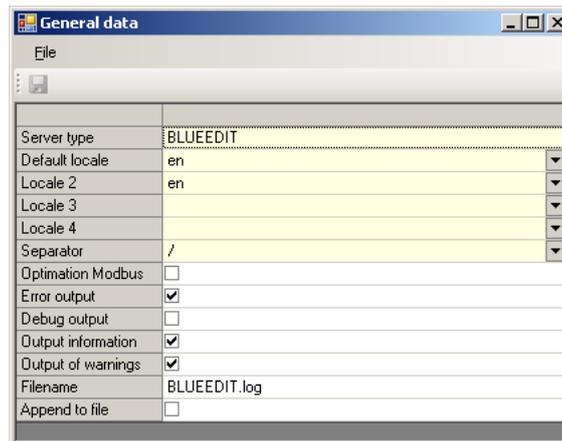
Saving the Project

Changes are not saved automatically. They must be saved manually, either via the menu item (<File><Save Project>) or by clicking on the icon .

3.2.2 General Configuration

General configuration

Clicking the menu item <Edit/General configuration> opens the following window:



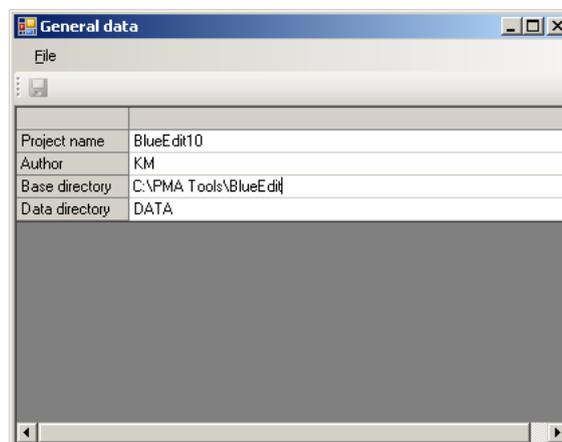
Here, you can select the user language for the software. At present, you have the choice between English (en) and German (de). In order to work with English dialogs and menus, you must set 'Default Local' to 'en'. In this case, 'Local 2' should be set to 'de'. If the dialogs and menus are to appear in German, 'Default Local' must be 'de', and 'Local 2' must be 'en'.

Language switchover will only be effective after closing/opening the Configurator.

For the other parameter settings, also see Fault analysis (see page 63).

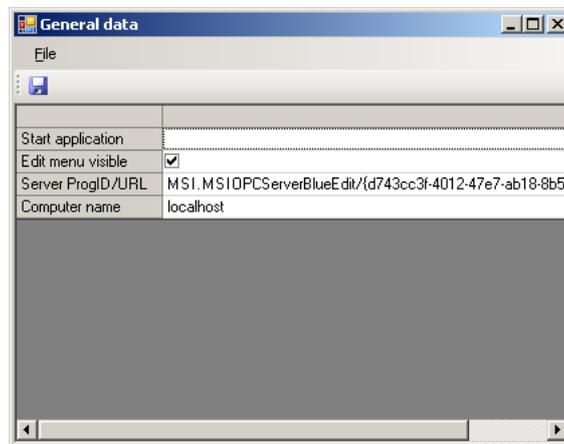
Clicking on <File> enables you to make additional settings to Project and Client data.

Project data are selected by clicking on <File/Project data>, which displays the following information:



Here, you can change the parameters of the active Project.

Client data are selected by clicking on <File/Client data>, which displays the following information:



Changes to Client data are only necessary, if communication with the equipment is to be done via a different OPC server supplied by Prozeß- und Maschinen-Automation GmbH, or if the OPC server associated with BlueEdit is not to be run on the local PC, but is located on a remote PC instead. If BlueEditOPCServer is run on a remote PC, please also read the notes under Settings and configurations for remote access (see page 65).

3.2.3 Settings for the Tracks of BlueEdit

Adjustment of the BlueEdit outputs

It is possible to configure the graphical display for the analog and digital outputs of BlueEdit. These adjustments can be individual per Project. For the 'Standard' Project, various default settings have already been made.

Lines for analog outputs

Clicking on <Edit/Analog output lines> or on the icon  opens the configuration template for the analog outputs (see below).

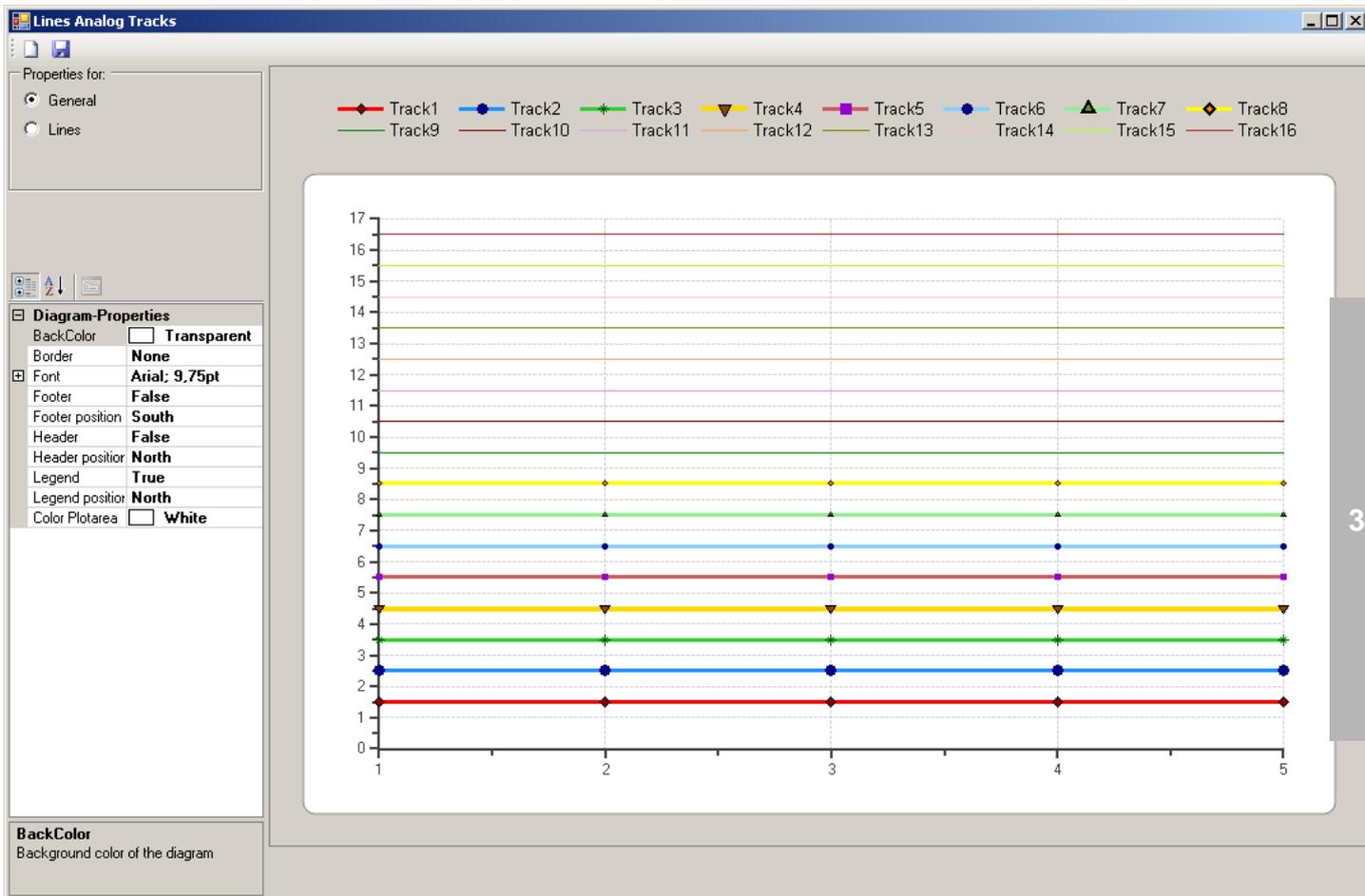


Fig.: Configuration template for analog outputs ('General' properties)

'General' properties

If the 'General' properties have been selected at top left in the template, the following general parameters can be adjusted:

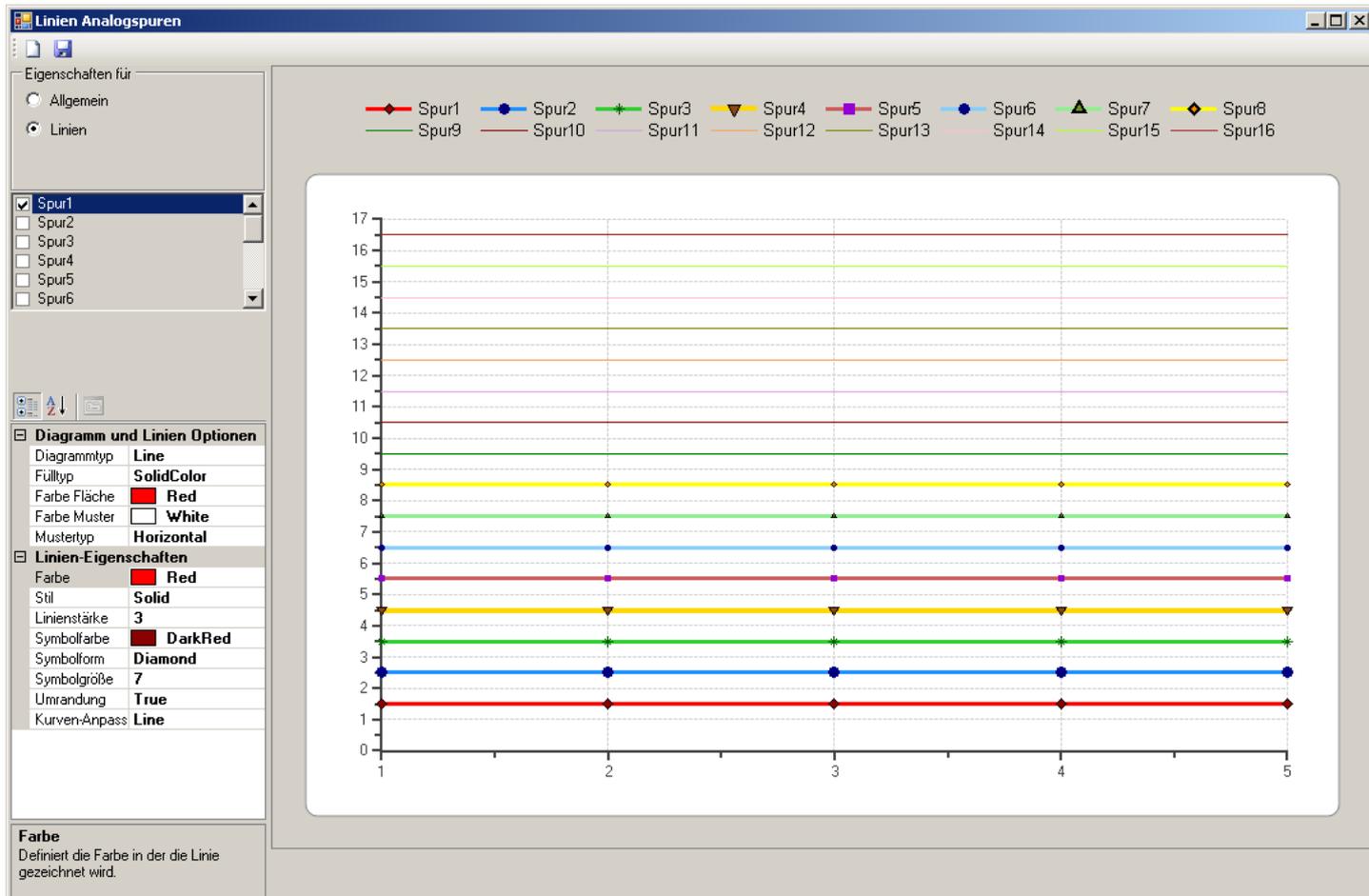
Caution: These parameters are shared by analog and digital outputs.

For example, a background colour is selectable, and the header/footer as well as the legend can be activated. In addition, the position of header/footer and legend can be defined. If a parameter can only be adjusted with certain values, a corresponding selection list is always presented.

Header and footer should be set to false in the moment because these parameters are only for future use.

'Lines' properties

If the 'Lines' properties have been selected at top left in the template, the following parameters can be adjusted:



Here, the adjustments can be made for max. 16 analog outputs (also if the programmer is configured for less outputs). For example, line colour, type, and thickness are definable. Moreover, it is possible to define whether segment joints are to be highlighted by means of a selectable symbol.

Lines for digital outputs

Clicking on <Edit/Digital output lines> or on the icon  opens the configuration template for the digital outputs (see below).

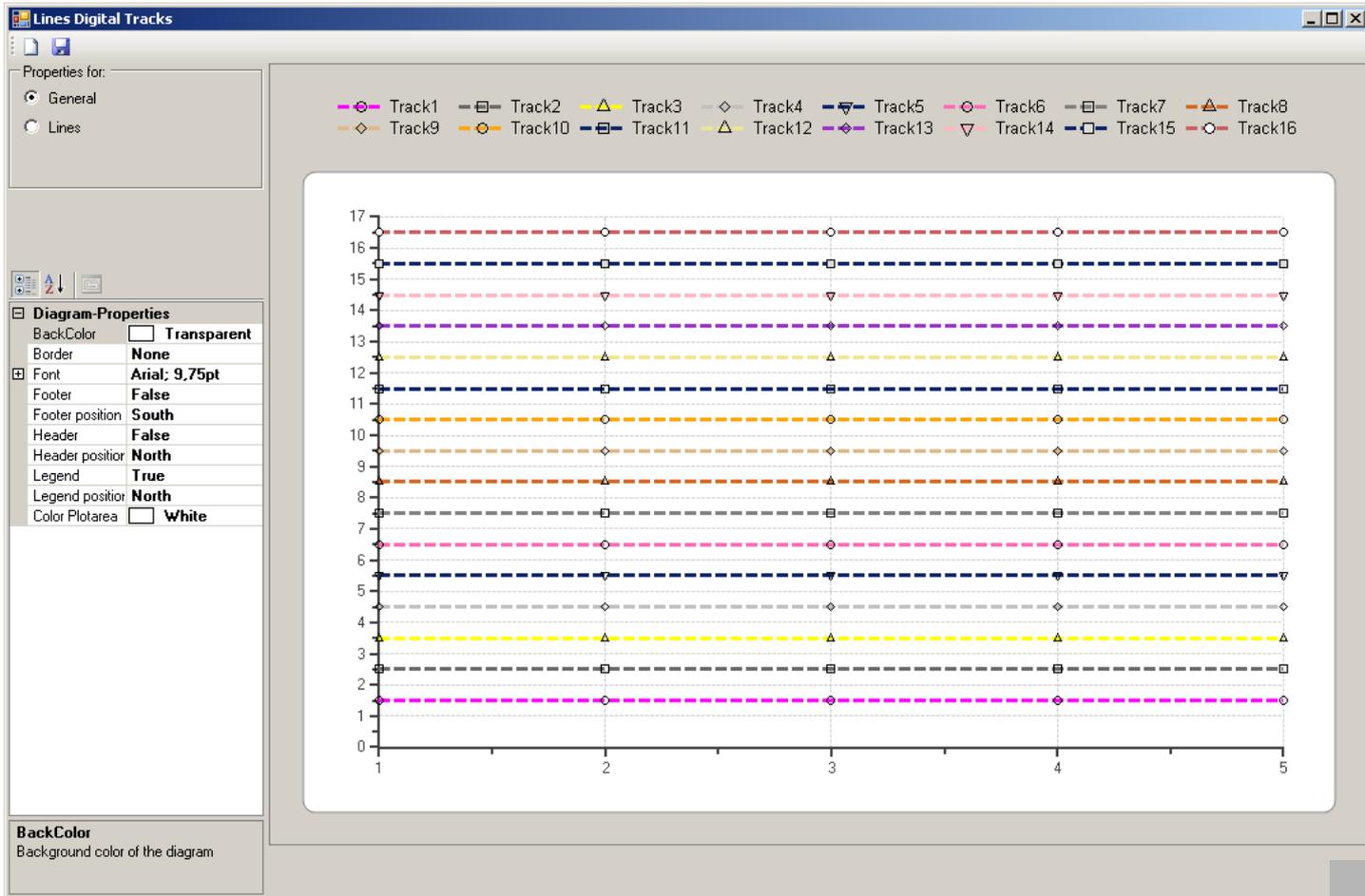


Fig.: Configuration template for digital ('General' properties)

'General' properties

If the 'General' properties have been selected at top left in the template, the following general parameters can be adjusted:

Caution: These parameters are shared by analog and digital outputs.

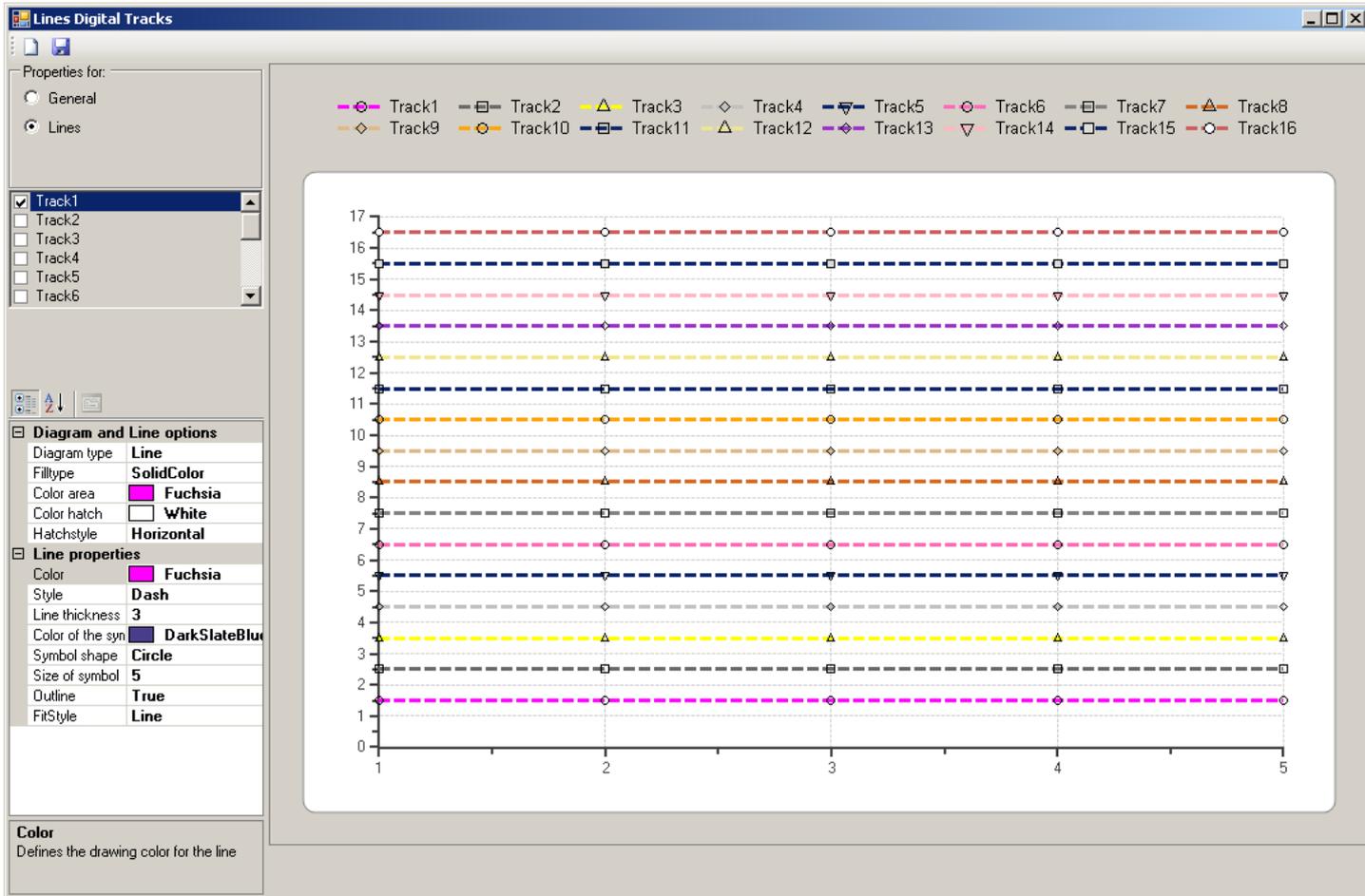
For example, a background colour is selectable, and the header/footer as well as the legend can be activated. In addition, the position of header/footer and legend can be defined. If a parameter can only be adjusted with certain values, a corresponding selection list is always presented.

Header and footer should be set to false in the moment because these parameters are only for future use.

'Lines' properties

If the 'Lines' properties have been selected at top left in the template, the following parameters can be adjusted:

3

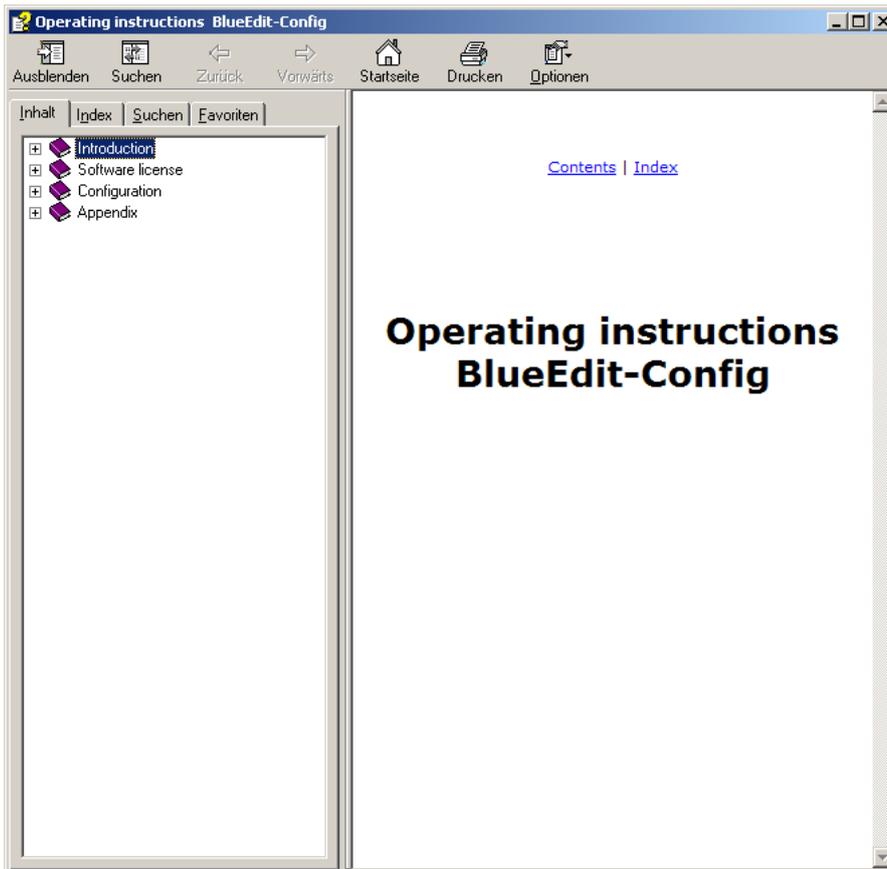


Here, the adjustments can be made for max. 16 digital outputs (also if the programmer is configured for less outputs). For example, line colour, type, and thickness are definable. Moreover, it is possible to define whether segment joints are to be highlighted by means of a selectable symbol.

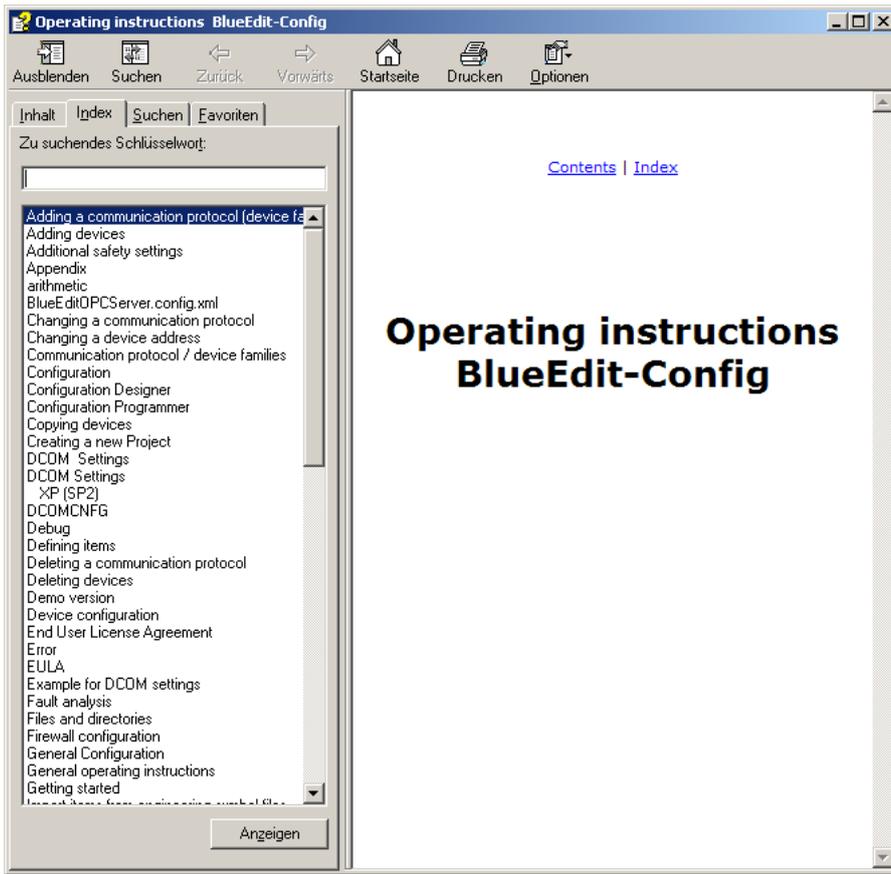
3.2.4 Online Help

Online Help

The online Help can be called either via the menu item <Help/Contents>, <Help/Index> or via the 'F1' function key. <Help/Contents> opens the following window,



and <Help/Index> opens this window:



Together with the entire Help text as a PDF file, the Help file is installed in the 'HLP' folder of BlueEdit, from where they can also be called directly.

3

3.2.5 Communication protocol / device families

Communication protocol / device families

The configuration program BlueEdit-Config supports several communication protocols and device families. At present, you can select between ISO 1745, Modbus RTU, and Modbus On TCP/IP. Different devices are assigned to each of the protocols and device families.

As BlueEditOPCServer can communicate via several interfaces, all device families can be included (also more than one, e.g. if some devices communicate via ISO 1745 and COM1, and others communicate via COM2, etc.).

Each configuration can consist of max. 16 communication protocols.

The next chapters describe how communication protocols can be added to the configuration, changed, and deleted.

Adding a communication protocol (device family) (📄 see page 46)

Changing a communication protocol (📄 see page 50)

Deleting a communication protocol (📄 see page 51)

3.2.5.1 Adding a communication protocol (device family)

Adding a communication protocol (device family)

In order to add a communication protocol (or a device family) in the Configuration Designer, the toolbox must be enabled first. For this, simply click on the icon  in the toolbar. The 'Toolbox' button is now displayed at the left of the screen.

If you move the mouse pointer over the 'Toolbox' button, a list with all available communication protocols is displayed. The list is closed as soon as the mouse moves outside the list.

Proceed as follows to select a communication protocol:

1. Position the mouse over the 'Toolbox' button.
2. Select the required protocol from the list with the mouse (click the left mouse key).
3. Hold the mouse key pressed, and move the mouse outside the toolbox list. Hereby, the mouse pointer changes to show that the 'drag & drop' function is being used.
4. You can release the mouse anywhere within the workspace. This automatically positions the graphic icon for the communication protocol in the workspace.

Now you can call the 'Configuration toolbox' (with a mouse click on the icon  or via the menu bar <View><Toolbox>).

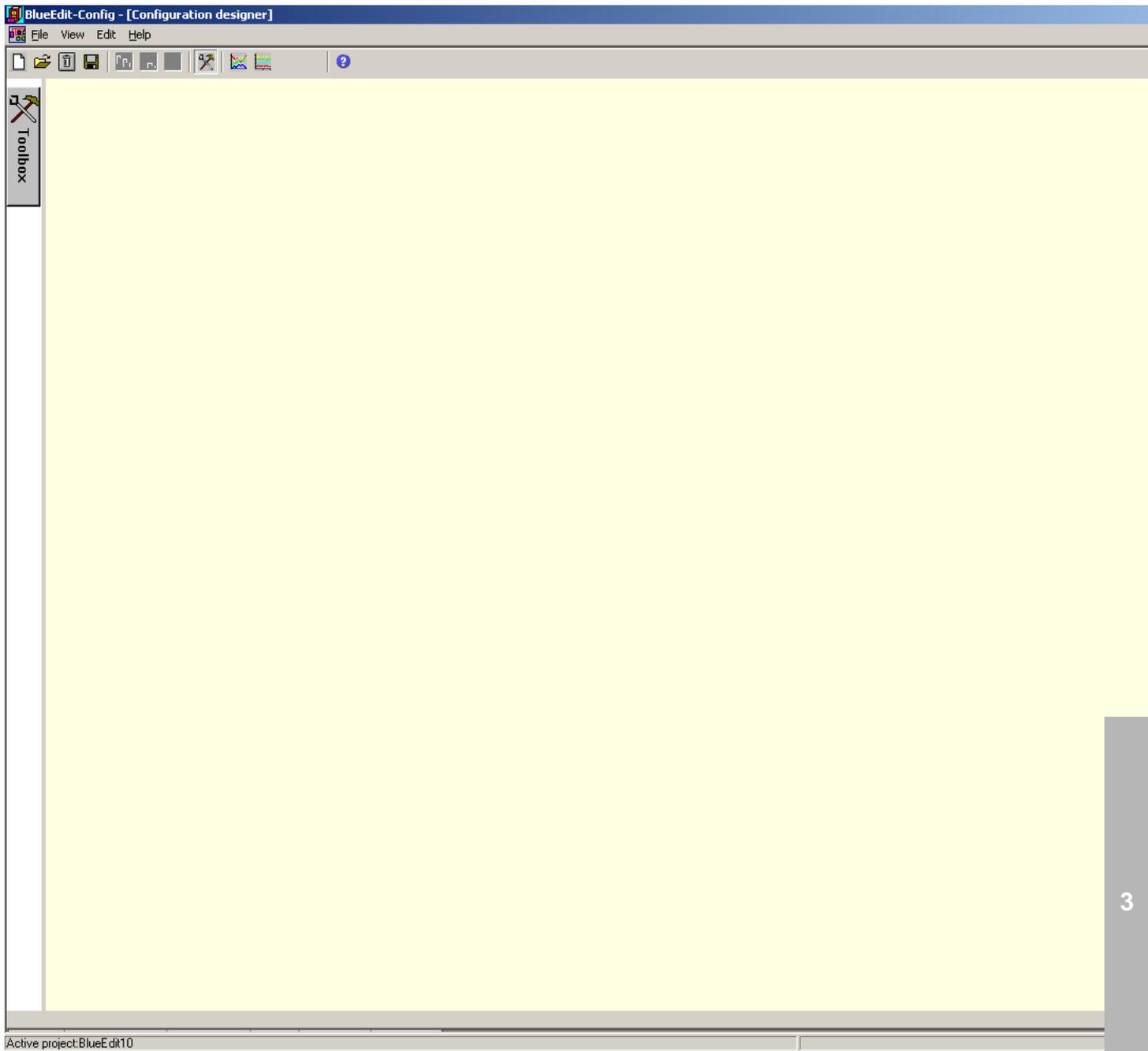


Fig.: 'Toolbox' button visible

Position the mouse pointer on the 'Toolbox' button. This opens a list with all the available communication protocols.

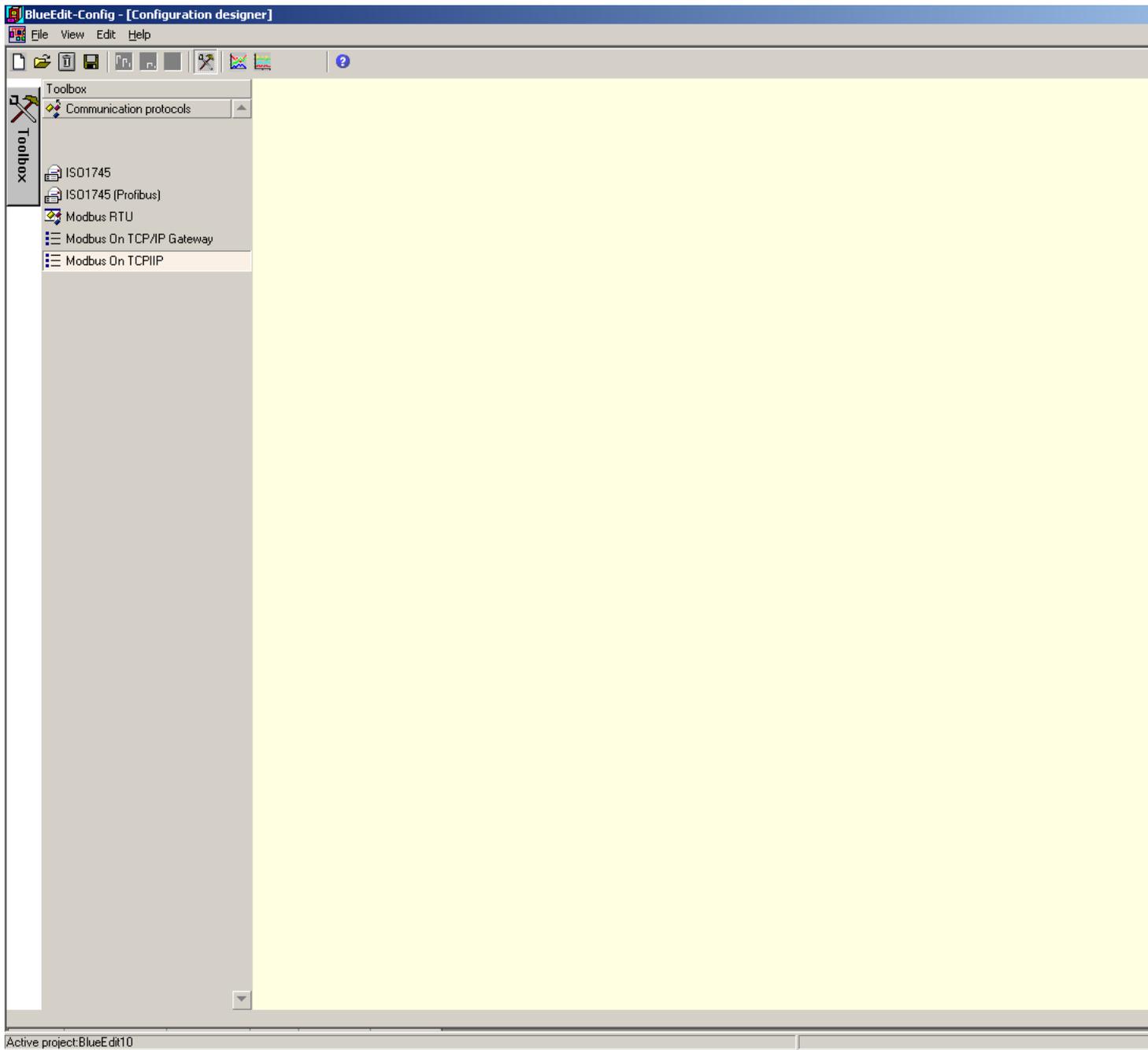
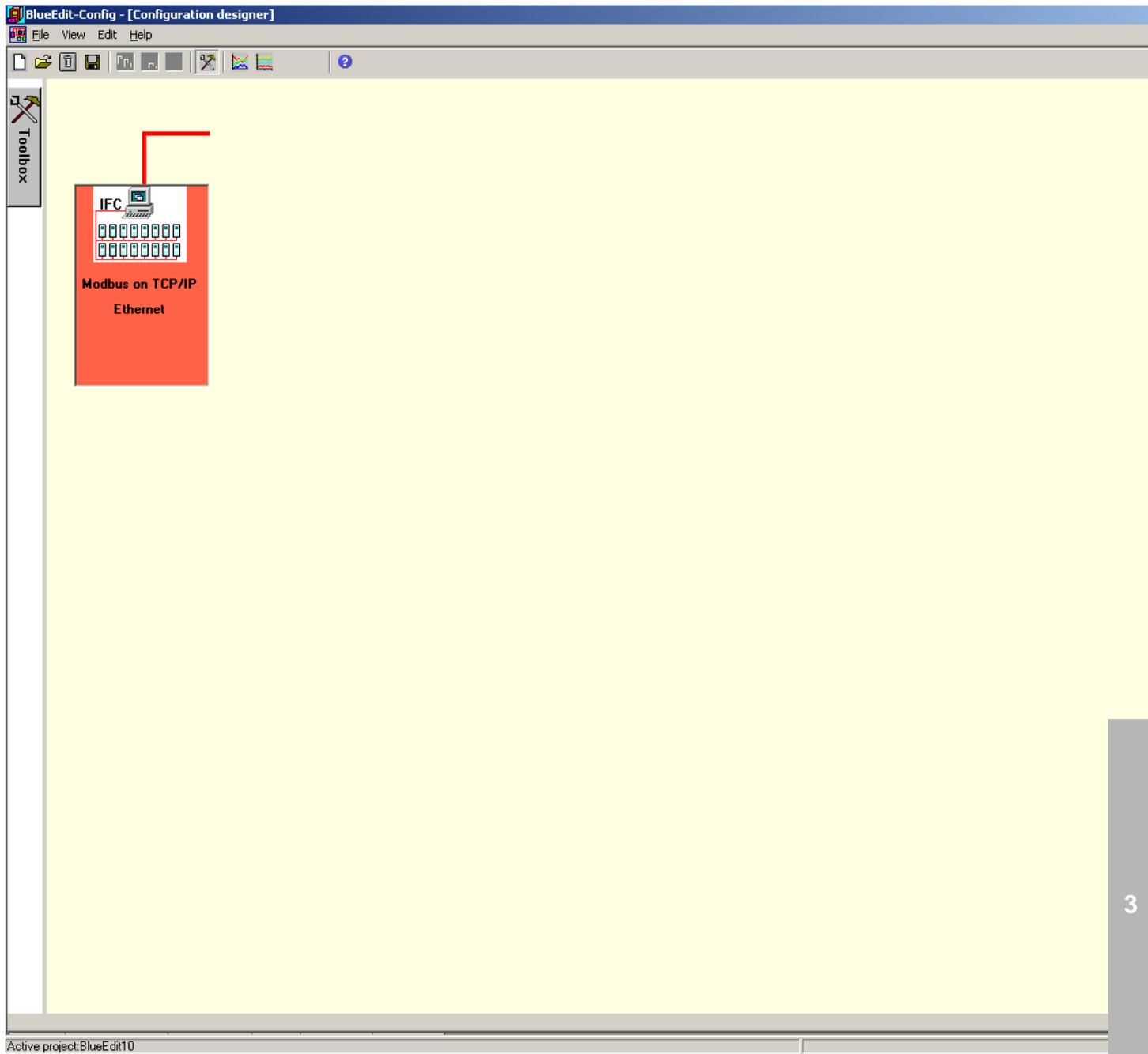


Fig.: List of available communication protocols

Now select the protocol needed to communicate with the target device (e.g. KS 108easy). 'Modbus on TCP/IP' has been selected in the example.

Keep the left mouse key pressed and drag the selected protocol to the right into the workspace. The necessary interface will be implemented and is shown graphically.

Use the same procedure to select/implement additional interfaces (e.g. ISO 1745, etc.).



3

Fig.: Implementing a new interface

3.2.5.2 Changing a communication protocol

Changing a communication protocol

If the protocol parameters are to be changed, the corresponding icon of the communication protocol in the workspace must be selected by clicking the left mouse key on the icon. The icon's colour changes to black, and a list with the possible parameters is displayed at the left. Which parameters are displayed and can be changed depends on the selected communication protocol. Possibly, certain parameters are only displayed but cannot be changed. Other parameters might provide a selection option. Mostly, these parameters have a different colour, and as soon as you click the mouse into the entry field, the selection becomes visible.

Caution: With 'Modbus On TCP/IP', the parameters are changed by clicking on the corresponding device, because every device has its own IP address.

3.2.5.3 Deleting a communication protocol

Deleting a communication protocol

In order to delete a communication protocol and all associated devices from the configuration, the protocol must be selected by clicking the left mouse key on the corresponding icon in the workspace. The icon's colour changes to black, and two options for deleting are displayed. You can either use the icon  in the toolbar, or the context menu. The context menu is opened by clicking the right mouse key on the selected communication protocol. One of the items in the context menu is 'Delete'. If the 'Delete' option is selected, a safety prompt is displayed. If deletion is confirmed, the communication protocol and all associated devices will be deleted from the configuration.

However, this deletion is only temporary. Final deletion is carried out by clicking on the icon  in the toolbar to confirm and save the changes.

It is also possible to delete several protocols, and to confirm/save their deletion together at the end.

Caution: With 'Modbus On TCP/IP' it is not possible to delete the communication protocol; the individual devices must be deleted. This is done as described above by marking the corresponding device and either clicking on the icon  or using the context menu.

3.2.6 Device configuration

Device configuration

This Chapter describes how to add or delete communication protocol devices.

The number of devices that can be added depends on the number of possible addresses for a particular device family. Moreover, not too many devices should be assigned to a communication protocol, as too much time might be required to read the data. Therefore, if many devices are involved, we recommend installing the same communication protocol several times, but using different interfaces.

3.2.6.1 Adding devices

Adding a device

Select the target device: When the communication method has been determined, the target device in which the programmer is running must be added (e.g. KS 108easy, KS 98 family, KS 90-1).

Mark the interface with the left mouse key (icon color changes to black).

If you move the mouse pointer over the 'Toolbox' button, a list with all available target devices is displayed.

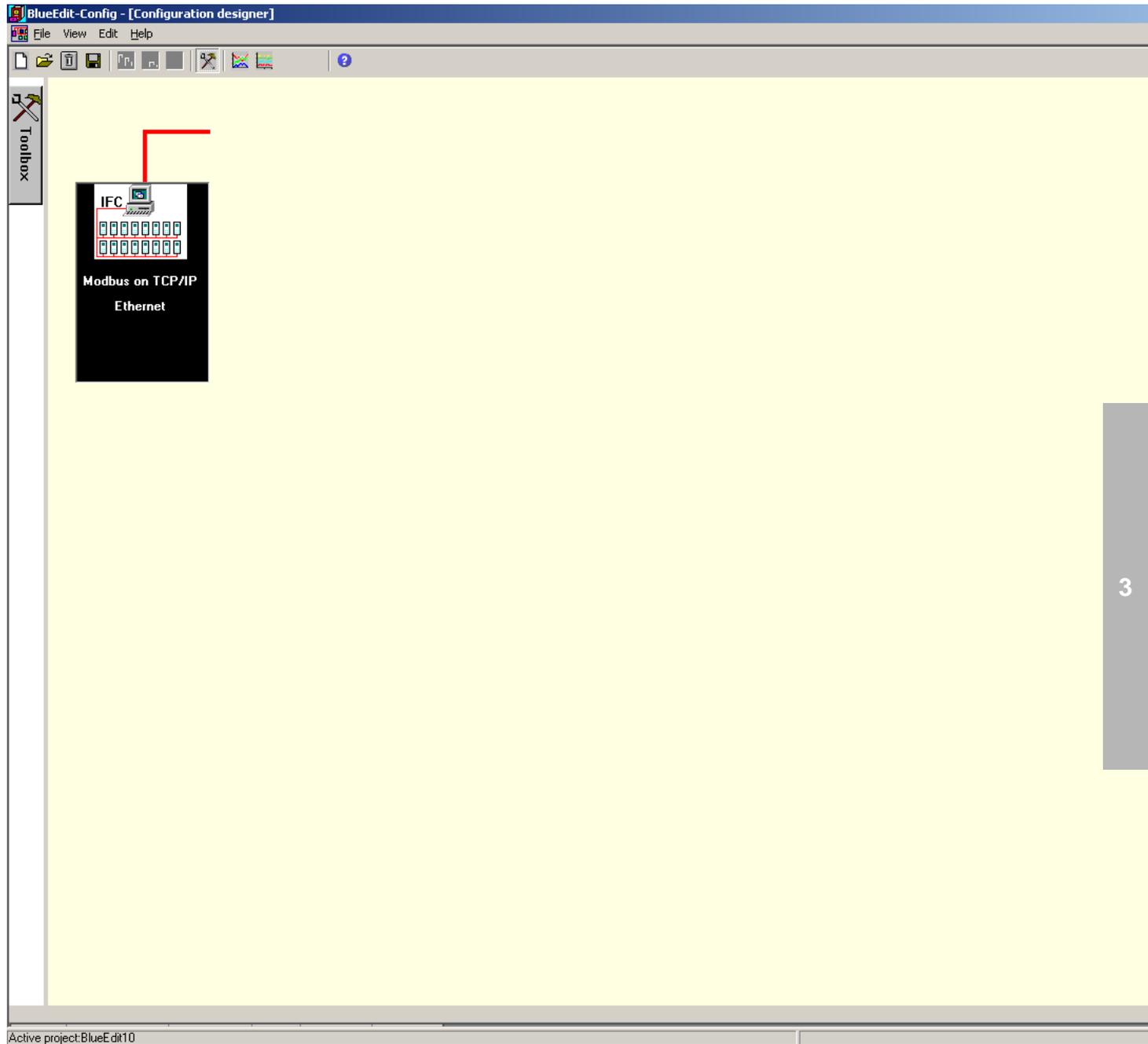


Fig.: Selected interface

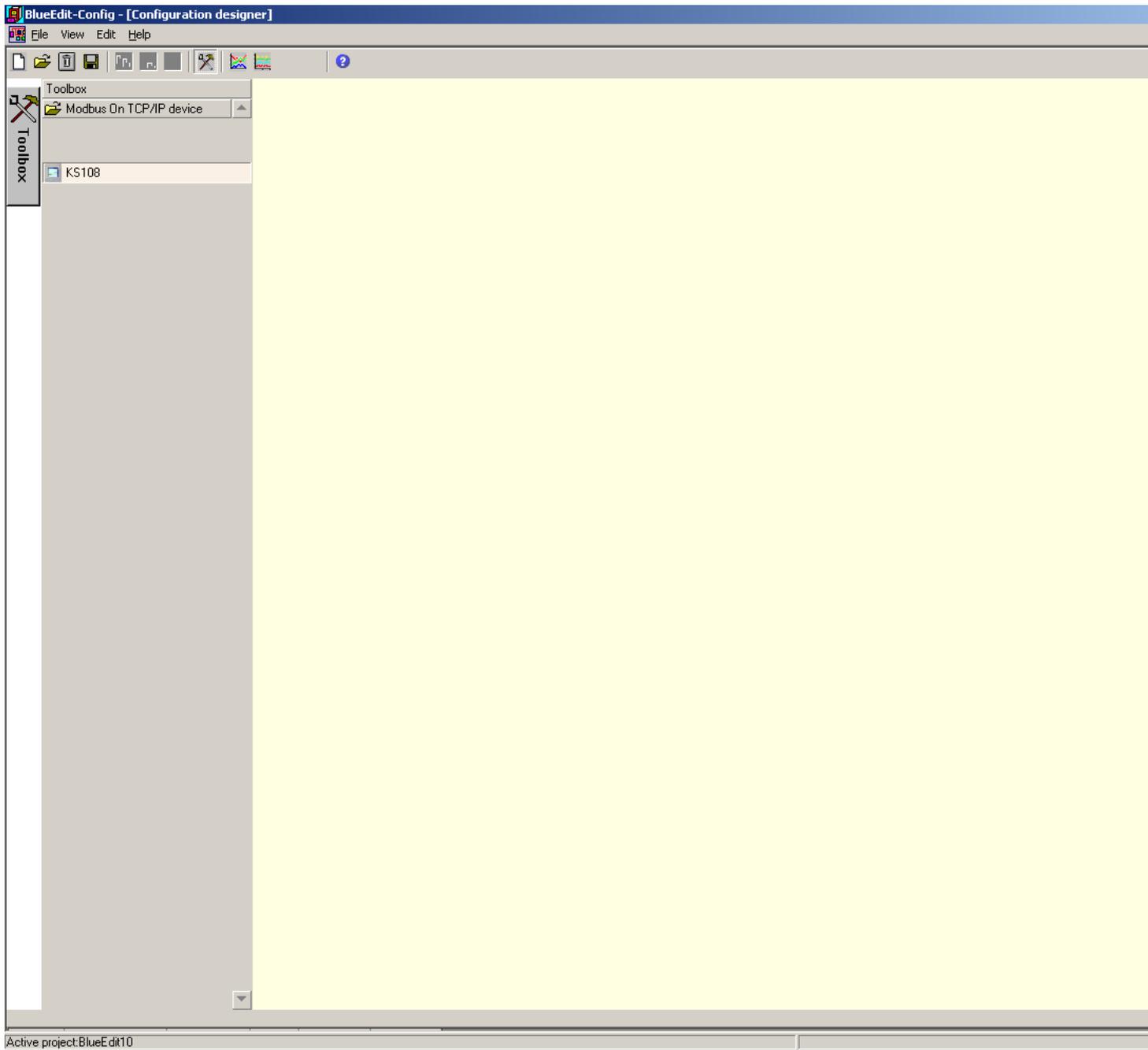


Fig.: Available target devices

Mark and drag one of the listed devices (KS 108) into the workspace with the left mouse key. A template for the device settings (device description, etc.) is opened.

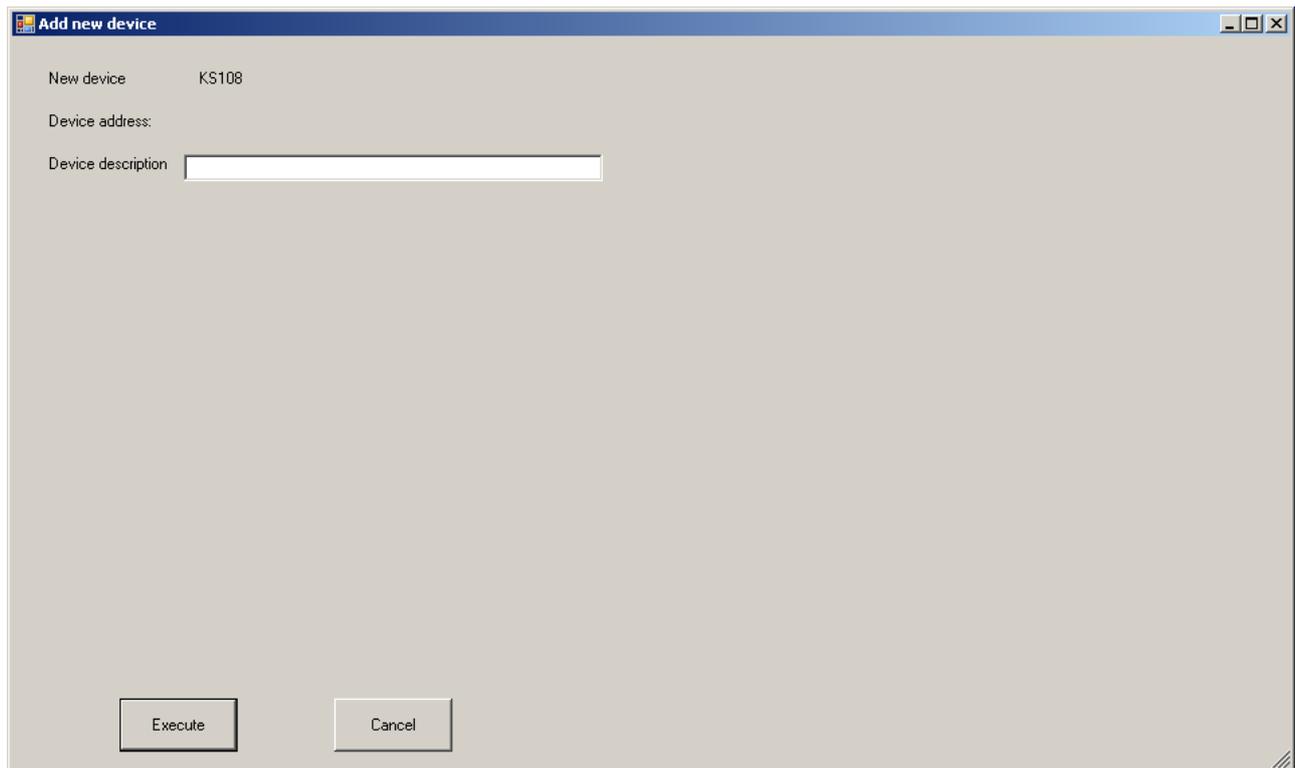


Fig.: Name for target device

After clicking the 'Execute' button, the selected device appears in the Configurator.

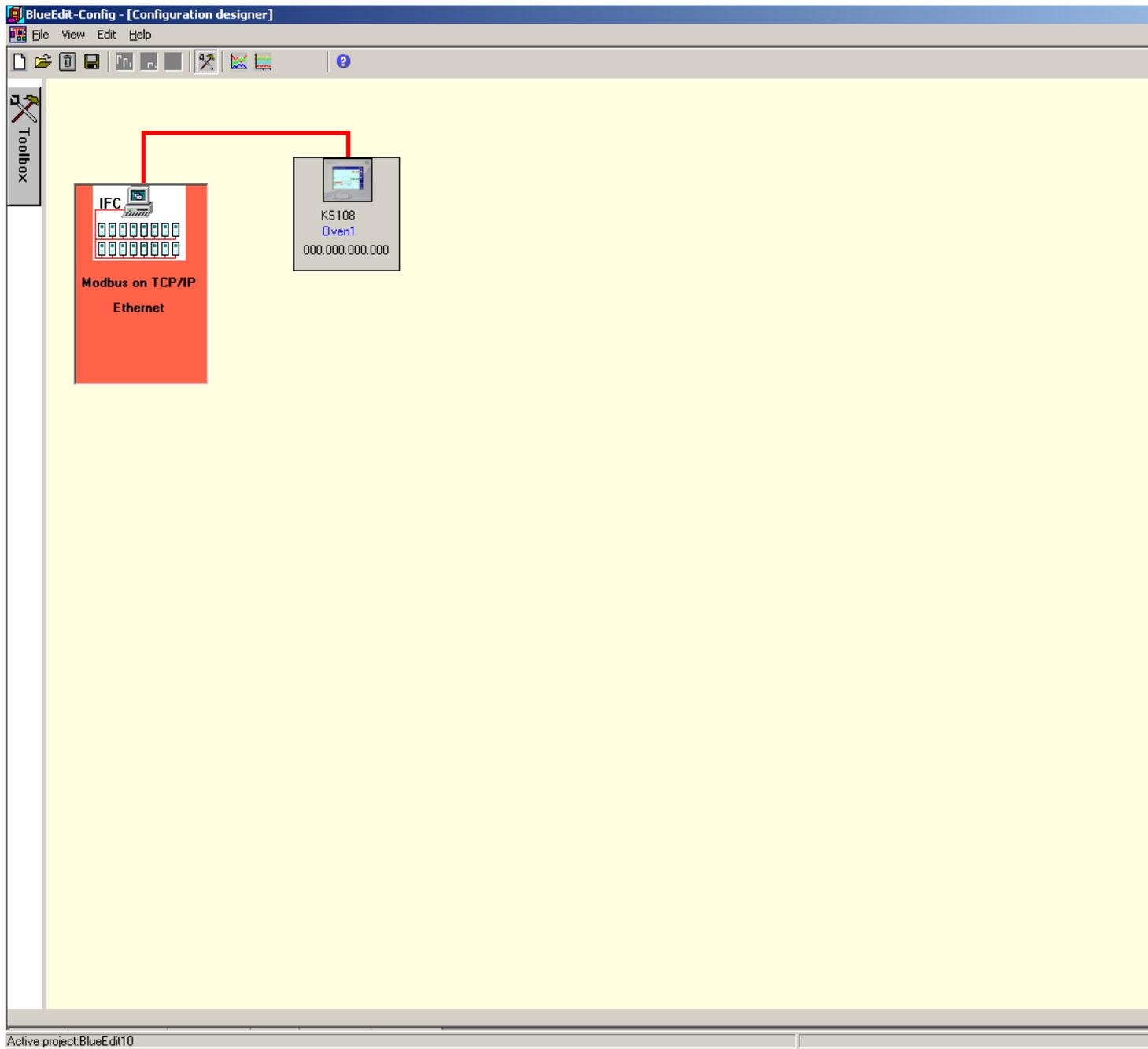


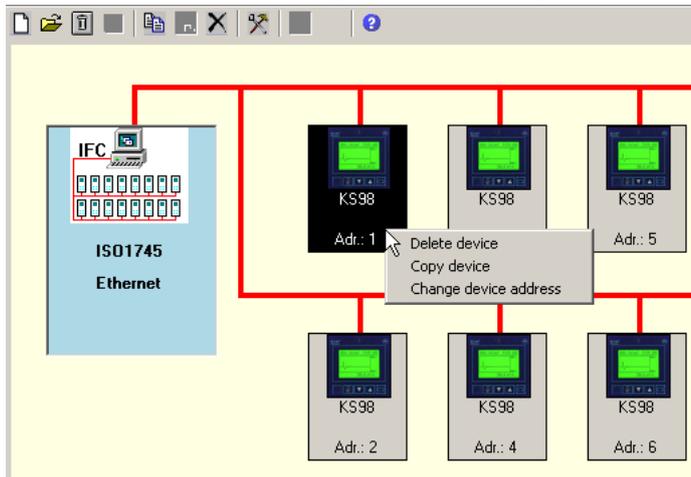
Fig.: Interface and (target) device KS 108easy

3.2.6.2 Deleting devices

Deleting devices

Proceed as follows to delete individual devices from the Project:

1. Mark the corresponding device in the workspace with the left mouse key (icon color changes to black).
2. Now click the right mouse key while the pointer is still on the marked device.



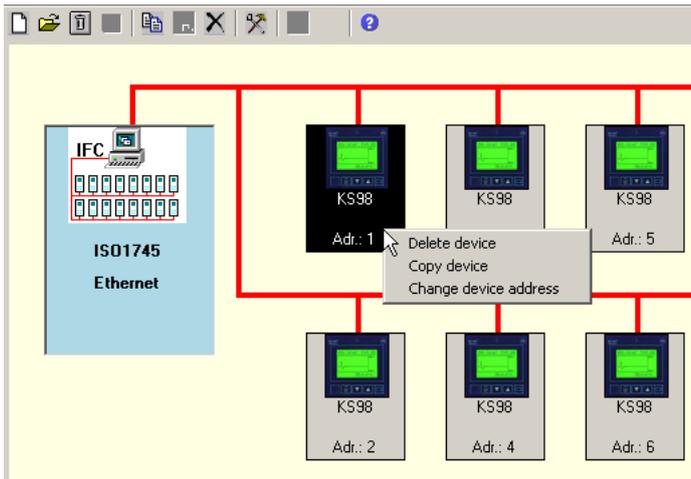
3. Select 'Delete device' in the context menu.
 4. A safety prompt is displayed. If deletion is confirmed, the device will be temporarily deleted from the configuration.
- Alternatively, you can use the icon  in the toolbar to delete the device.

3.2.6.3 Copying devices

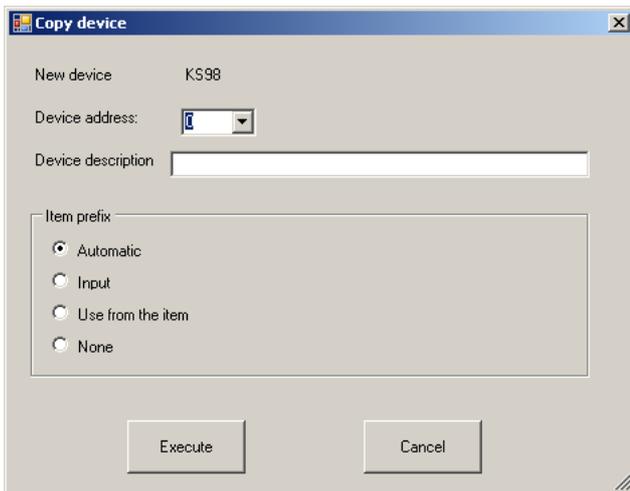
Copying devices

Proceed as follows to copy a device:

1. The device to be copied must be marked in the workspace. This is done by selecting the device with the mouse pointer and clicking the left mouse key. A table with all the Items of the device is displayed in the lower part of the workspace.



2. Moreover, a special icon is available in the toolbar for copying the device into the clipboard. Click the icon.
3. The communication protocol (device family) that is to be assigned to the device must be marked in the workspace. It can be the same protocol that belongs to the device to be copied, or it can be another protocol of the same device family.
4. Next, click on the in the toolbar. However, before the copy of the device is inserted, an entry window with parameters appears after a short delay. The entry window can have the following appearance:



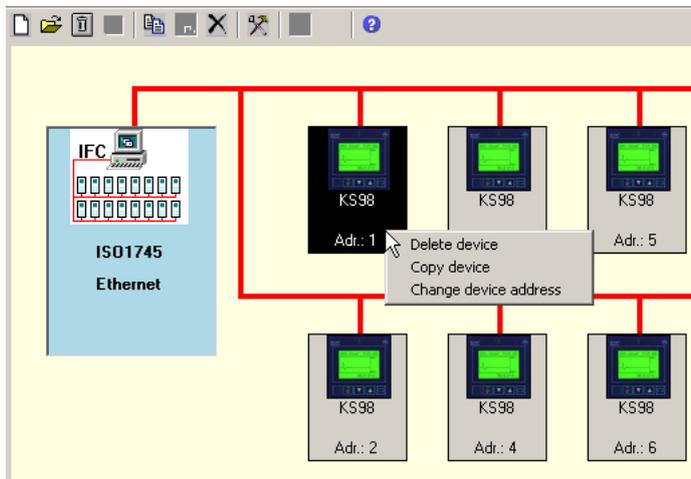
The parameters in the entry window have the following meanings:

- **Device address:** Here you must select the device address. Depending on the device family, different address ranges are available (e.g. the addresses in ISO 1745 are 0 to 99). The list only shows the addresses that are still available.
- **Device description:** This is an optional parameter that provides additional information on the device. An OPC Client cannot read this information.
- **Item hierarchy:** A hierarchy can be used to enable an OPC Client to browse for Items in a structured manner. When adding a new device or an individual Item, 4 possibilities are available:

- **1. Automatic:** A hierarchy is created that consists of communication protocol (e.g. ISO 1745), internal interface number (e.g. IFC1) and device address (e.g. ADR01). For example, ISO 1745/IFC1/ADR01 is entered as hierarchy. The item name will then be prefixed automatically with ./ (dot slash).
- **2. Entry:** An own hierarchy can be defined (e.g. Floor1/Room1/Temperatures). The individual levels must be separated with a slash '/'. The item name will then be prefixed automatically with / (slash).
- **3. Take over from Item:** The hierarchy of the Item to be copied is used. As this can result in multiple use of Item identifiers (hierarchy and Item name), the Item name must be changed before saving.
- **4. None:** No hierarchy is used, and a / (slash) is entered automatically as hierarchy. The Item name is not prefixed.

So far, the copied device and all added Items have only been inserted temporarily. They are inserted and saved permanently by clicking the icon  in the toolbar. Consequently, it is possible to copy any number of Items from any number of devices without having to save them individually.

Alternatively to the above procedure, copying is also possible via the context menu. The context menu is opened by clicking the right mouse key on the selected device (see below).



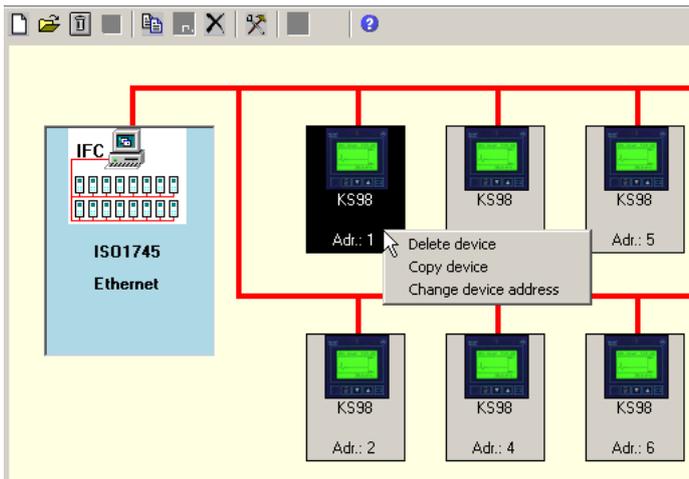
In the context menu you then select 'Copy device'. Subsequently, the window for entering the parameters is opened. For details, see previous page.

3.2.6.4 Changing a device address

Changing a device address

It is also possible to change the addresses of a device and the associated Items at a later time. Proceed as follows to change the address:

1. Mark the corresponding device in the workspace by placing the mouse pointer over the device symbol and clicking the left mouse key. The selected symbol turns black.
2. Keep the mouse pointer on the symbol and click the right mouse key to open a context menu.



3. Click on 'Change device address' in the context menu. This opens a template in which the new address can be selected.



4. When the address has been selected, click on 'Execute'. The device address will now be changed, together with the hierarchy of the associated Items, if necessary.

Caution: This is not possible with 'Modbus On TCP/IP', because every device has its own IP address instead of a device address.

4 Appendix

Appendix

The Appendix contains several useful tips and hints on the following topics:

1. Files and directories
2. Fault analysis
3. Settings and configurations for Remote access
4. Firewall settings
5. DCOM settings
6. Additional safety settings
7. End user license agreement (EULA)

4.1 Files and directories

Files and directories

All necessary files for the BlueEditOPCServer, the associated configuration program, etc. are placed in the correct directories during installation. Of course, you cannot simply delete these files and directories - they must be removed by uninstalling the software package.

Additional files are generated during configuration of the BlueEditOPCServer with the program MSI OPCServerW-Config. One of the important ones is the file

BlueEditOPCServer.config.xml

which is generated in the directories of the server and the configuration program. This file contains all the general data regarding all the configured Projects. Furthermore, a file named **Project name.cdb** (e.g. Standard.cdb) is generated for every Project. Per default, this file is located in the program's sub-directory 'Data'. However, a different path can be assigned when creating the Project.

Consequently, should a configuration be generated on a different computer than your standard working PC, the file BlueEditOPCServer.config.xml and the associated Project file (e.g. Standard.cdb) must be copied from the configuration PC to the working PC. It is also possible to copy only the Project file (e.g. Standard.cdb) into the data directory of the working PC. In this case, a Project with the same name must be created there by means of MSI OPCServerW-Config.

4.2 Fault analysis

Fault analysis

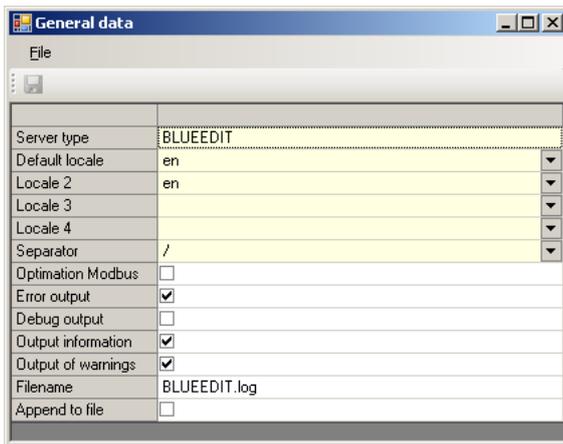
For fault analysis, BlueEditOPCServer provides the possibility of generating supplementary outputs. These outputs can be activated/deactivated by means of the Explorer during configuration. The following supplementary outputs are possible:

1. Faults
2. Debug
3. Info
4. Warnings

Combinations of the individual outputs are possible. If all the options are activated, it is possible that a very large amount of data will be generated.

If these outputs are written into a file (can be configured), a subsequent check of the sequence is possible, and which faults and warnings occurred.

The screenshot below shows the activation in the configuration program:



In the above example, all additional output options have been activated. These outputs will be written into the file MSIOPCDataServer.log. The file will be created again during every restart of the server, because the option 'Append to file' has not been activated.

Caution: The option 'Debug output' can write large amounts of data into the log file. Therefore, it should only be activated, if it is really necessary for a fault analysis. 'Debug output' records practically all read and write operations between client and server.

Structure of the log file

The log file for fault analysis has the following general structure:

[Date time] [c] output text

The clock has a resolution of 100 ns. Values smaller than one second are separated from the seconds by a dot (example for date and time: [01.01.2006 11:28:30.2031250]).

The output at [c] can be: [I] for information [E] for error (fault) [W] for warning [D] for debug

Normally, a new log file starts with the output of the version and type of the OPCServer. A typical output could be as follows:

[01.01.2006 11:26:59.4687500] [I] MSI-OPC Data Access Server (PMA) Version= 1.0.0.0

This is followed by the information whether the server uses a valid serial number, and whether it has a valid activation code.

The output could be as follows:

```
[ 01.01.2006 11:27:00.8593750 ] [!] License info: OPCServer license correctly activated.
```

4.3 Settings and configurations for Remote access

Settings and configurations for Remote access

Most OPC clients and servers use DCOM in order to communicate via a network. As additional safety functions have been implemented in Windows XP - especially since Service Pack 2 (SP2) - several useful hints are given below for ensuring trouble-free operation of DCOM with BlueEditOPCServer. Additional information on DCOM settings and other hints can be found in the Internet at the OPC Foundation under <http://www.opcfoundation.org>.

SP2 provides several improvements for the PC's safety, two of which are directly related to OPC via DCOM. For example, new 'DCOM Limit Settings' have been added. Secondly, a software firewall has been integrated, that is enabled in the default setting.

By means of the Callback Mechanism used by OPC, an OPC client becomes a DCOM server, and the OPC server becomes the DCOM client.

Note: OPC communication that is only carried out on a single computer, uses COM instead of DCOM, so that the following settings are not necessary.

The following sections describe the settings for the Windows firewall, for DCOM, and additional safety settings. The descriptions are for Windows XP Service Pack 2. The screenshots shown here might not correspond with those of other Windows versions (2000, XP without SP2, etc.) or might have different contents.

4.3.1 Firewall configuration

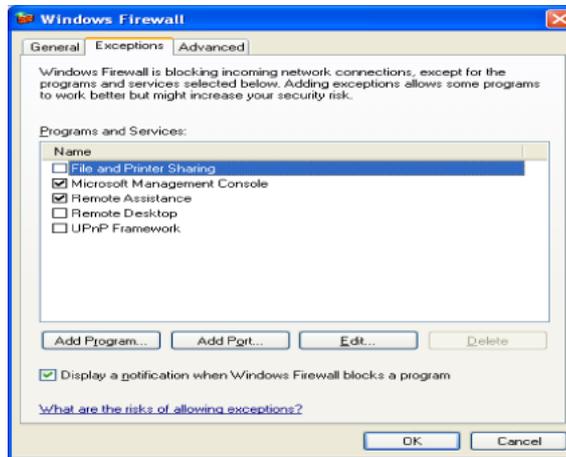
Windows Firewall

The firewall permits communication via a network that was initiated locally, but prevents incoming communication by default. However, the administrator can define applications and ports that accept unrequested incoming communication. In order for OPC client/server applications to work properly via DCOM, adjustments are necessary for both.

Firewall configuration

If the Windows firewall is disabled, it does not need to be configured.

If the firewall is enabled, the Exceptions list of the firewall should be selected:



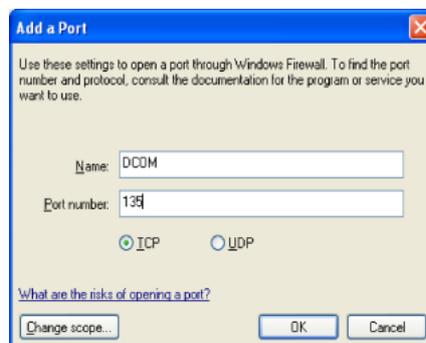
All OPC clients and servers must be added to the Exceptions list (click 'Add Program ...' button).

In addition, the Microsoft Management Console (is used for DCOM configuration program) and the supplementary OPC program 'OPCenum.exe' must be added.

If necessary, please refer to Windows Help for details on adding programs to the list.

Note: Only 'exe' files can be added to the list.

Also, TCP port 135 must be added by means of the 'Port ...' button, as this port is required for initializing the DCOM communication.

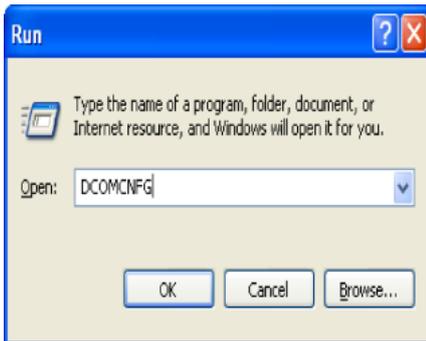


4.3.2 DCOM Settings

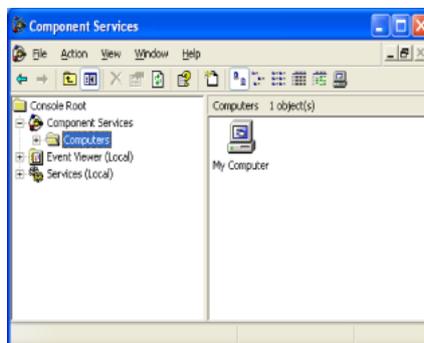
OPC via DCOM with Microsoft Windows XP and Service Pack 2

Proceed as follows to configure DCOM for OPC communication with Windows XP SP2:

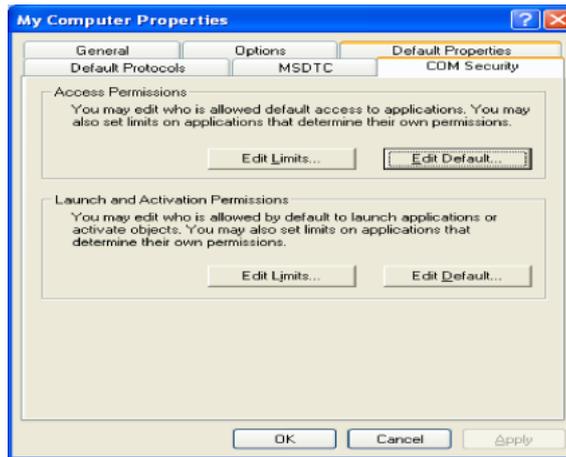
1. Click on Start -> Run, enter 'DCOMCnfg', and click on OK.



2. Click on 'Component services' in the console root.
3. Then click on 'Computer' under 'Component services'.
4. Place mouse pointer in workplace, press right mouse key, and then select 'Properties'.



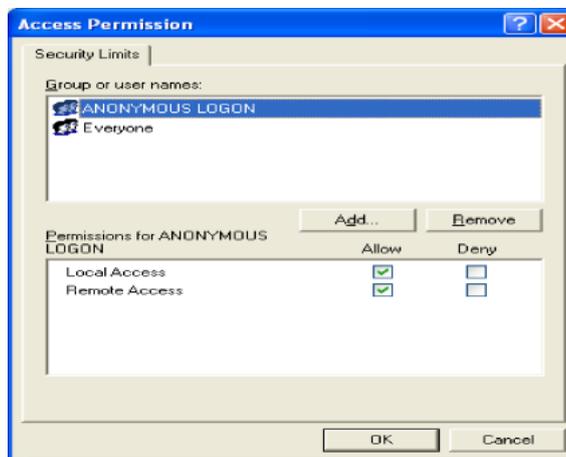
5. Select the tab 'COM Security', which contains the 4 possibilities to be configured:



6. Editing the limits for Access and Start:

a. Access rights editing limits ...

Mark the remote access for user ANONYMOUS LOGIN in this dialog box.



Note: This setting is necessary for OPCEnum.exe and for some OPC servers and clients that set their DCOM 'Authentication Level' to 'None', in order to permit anonymous connections.

If OPCEnum is not used, the remote access for anonymous users need not be enabled.

b. Start and enabling rights editing limits...

Remote start and remote enabling for the group 'Every' must be activated here.

Note: As the group 'Every' is frequently not desired, as it includes everything, it is often better to create a separate group (e.g. OPC User). Subsequently, add all users to this new group, who run the OPC server and clients.

7. Editing the standard for Access and Start

Local and remote access must be set to 'Allow' for every user or group for whom OPC communication is to be possible.

Access rights per user:

Permissions for Everyone	Allow	Deny
Local Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remote Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>

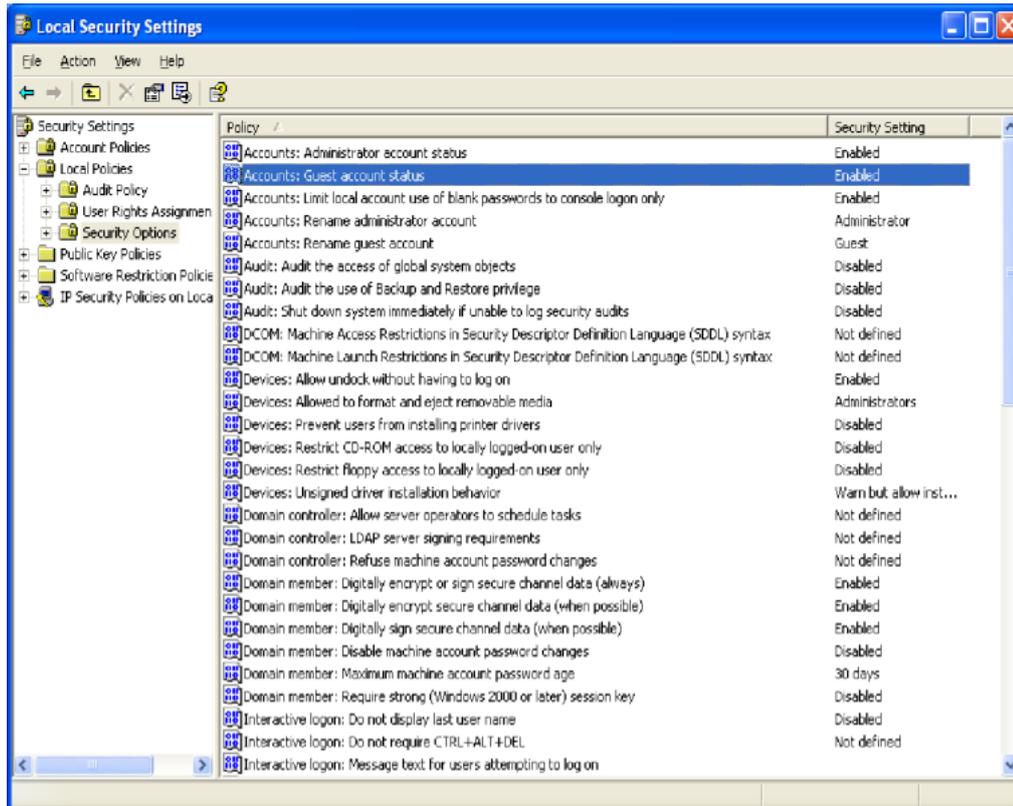
Start and activation rights per user:

Permissions for Everyone	Allow	Deny
Local Launch	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remote Launch	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Local Activation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remote Activation	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.3.3 Additional safety settings

Additional safety settings for Windows XP

Windows XP provides several more important safety settings, which can prevent unauthorized remote access to BlueEditOPCServer. The local safety settings might have to be adapted accordingly. These are accessible in Windows XP under 'Administrative Tools'. After opening 'Local Security Policy', you must select 'Local Policies' and the 'Security Options'. Here, it might be necessary to activate 'Guest account status', as shown in the screenshot below:



In addition to the 'Guest account status', you must also adapt 'Network access: Sharing and security model for local accounts'. It should be set to 'Classic - Local users authenticate as themselves'. The following screenshot shows the settings:

4.3.4 Example for DCOM settings

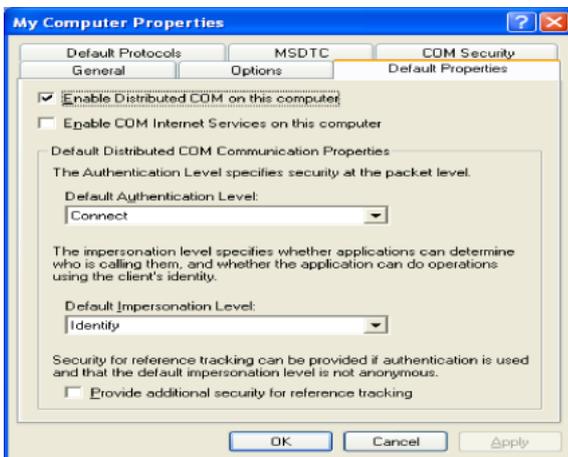
Example for DCOM settings

Sometimes, it can be very time-consuming until all the settings on the OPC server and the OPC client PC have been made so that everything works correctly via DCOM. Shown below are a few screenshots from a correctly working installation. Apart from the information given below, you should also observe the notes on DCOM and Firewall in the previous sections.

In the example below, all the PCs are in a common workgroup, i.e. not in a domain. In order to simplify the access rights, the same user and the same password has been entered on all the PCs. Here, the user is 'OPCInterop'.

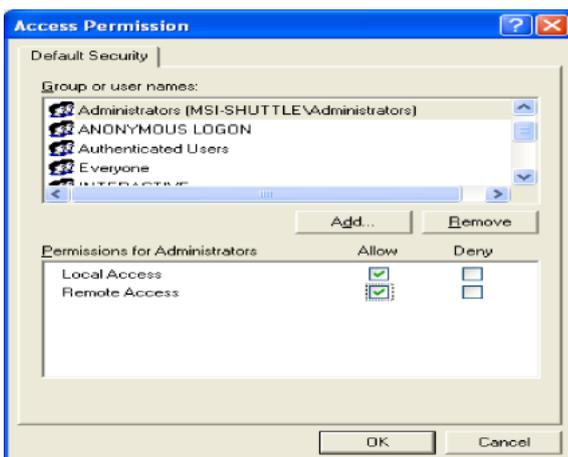
If you are working in a domain, a group can be created, which can be arranged for common use.

The following screenshot shows the general DCOM settings, as entered for 'Workplace' in DCOMCNFG.

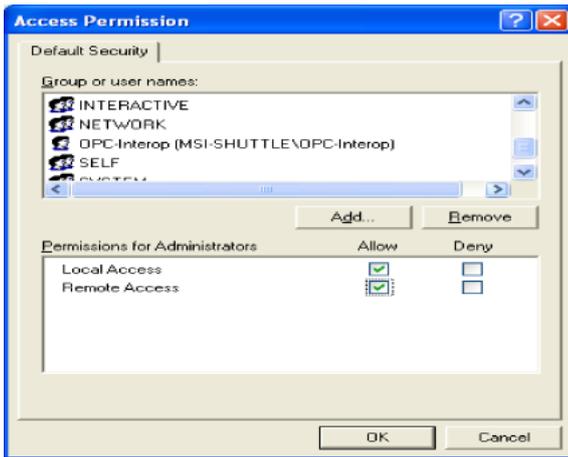


The next two screenshots show group or user names, which are to be given access rights. Here, more users and groups have been given access rights than described in the section 'DCOM settings' DCOM einstellungen (see page 67). Particularly important are the access rights for the user 'OPCInterop'.

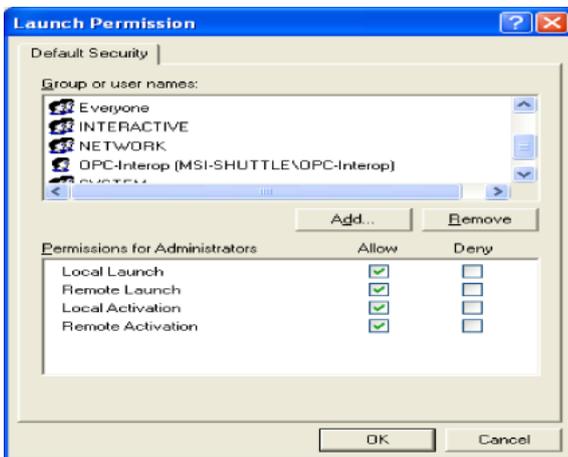
Access rights, Part 1:



Access rights, Part 2:



Of course, the start authorization for user OPCInterop is equally important, so that he/she is able to start BlueEditOPCServer. In this case, start authorization has also been assigned to the other groups and users.



Also important is that the following settings are made in BlueEditOPCServer. This ensures that, regardless of which user starts the server, it is always considered as having been started by user OPCInterop. This is particularly important for the functionality of the callback from the server to the client.



4

4.3.5 Problems with Remote access

Problems with Remote access

If problems arise during Remote access to BlueEditOPCServer, the OPC client usually generates error messages. As not all OPC clients generate the same messages, only a few general hints can be given below. If necessary, the specific error messages generated by the respective OPC client must be looked up in the client's operating manual.

1. Access denied when browsing for BlueEditOPCServer

The OPC client finds the remote PC in the network with BlueEditOPCServer, but access is denied when attempting to browse for OPC servers. If the OPC client is used to browse the program OPCENUM of the OPC Foundation, the DCOM or firewall settings for OPCENUM are probably incorrect in the remote PC.

2. BlueEditOPCServer does not start

The OPC client finds BlueEditOPCServer, but cannot start it. Probably, the start authorization for BlueEditOPCServer has not been defined correctly on the remote PC. Check that the DCOM settings are correct.

3. BlueEditOPCServer starts, but access is not correct

The DCOM access rights have not been defined correctly.

4. Attempt to generate a Group or 'Subscription' fails

The OPC client is able to start BlueEditOPCServer on the remote PC, and is also able to browse for the configured Items. Synchronous reading and writing is also possible, but access is denied when attempting to generate a Group or 'Subscription'. BlueEditOPCServer tries to execute a callback, but may not access the OPC client, because the DCOM settings on the client PC are not correct. Perhaps BlueEditOPCServer has been started by a user who does not have access rights for the client PC.

4.4 End User License Agreement

End User License Agreement

Product: BlueEdit

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