NETLink® PRO family

Application Examples with RFC 1006

Edition 6 / 05.10.2012

Systeme Helmholz products

S7/S5 OPC-Server V4.10.2.9117 (Systeme Helmholz)

Products of other manufacturers

INAT-OPC-Server (INAT GmbH)

Indusoft Web Studio V7.0 (Indusoft)

InTouch V9.5 (Wonderware GmbH)

KEPserverEx V5.4.135.0 (KEPware Inc.)

PROCON-Win V5.3 (GTI Control)

VisAM Win32 (VISAM GmbH)

WinCC V7.0 (Siemens AG)

WinCC flexible 2005/2007 (Siemens AG)

ZenOn V6.2 (COPA-DATA)

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Note:

We have checked the content of this manual for conformity with the hardware and software described. Nevertheless, because deviations cannot be ruled out, we cannot accept any liability for complete conformity. The information in this manual is regularly updated. When using purchased products, please heed the latest version of the manual, which can be viewed in the Internet at www.helmholz.com, from where it can also be downloaded.

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Revision history of this document:

Edition	Date	Revision
1	07.05.2008	First edition
2	07.04.2010	PRO family updated
3	29.11.2010	KEPserverEx V5.4.135.0 updated
4	04.07.2011	Helmholz OPC Server V4.0.6.4908 updated
5	05.08.2011	Added Indusoft Web Studio V7.0 and PROCON-Win V5.3
6	15.08.2012	Added WINCC V7.0

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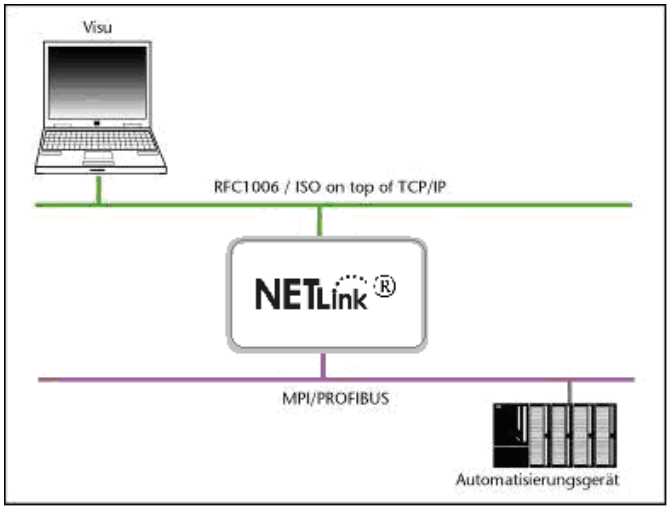
1 Overview

1.1 Application and function description

This document is intended as a supplement to the NETLink® product line manuals.

Many visualization manufacturers support the TCP/IP protocol *'RFC1006'* also known as *'ISO on top of TCP'* to be able to communicate with S7-300/S7-400 systems, for example.



If this *'RFC1006'* function is activated for example in the NETLink® PRO, explicit adaptations must be made to the software products. This manual describes step by step the basic settings of a small selection of visualization solutions for transferring data via this communication path.

In firmware versions from 2.3 of the NETLink ® PRO family adapters the *"RFC1006*" function is always active.

It is assumed that the reader is familiar with the development environment of the software solutions mentioned in this document, as only the points specific to the connection are described

More extensive support with commissioning and parameterization of the various SCADA-, HMI/OPC server systems is available directly from the manufacturers in question.

At this point is not described how a Internet teleservice via VPN and port forwarding is implemented with a NETLink® Ethernet gateway.

Please pay attention to the information in the figures

1.2 Information in the figures

Many of the figures in this document contain settings and directions for use marked or highlighted in red.

2 RFC 1006 Activation via the Web Interface

The examples described here are based on NETLink models with firmware versions less than V2.3 (e.g. NETLink ® PRO). Prior to the use with this device the RFC 1006 functionality has to be set manually.

A detailed description is also given in the accordingly manual! We generally recommend upgrading your NETLink® products with the last firmware version, so you can always use the latest features.

2.1 Requirements

The NETLink® Ethernet gateway is connected to the PC via a network card. One of the SCADA/OPC server programs described below is also installed on this PC. The Webinterface function must not be deactivated. It is accessed via one of the installed Internet browsers (for example, Mozilla Firefox, Opera, Konqueror, or Internet Explorer).

You do not need to install any additional drivers for the NETLink®.

The applications described here were performed on the Window XP operating system with service package 2 and 3.

2.2 Adapting the configuration side

As soon as the Web interface is opened by entering the relevant URL *'http://<ip address>'*, the link to *"Configuration"* opens. As soon as you have answered the security query, you can write to all parameters.

From version 2.3 there is a text field: "RFC mode is always activated". In this case, you can skip this section.

The *'RFC 1006 interface ON/*OFF' option is activated by entering *"ON"* and confirming with the *"OK"* button (see Fig.)

In the next window, the settings are displayed again and must be confirmed with *"OK"* before they are finally transferred to the NETLink® device.

affects only the products:

700-881-MPI11 and

700-881-MPI12

The following figure shows the configuration screen in the NETL ink ® PRO web interface. In the current firmware versions of other NETLink ® Ethernet variants is this manual assignment not necessary.

Configuration menu in NETLink® PRO:

Systeme Helmholz compatible with you

Home | Status | Configuration | Security | Observe Variables

NETLink PRO Configuration

Device specific parameters

Device name	Martin

TCP parameters

Static IP address	192.168.4.38	Static parameters are used if DHCP is switched off
Static subnet mask	255.255.0.0	Static parameters are used if DHCP is switched off
Static gateway	0.0.0.0	Static parameters are used if DHCP is switched off
Alternative NETLink Port	7777	Don't use well-known ports less than 1024 (Default port is 7777)
DHCP ON/OFF	OFF	
DHCP Timeout (in seconds)	DHCP is disabled	
Web interface ON/OFF	ON	

RFC 1006 / S7-TCP parameters

RFC 1006 interface ON/OFF	ON				The following parameters are used if RFC 1006 is switched on
- Bus autobaud ON/OFF	ON				
- Own station address	0				
- Stored bus parameters	Baud rate (kBit/s)	187.5	HSA	31	The bus parameters are used if autobaud detection is switched off
	Tslot_Init	415	Ttr	9984	
	Max. Tsdr	400	Min. Tsdr	20	
	Tset	12	Tqui	0	
	Gap Factor	5	Retry	2	
- Rack/Slot mode ON/OFF	OFF				
- Fix destination address for R/S mode	2				This parameter is only necessary if rack/slot mode is switched on

Password settings

New password	•••••
Retype new password	•••••

OK

System Reset | Cancel

Rebooting can take up to 15 seconds.

After the new parameterization data have been stored, the NETLink® PRO is restarted to activate the new configuration.

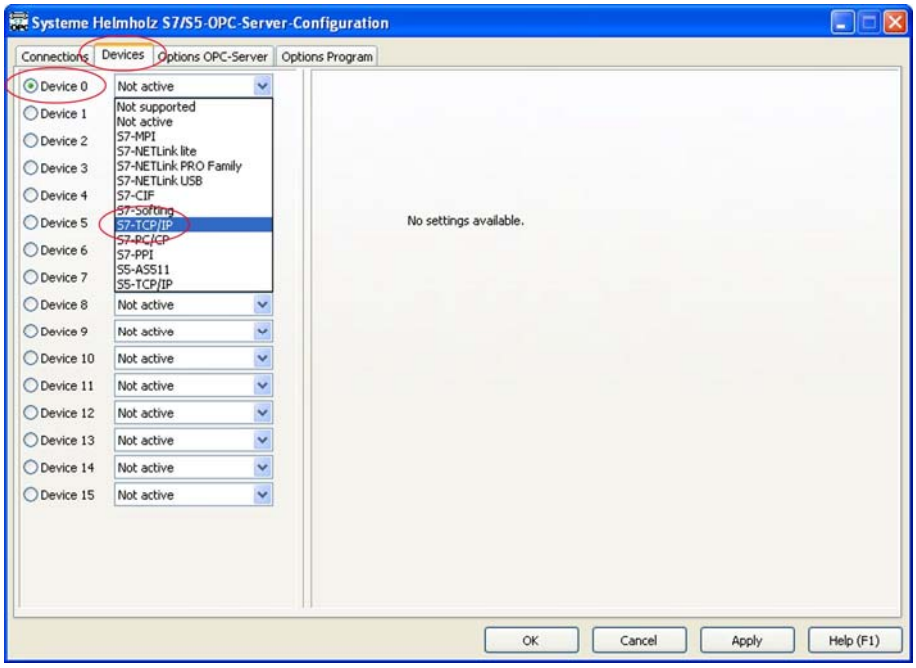
3 Systeme Helmholz OPC-Server V4.10.2.9117

The following steps must be performed in the described sequence (Version July 2011):

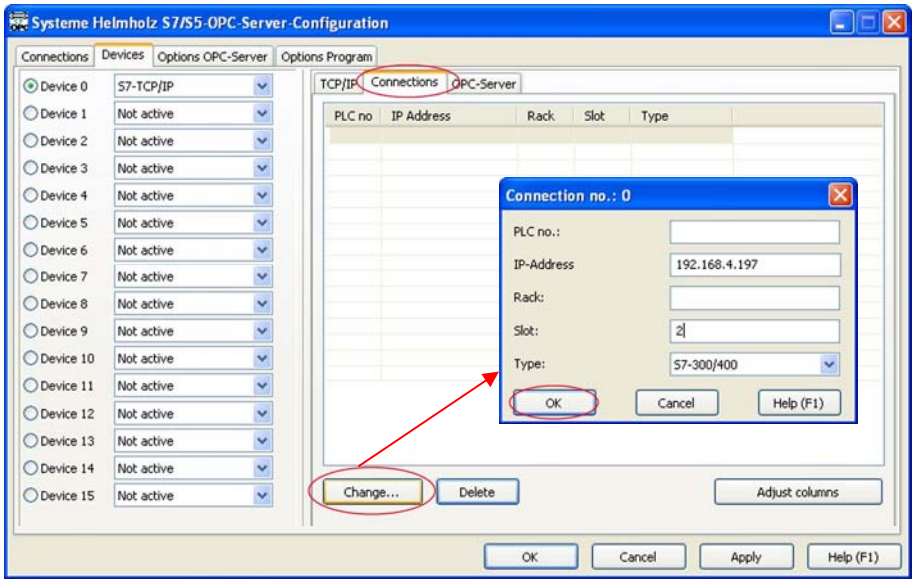
3.1 Configuration of the communication partner

Start the *"Configuration S7-OPC Server"* program module via *Start/Programs/Systeme Helmholz/S7-OPC-Server*:

- Select tab card *"Devices"*.
- In this example, click device 0 and then select *"S7-TCP/IP"* from the pull-down menu.

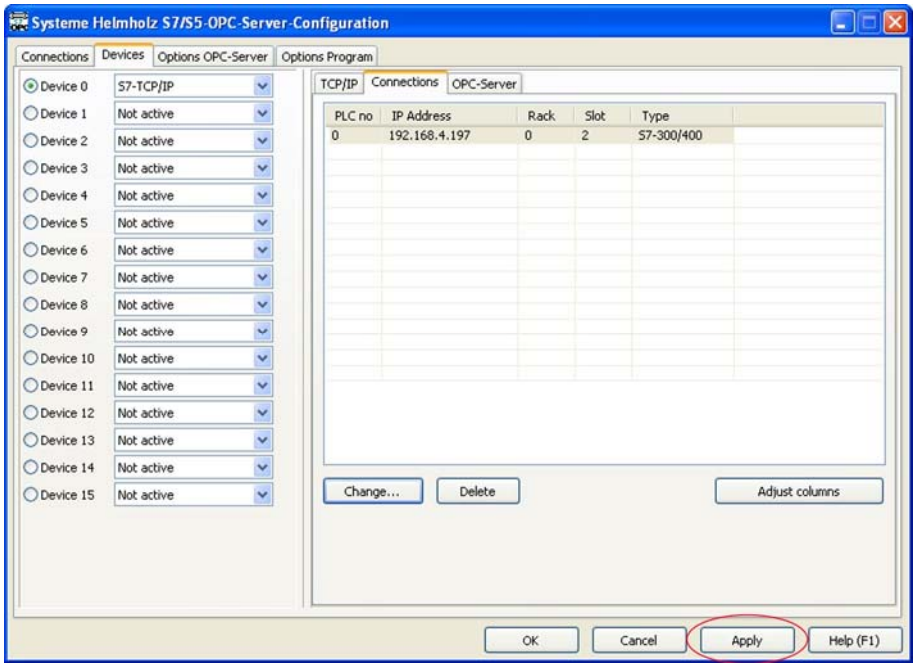


- Go to the tab *"Connections"* in the right sub window.
- Click *„Change…"* to create a new connection.



It opens a new connection window

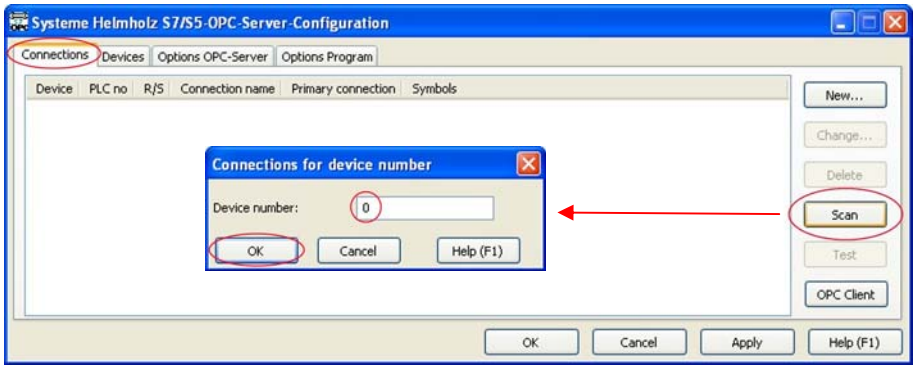
- The PLC no. and Rack in this example is not relevant
- Enter the NETLink® address in the IP address field
- Enter the MPI address of the connected PLC in *"Slot"*
- Finally set the type of PLC you are working with.
- Close the window by clicking *"OK"*.



Complete your connection settings with *"Apply"*

Next, select the main tab *"Connections"*

- Click the Button *"Scan"*.

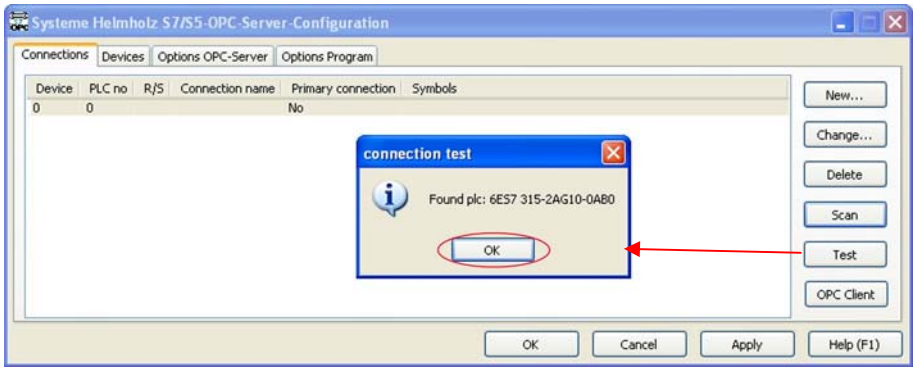


Enter the configured device number (possible 0 to 15). In this example -> 0

- Confirm with *"OK"*

The connection to the adapter should be established and displayed.

- The CPU can be determined with *"Test"* (this feature is optional and must not be executed in mandatory).

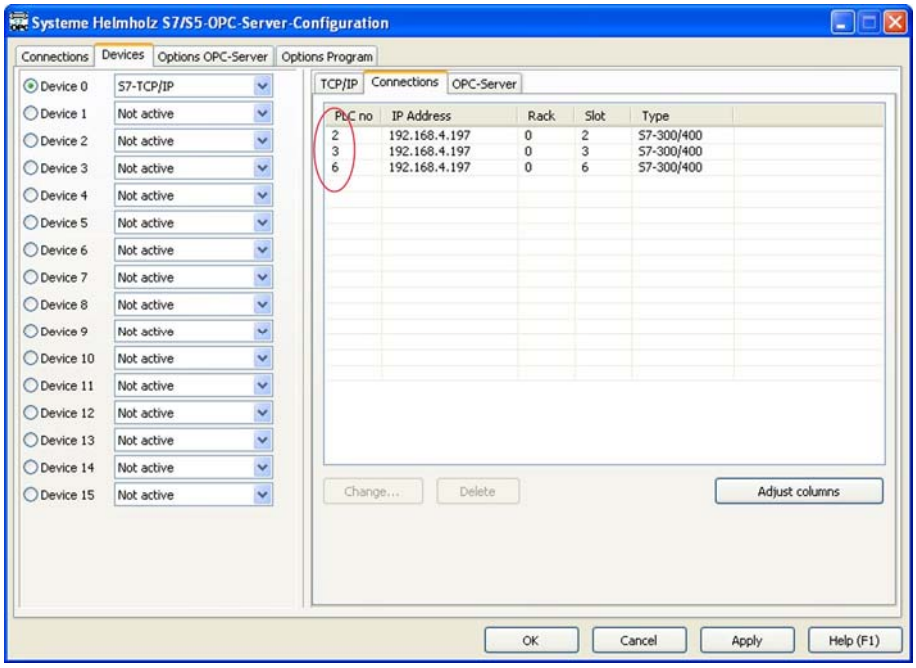


- The connection test was successful and can be confirmed with *"OK"*.

The OPC server is now fully configured for a NETLink® to PLC connection.

If you want to set up multiple connections within a device, the *"PLC no."* has to be unique for each connection. These numbers must be different.

Choose the CPU address as PLC-number to prevent duplicates



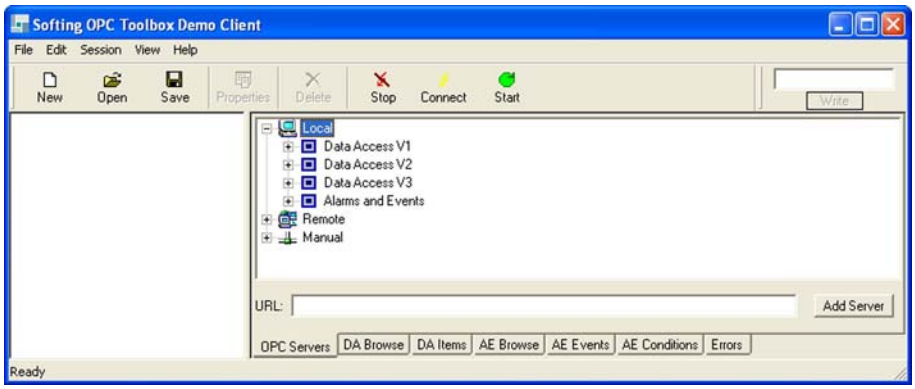
3.2 Setting up the OPC Toolbox demo client

The following steps are provided as an example only and are not obligatory for customer applications. They serve as a visual check whether data exchange is taking place.

Start program module *"OPC Toolbox demo client"* with *Start/Programs/Systeme Helmholz/S7-OPC-Server*. The various tab cards are displayed below.

The *"OPC Servers"* field opens first:

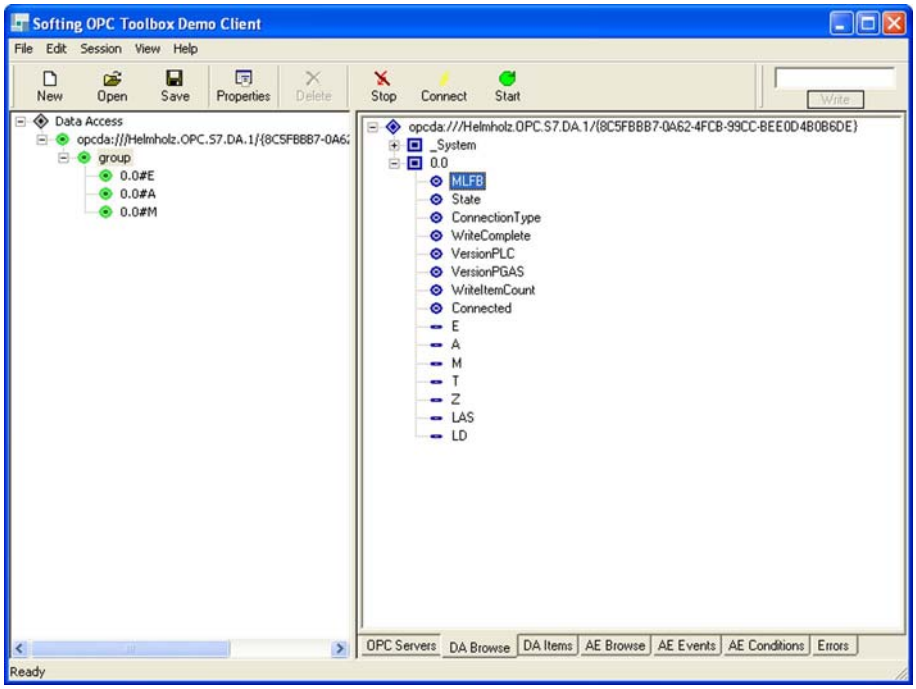
- the tree structure can be open by clicking the plus sign in front of *"Local"*



- open *"Data Access V3"* in a similar manner
- open *"Helmholz S7/S5 OPC Server"* similarly
- Double-click *"Helmholz.OPc.S7.DA.1"*
- The *"group"* opens in the left field. The green circle indicates that the connection has been started.

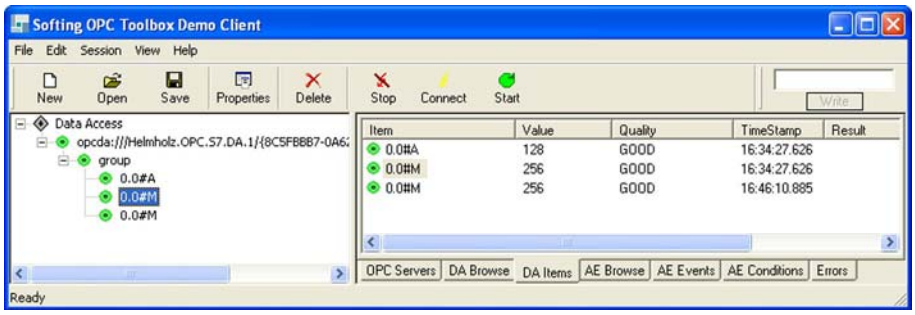
Now switch to the *"DA Browse"* tab card.

- open*"opcda://Helmholz.OPC.S7.DA.1/{…"* in the tree structure
- A device is displayed when it has been found (in this case *"0.0"*).
- On opening the device, the data access objects are searched from the CPU and then listed.
- Transfer the selected items into the left column by double clicking (multiple selections possible).

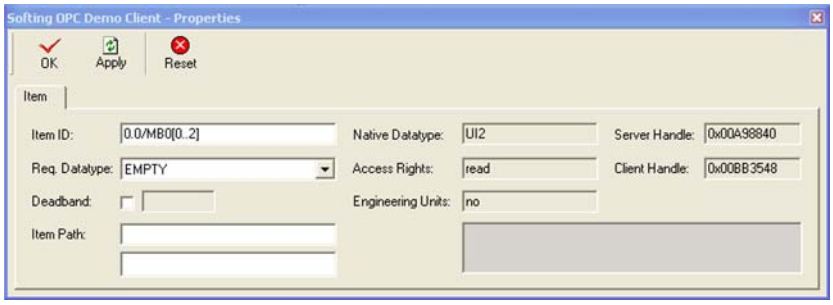


Now switch to the *"DA Items"* tab card.

- The connection quality status is displayed in the *"Quality"* column
- Currently, only the permissible name range elements are displayed under *"Value"*.

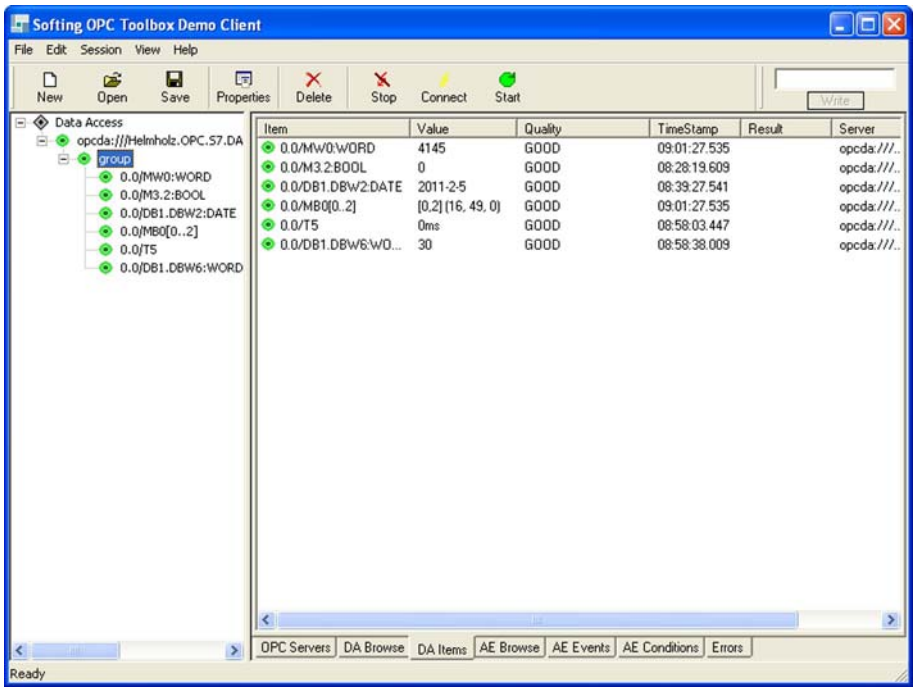


- Every item can be edited by selecting it and then clicking the *"Properties"* button.



- The changes are adopted with *"Apply"* and *"OK"*.

Further examples of the syntax of various items:

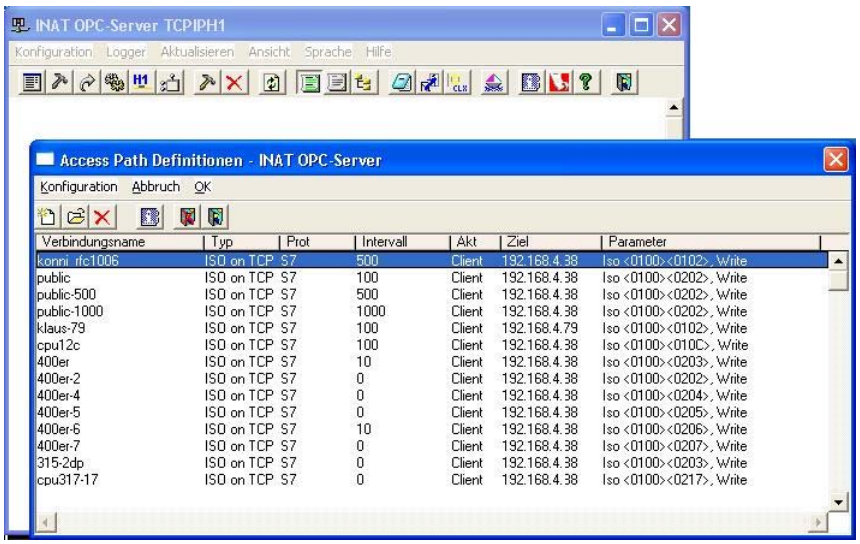


4 INAT-OPC-Server (INAT GmbH)

The following steps must be performed in the described sequence (status May 2008):

4.1 Configuring the INAT OPC server

The following dialog box opens when you select "*Configuration->AccessPathDefinition*" from the menu:



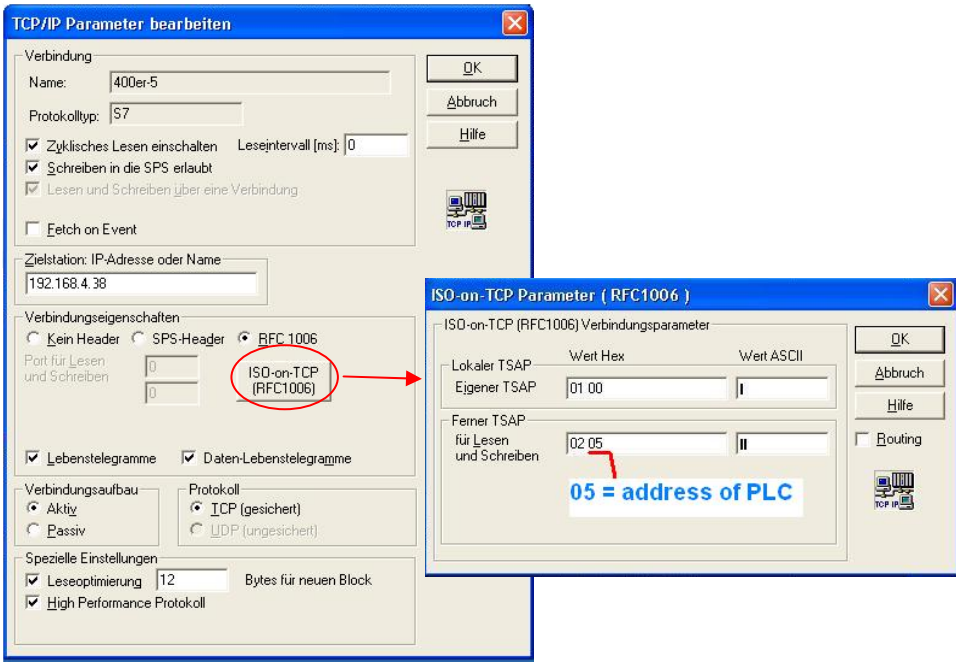
A new connection is generated via menu "*Configuration->New*" in dialog box "*Access Path Definition*".

The following dialog box opens.

When you have confirmed the new connection with the OK button, you can set the parameters in the subsequent dialog box:

The most important entries are:

- The IP address of the target station
- Connection properties RFC1006



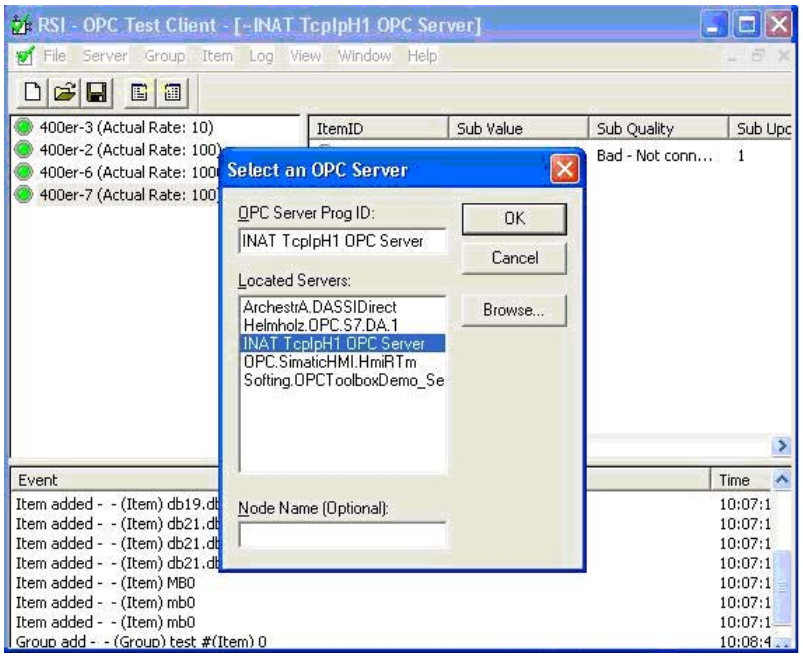
The RFC1006 setting is configured via the *"ISO-on-TCP"* button.

4.2 INAT-OPC Client

Select the OPC Server.

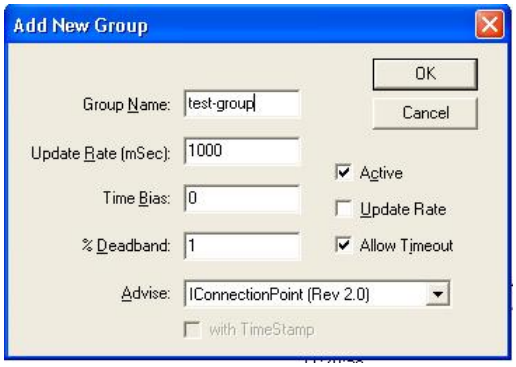
Once the server is configured, you can access the data of the controller via the OPC Client.

You can select the OPC server from which the configured data will be fetched via menu item *"File->New"*.

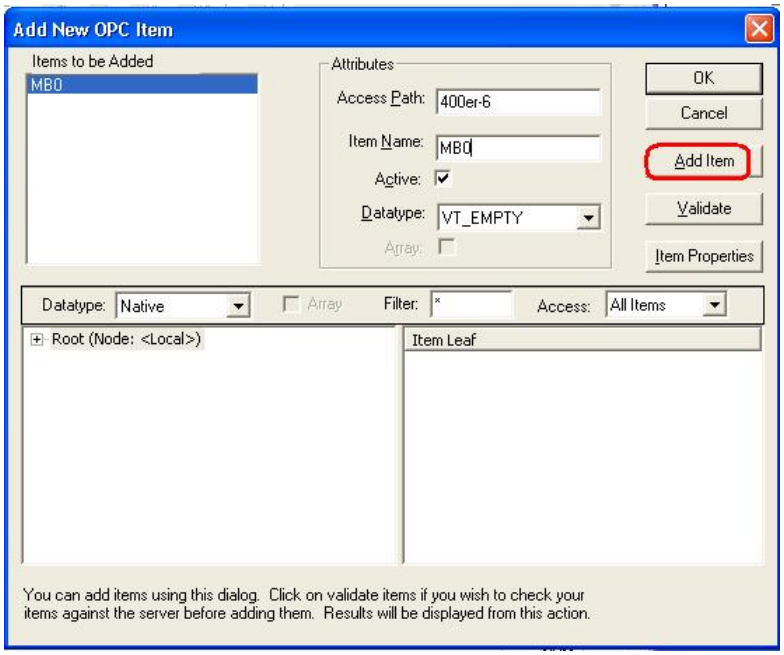


Configuring visualization data

- First of all, create a "*Group*"
- Menu *"Group->Add Group…"*



- Then select menu *"Item->Add Item…"*
- Important! In field *"Access Path"* you must enter the name of the connection exactly as designated in the OPC server
- For "Item Name" enter the variable from the SPC
- Finally press button *"Add Item"* and then *"OK"*

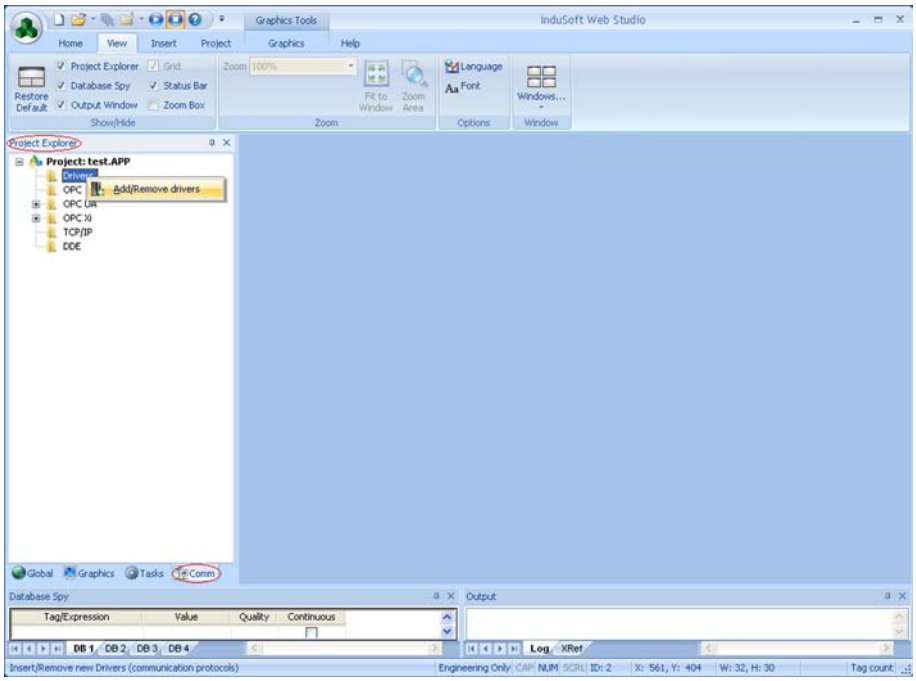


5 Indusoft Web Studio V7.0

The following steps must be performed in the described sequence (status August 2011). The user should be familiar with IWS or at least have the “Getting Started” guide and the Indusoft-driver specs “SIETH” at hand.

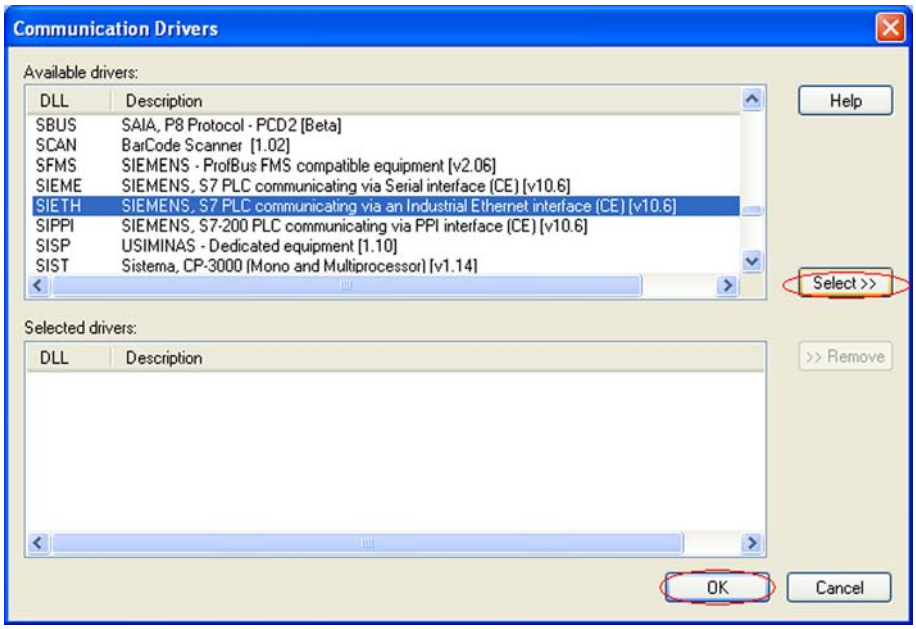
5.1 Configuring the Indusoft communication driver

Choose the tab *„Comm“* in *„Project Explorer“*, then right-click on *“Drivers”* and choose *“Add/Remove drivers”*:

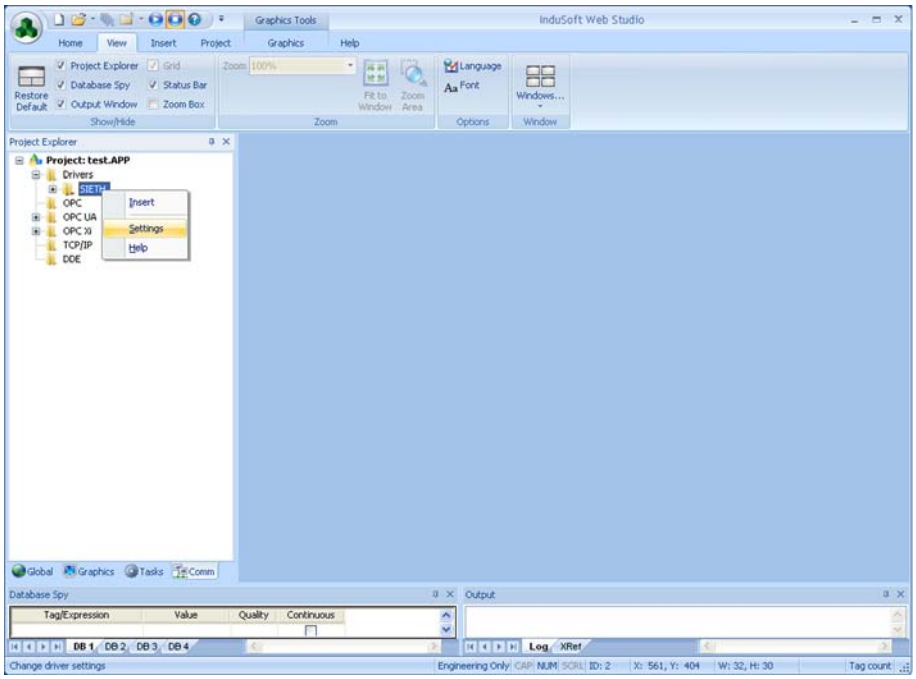


Pick the *“SIETH“* driver out and add it by clicking *“Select>”*and confirm with *“OK”*:

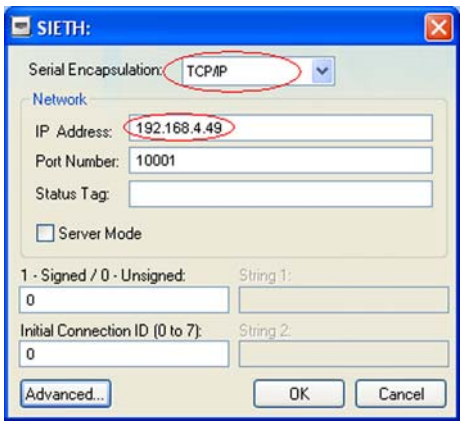
Press „Help“ before you select the driver in order to open the corresponding driver manual.



- In the *„Project Explorer“*, tab *„Comm“* right-click on the driver *“SIETH”* and from the context menu choose *“Settings”*:

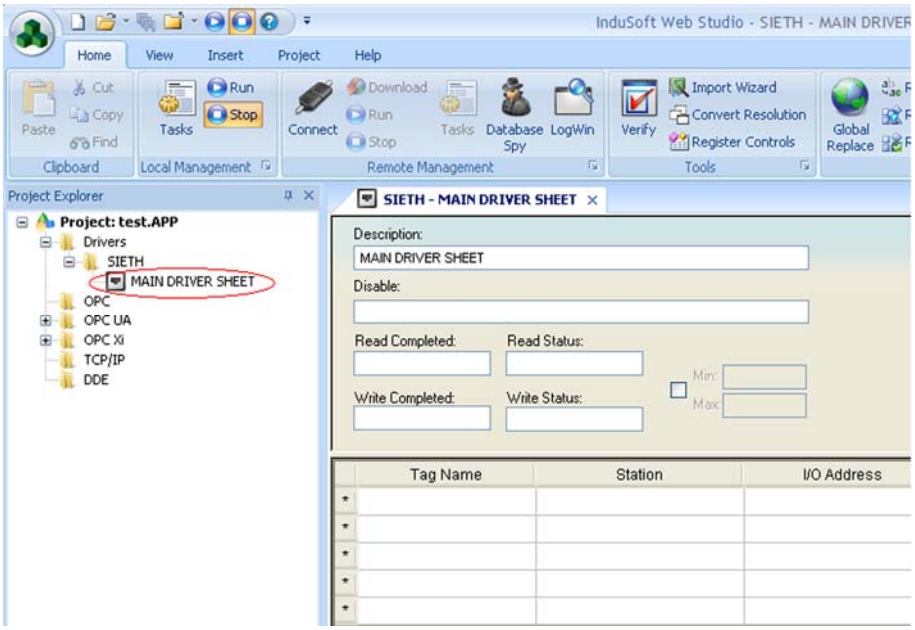


Under *“Serial Encapsulation”* choose *“TCP/IP”* and under *“IP Address”* enter the IP address of the NETLink. Everything else will be left default:



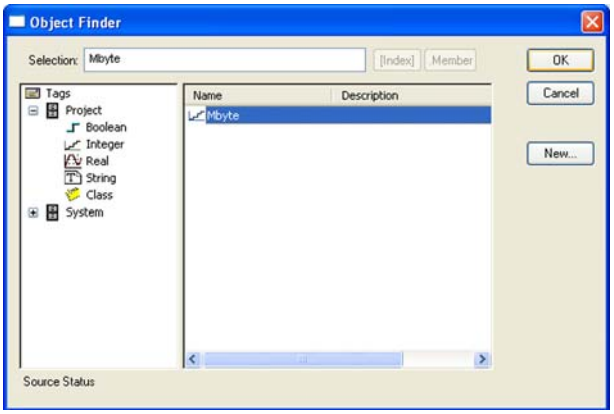
5.2 Setting up values to visualize

In the tree of the *"Project Explorer"* under *"Drivers"* -> *"SIETH"* you can find a *"Main Driver Sheet"*. Double-click either this or any other driver sheet:



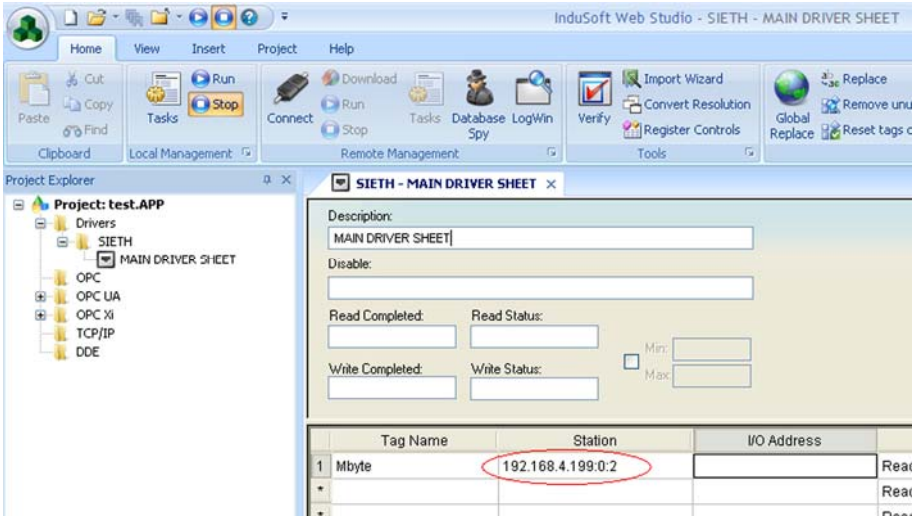
On this *"Driver Sheet"* you have to configure any values you choose to visualize.

- After double-clicking the first empty cell in the column *"Tag Name"* a dialog window opens, in which to choose the tag to specify. In this example the tag is called *"Mbyte":*

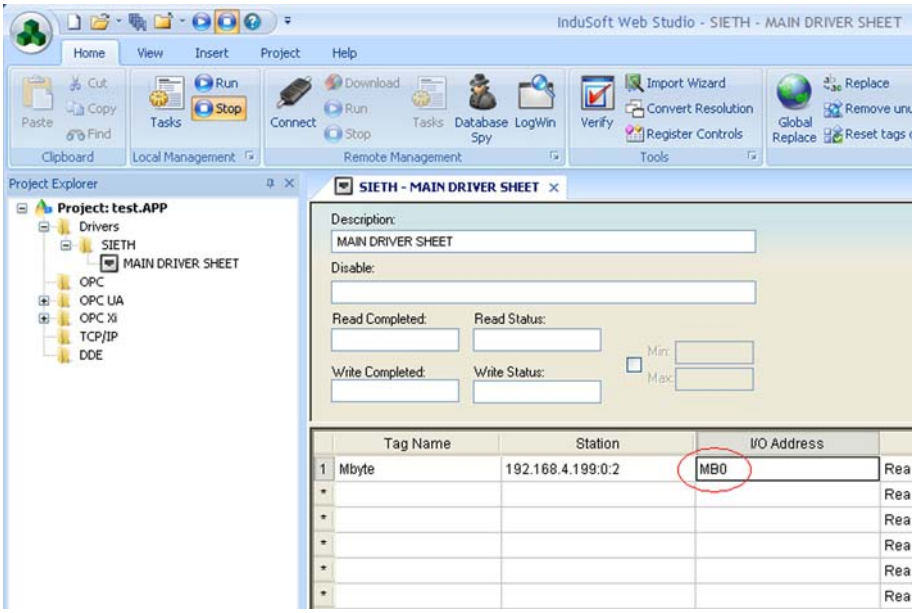


- Enter the IP address of the adapter, the rack number and the slot (the PLCs MPI address) under the column *"Station"* using this format:

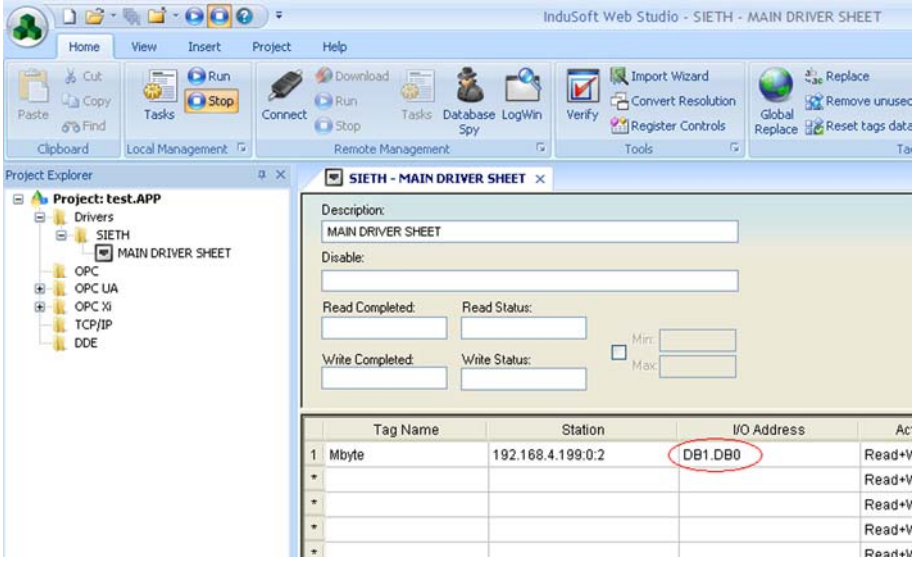
<IP address> : <Rack> : <Slot>



- Adjacent enter the memory address of the variable you want to access on the PLC under the column *"I/O Address"* (for further information please consult the *"SIETH"* driver manual):



- Important for S7-200 users!
  The V registers of the S7-200 can be read by stating the DB1 registers. (For further information please consult the *"SEITH"* driver manual):



- Save the *"Driver-Sheet"* and run the application. The value contained in flag byte 0 (VB0 in a S7-200) will be saved and displayed in the tag *"Mbyte"*.

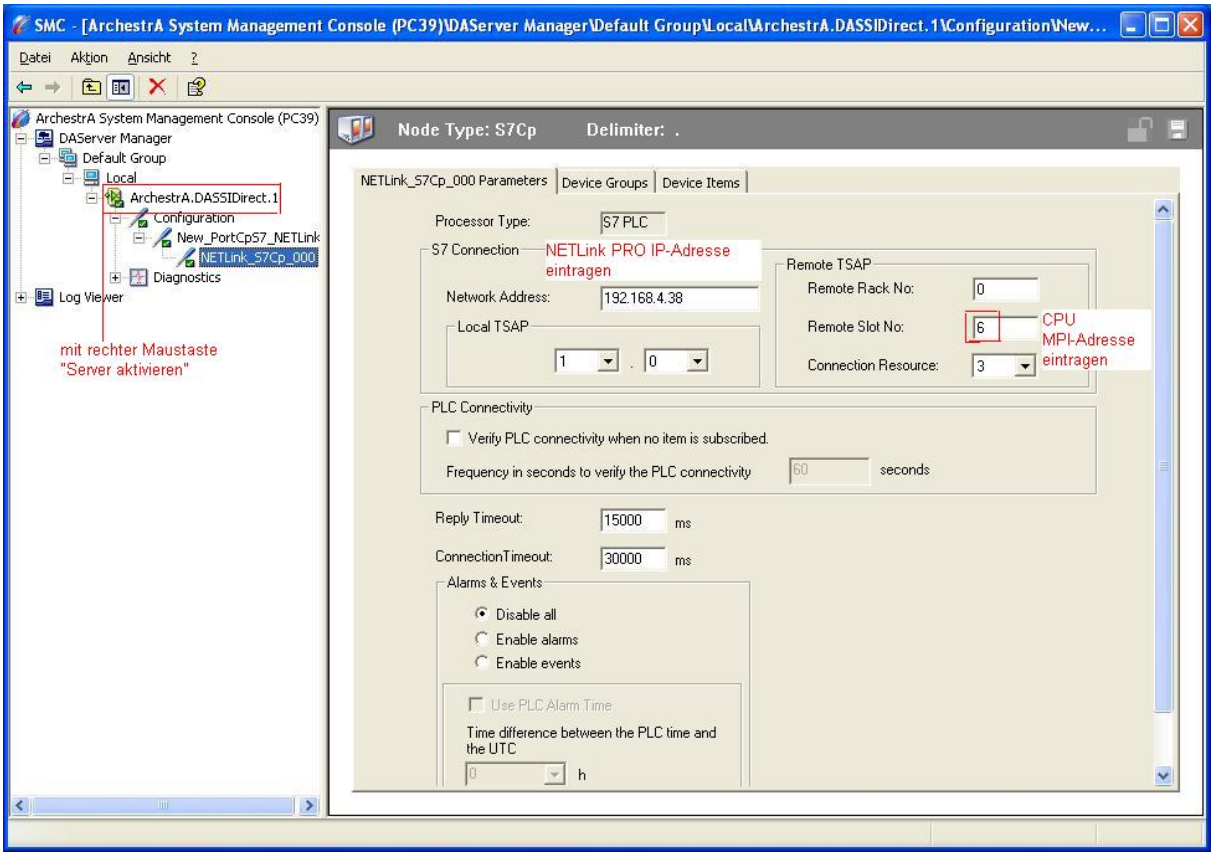
6 InTouch V9.5 (Wonderware GmbH)

(System Management Console 2.0 Version 5.1)

The following steps must be performed in the described sequence (status July 2007):

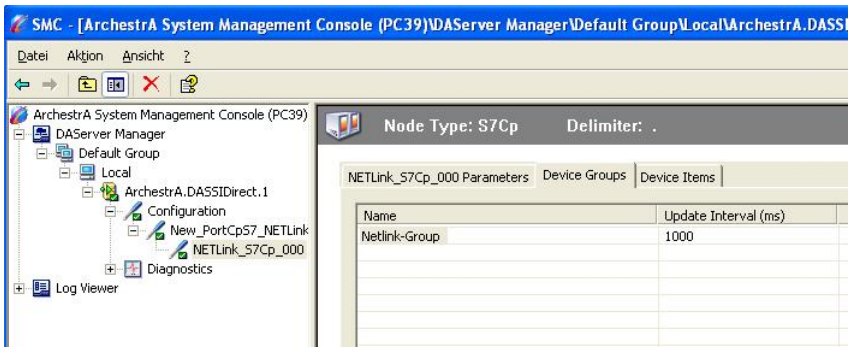
6.1 Starting the System Management Console

"*Start->Programs->Wonderware->System Management Console*"



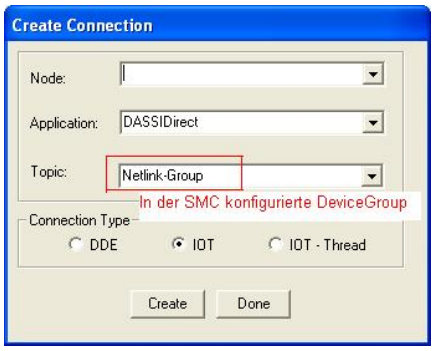
6.2 Configuring the Device Group

Enter Device Group (later the NETLink® will be addressed with this name from the WWClient)



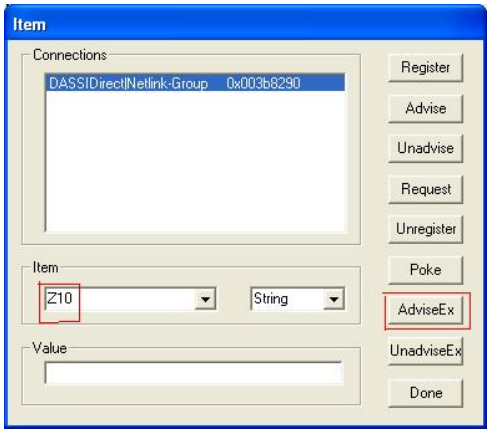
6.3 Configuring the Wonderware Client

"Start -> Programs -> Wonderware Factory Suite -> Common-> WWClient" to establish connection

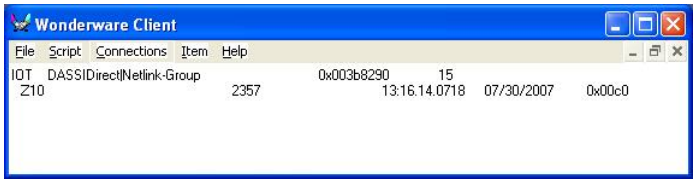


If the connection has been set correctly, the following display opens:

Configuring the item



If the Item configuration is correct and the SIDirect DAServer has been activated, the configured *"Item"* is updated in the *"Wonderware Client"* window.

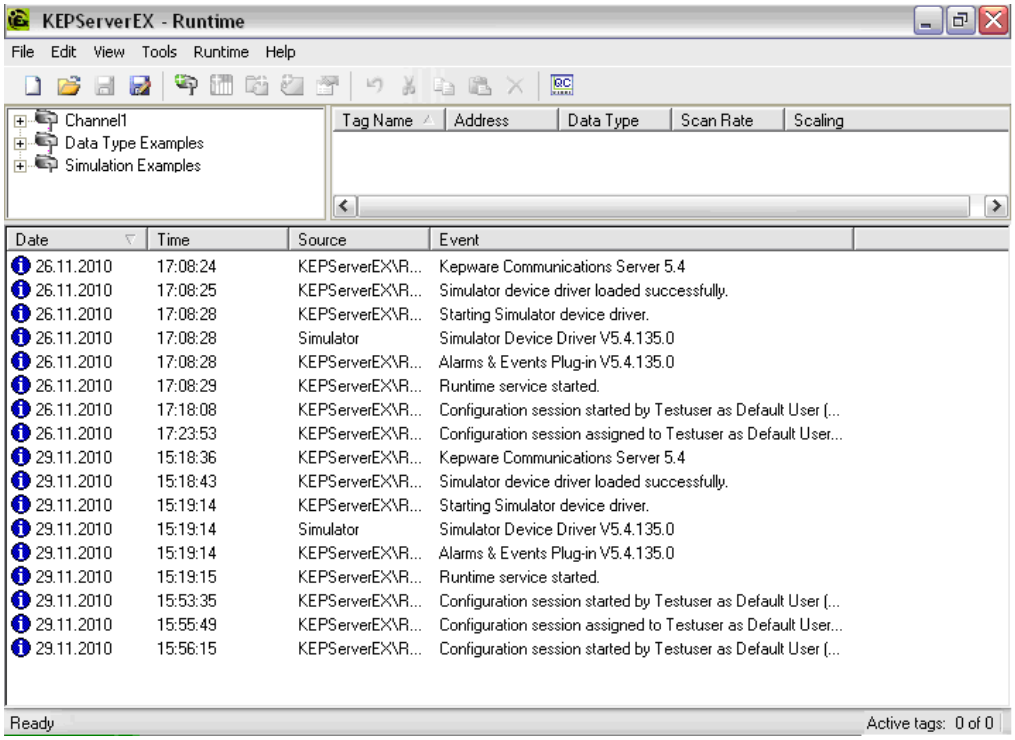


7 KEPserverEx V5.4.135.0 (KEPware Inc.)

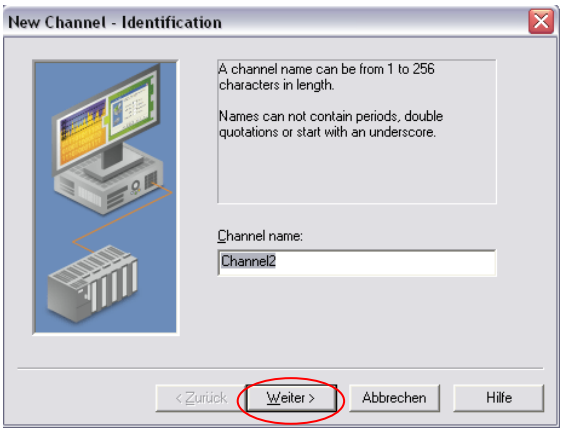
The following steps must be performed in the described sequence (status December 2010):

7.1 Configuring KEPserverEx

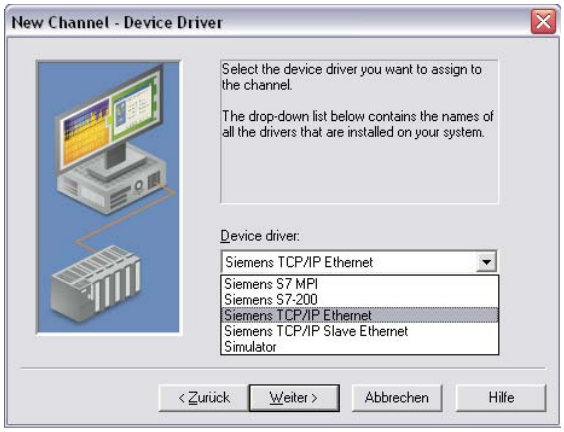
Start program module KEPServerEx, create a new project or right-click in the demo project and select *"New Channel"*.



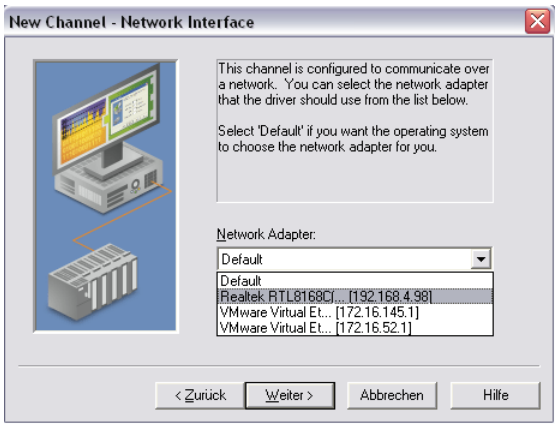
Enter a new name or leave the existing one and *"Continue"*



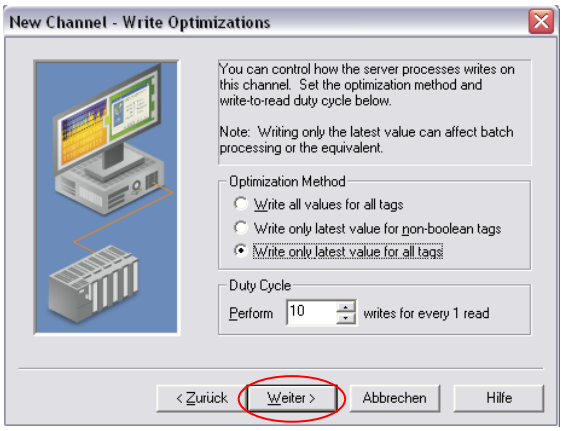
Select device driver *"Siemens TCP/IP Ethernet"*



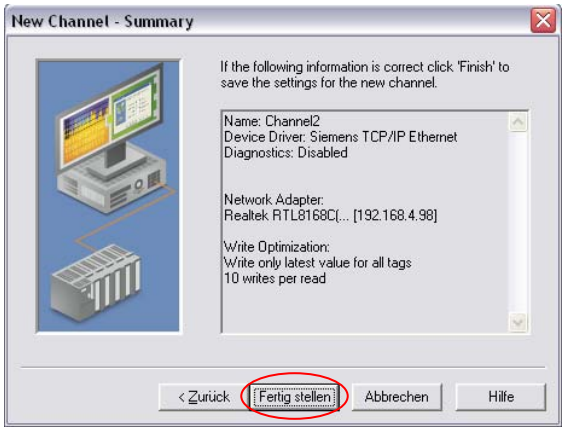
Select the computer's own network card



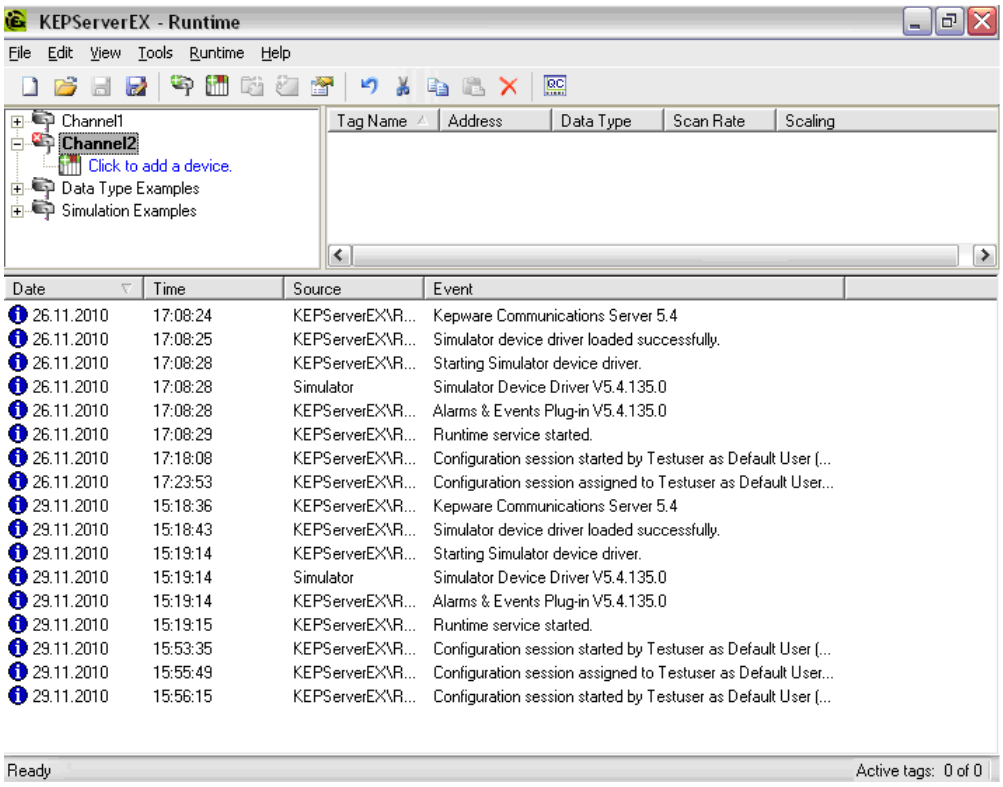
Leave default optimizations and confirm with *"Continue"*.



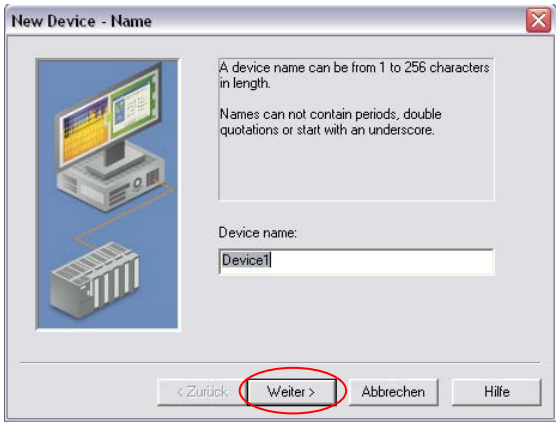
"Finish" the channel settings.



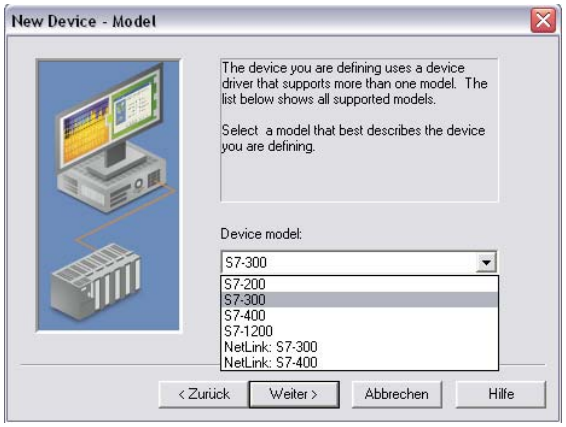
Select *"Click to add a device"* to assign the NETLink® as a device



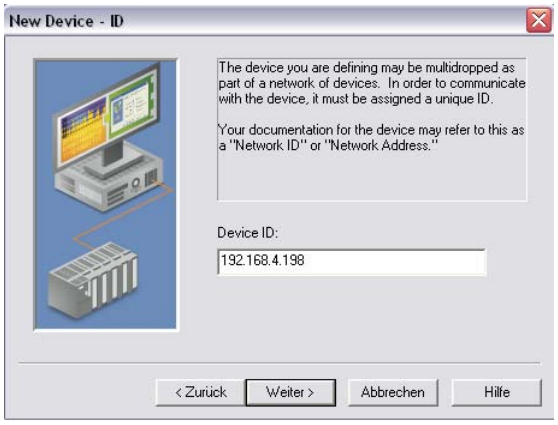
Enter a new name or leave the existing one and *"Continue"*



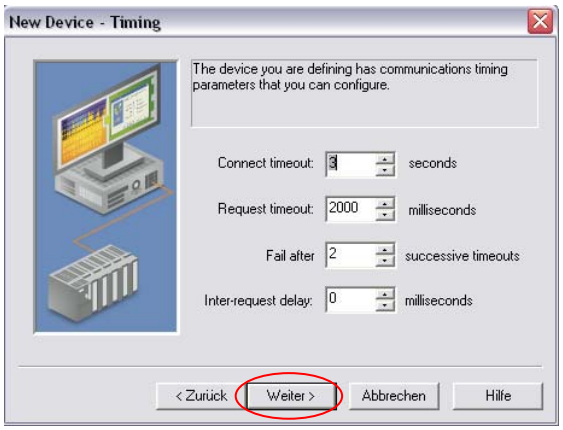
Select device model *"S7-300"*



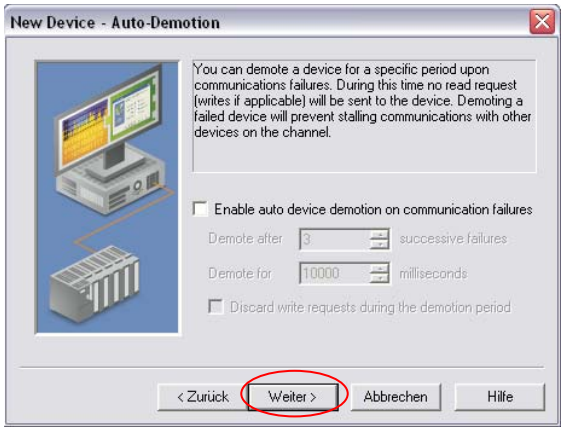
Enter the IP address of the connected NETLink® here.



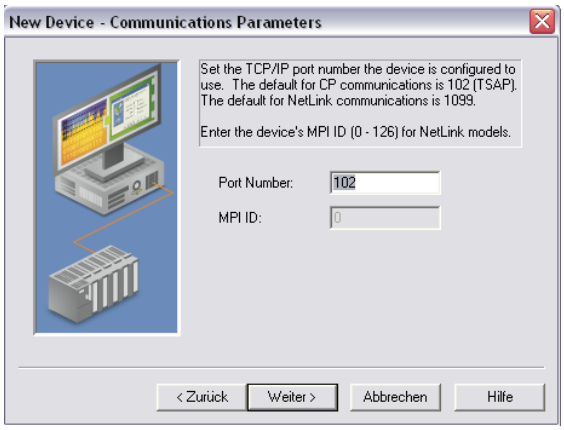
Leave default timing and confirm with *"Continue"*.



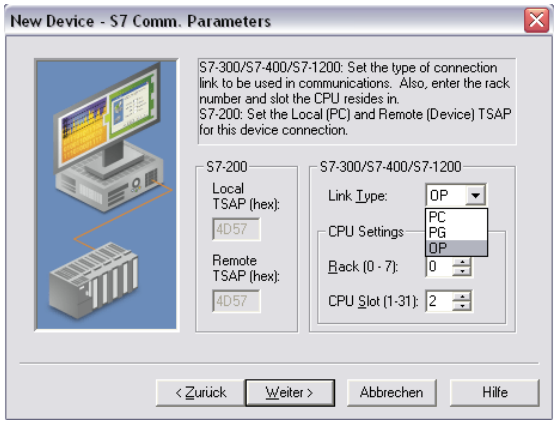
No changes at this point *"Continue"*



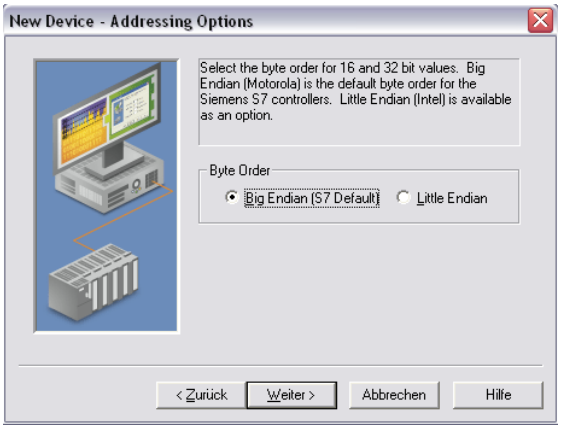
The communications port for RFC 1006 is 102 (default)



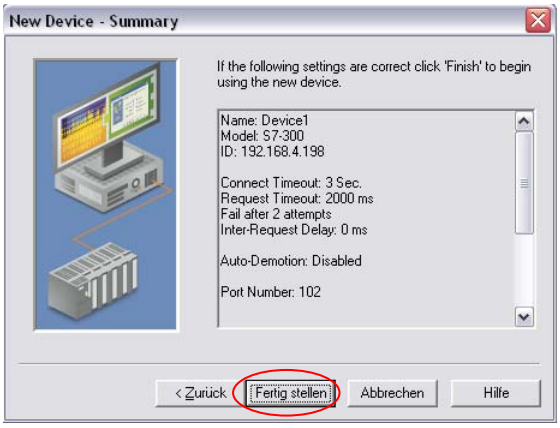
The link type must be set to *"OP"*!



Leave byte order at *"Big Endian(S7 Default)"*.

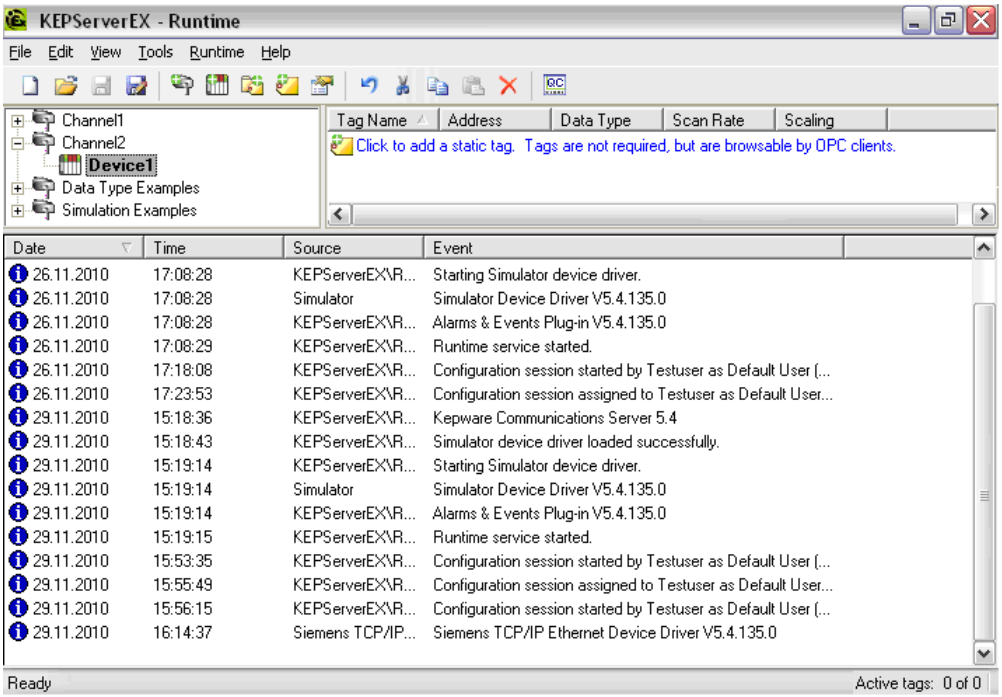


"*Finish*" the device settings.

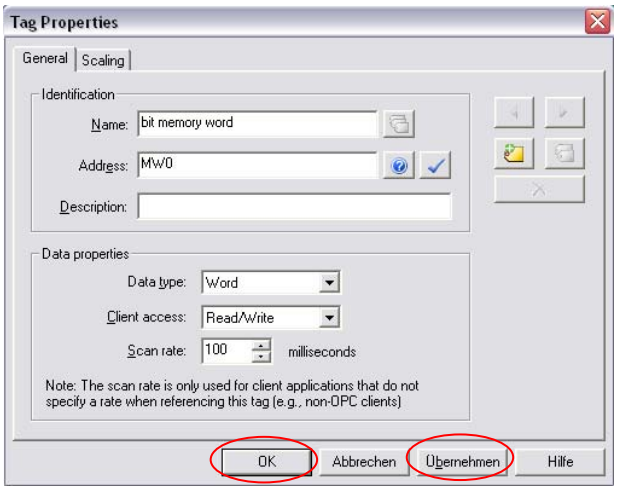


The following steps are provided as an example only and are not obligatory for customer applications. They serve as a visual check whether data exchange is taking place.

By clicking *"Click to add a static tag"* in this example, only one item will be assigned.



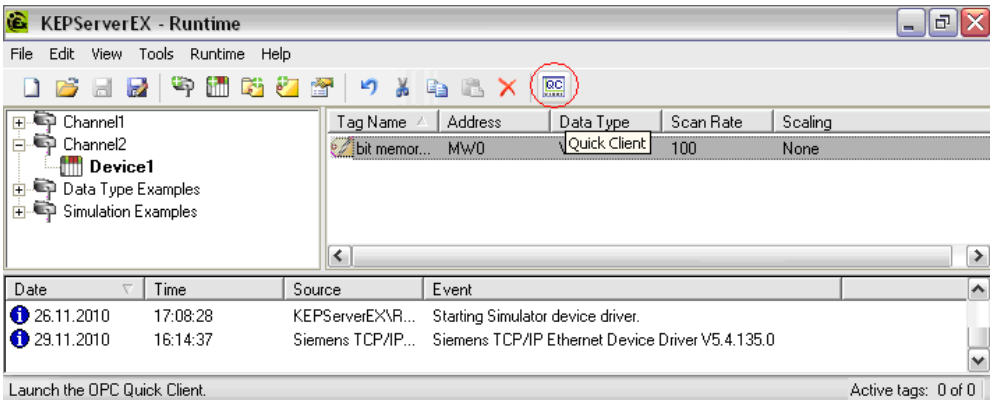
The flag word zero will be processed in the sequential program of the connected CPU.



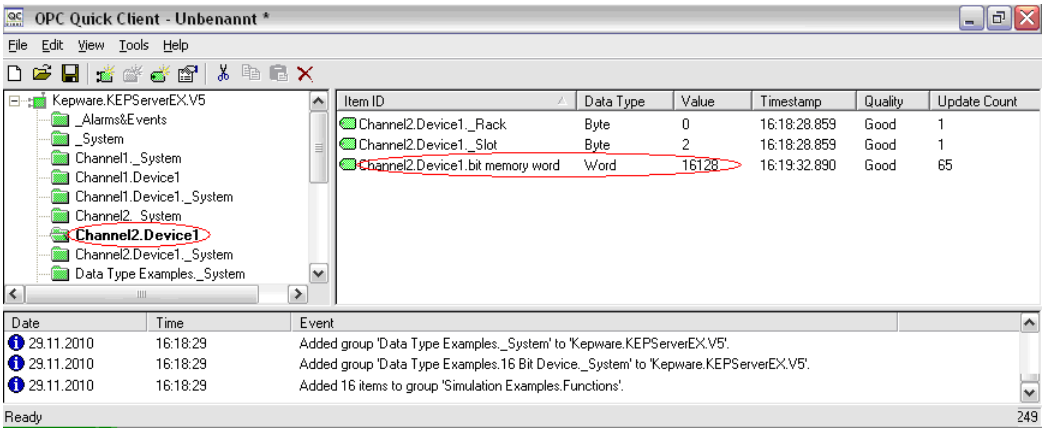
Complete with *"Apply"* and *"OK"*

7.2 Starting the OPC quick Client

The Quick Client can be started via the marked icon:



The program module *OPC Quick Client* opens and the status of the item is displayed by marking the channel and device you previously created

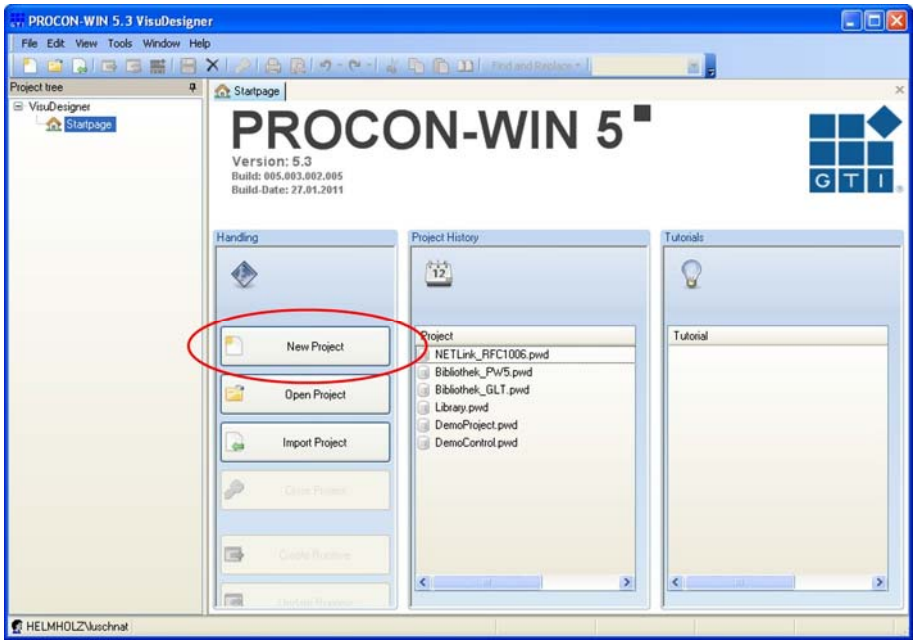


8 PROCON-Win V3.2 (GTI Control)

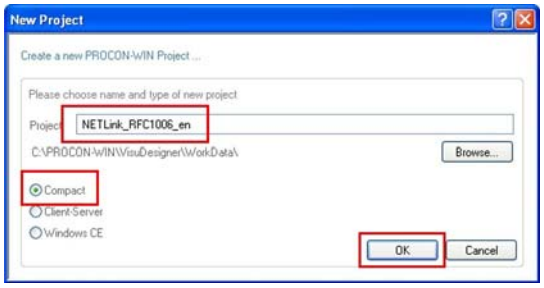
The following steps must be performed in the described sequence (Version July 2011):

8.1 Configuring the driver and connection

- Open *PROCON-WIN 5 VisuDesigner* .
- Create a new project by pressing „New Project“



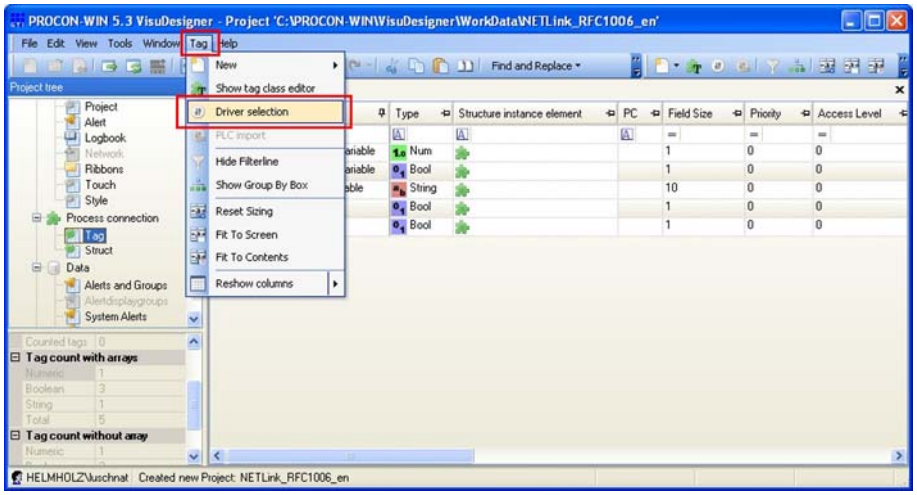
- Choose *“Compact”* and name the project.
- Confirm with *“OK”*.



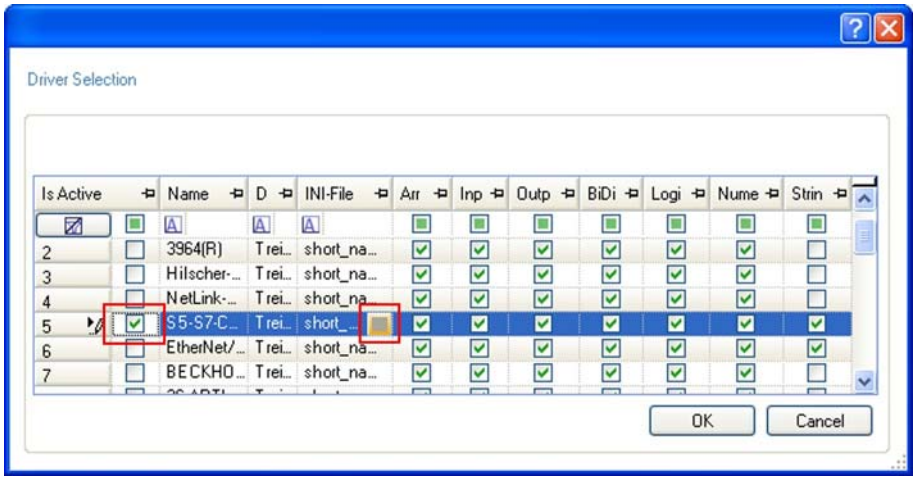
A new project is created and opened immediately.

- Double-click *„Tag“*.

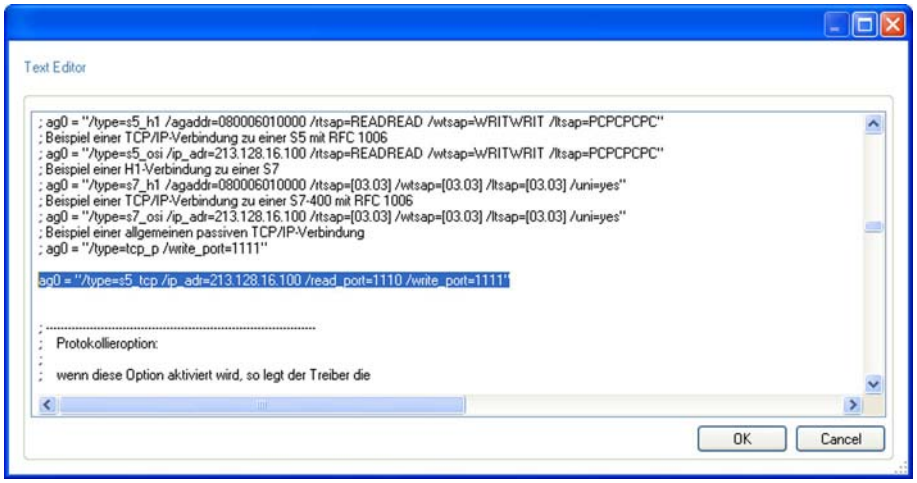
- From the menu bar click on *“Tag” -> “Driver selection”*



- Select *„S5-S7-COMBI RFC 1006”*.
- Click the button contained in the cell under the column *“INI-File”*.



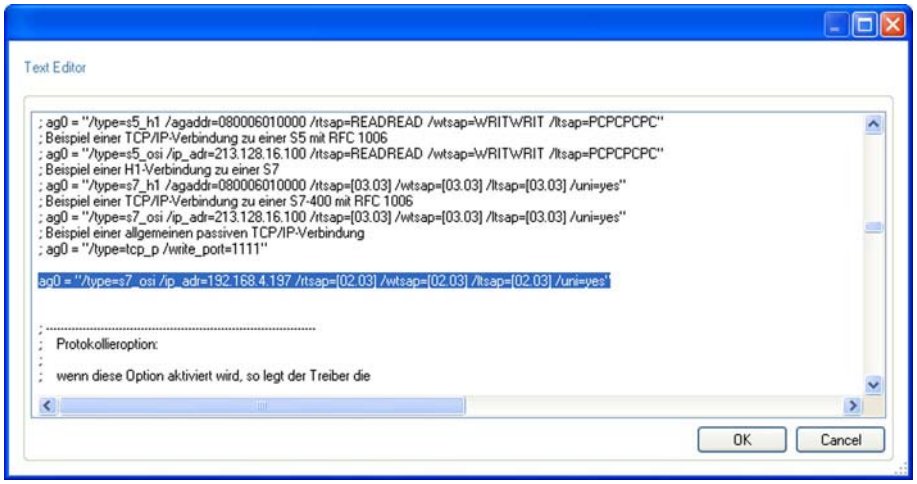
- A text editor opens.
- Search for this in color highlighted line:



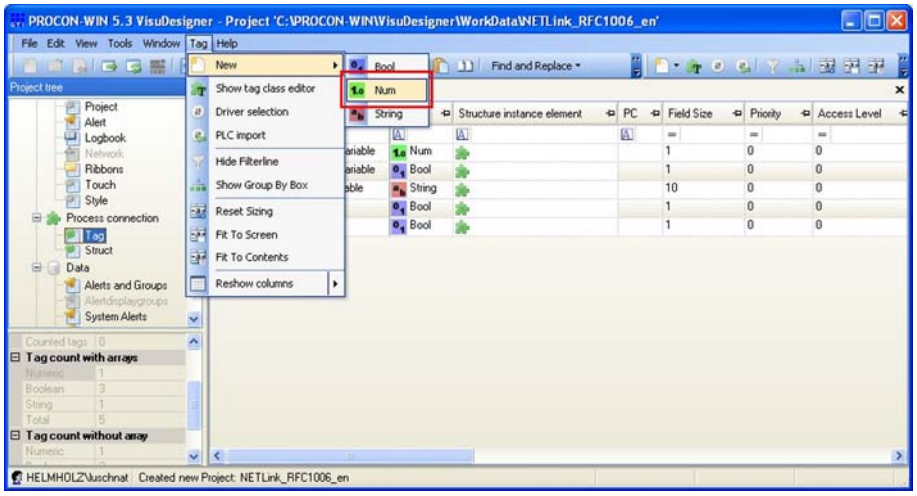
- The highlighted line is to be replaced with the following:

ag0 = "/type=s7_osi /ip_adr=XXX /rtsap=[02.0Y] /wtsap=[02.0Y] /ltsap=[02.0Y] /uni=yes"

- In place of the “XXX” enter the IP address of the NETLink
- Replace every “Y” with the MPI address of the PLC connected to the NETLink
- The resulting string should look something like this:



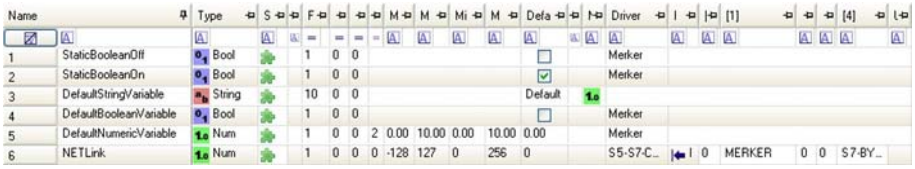
- Close the text editor and driver selection screen by pressing *“OK”*
- From the menu bar press *„Tag“* -> *„New“* -> *„Num“*.



- Fill the table with the following values:

Name	user-defined
Decimal places	0
Min PLC	-128
Max PLC	127
Min PC	0
Max PC	256
Driver	S5-S7-COMBI RFC 1006
IO	Input
Baustein-Typ	MERKER
Format	S7-BYTE

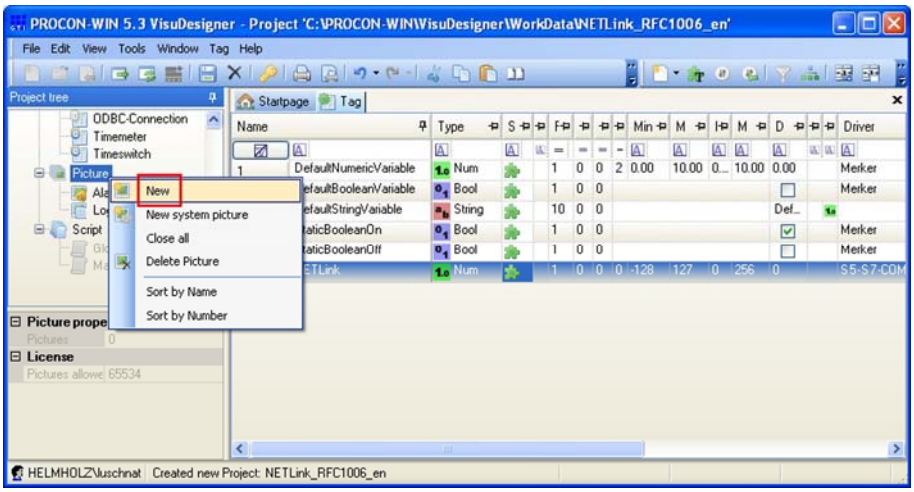
- Values not defined above are left at default.



- Save the project (STRG+S).

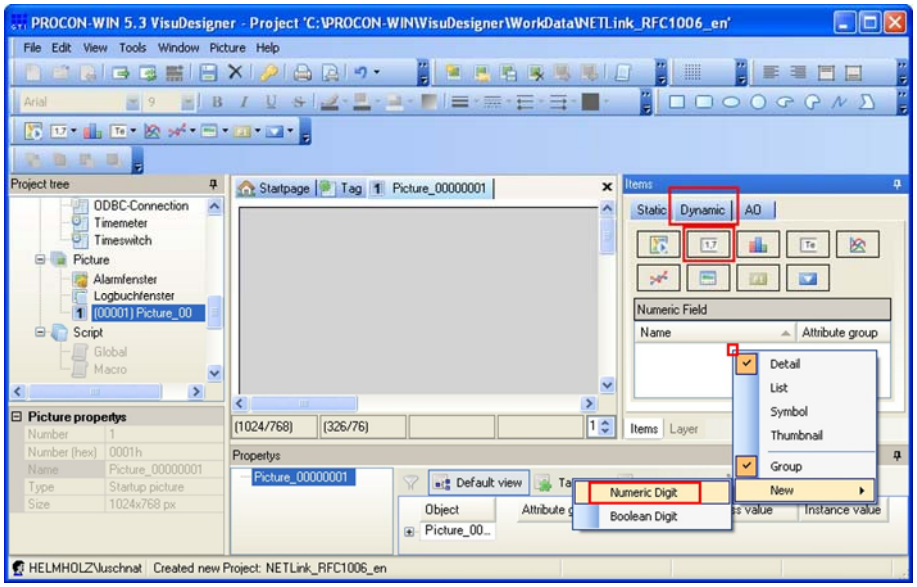
8.2 Creating a Picture

- Right-click on *"Pictures"* and select *"New"*.

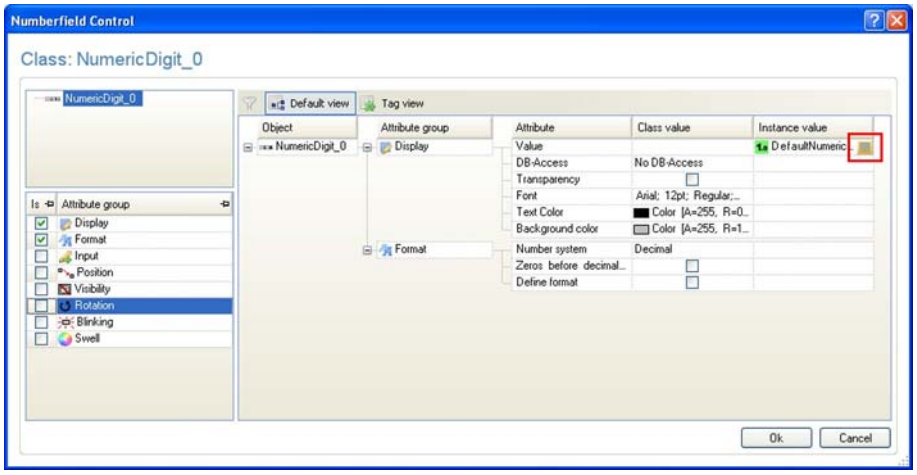


- A new Picture is created and displayed
- Click the tab *"Dynamic"* under *"Items"* and then *"Numeric Field"*

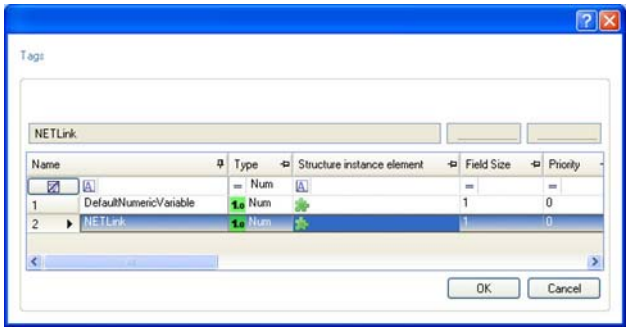
- Now right-click on the white area beneath *"Dynamic Symbol"* and choose *"New"* -> *"Numeric Digit"*



- Press the button contained in the cell under column *"Instance Value"* row *"Value"*.

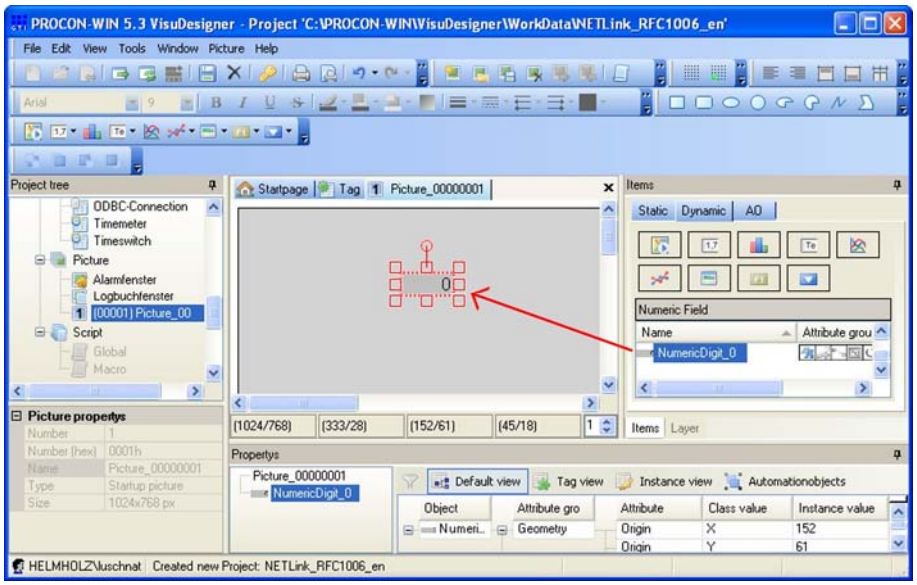


- Choose the afore created tag and close the window with *"OK"*.

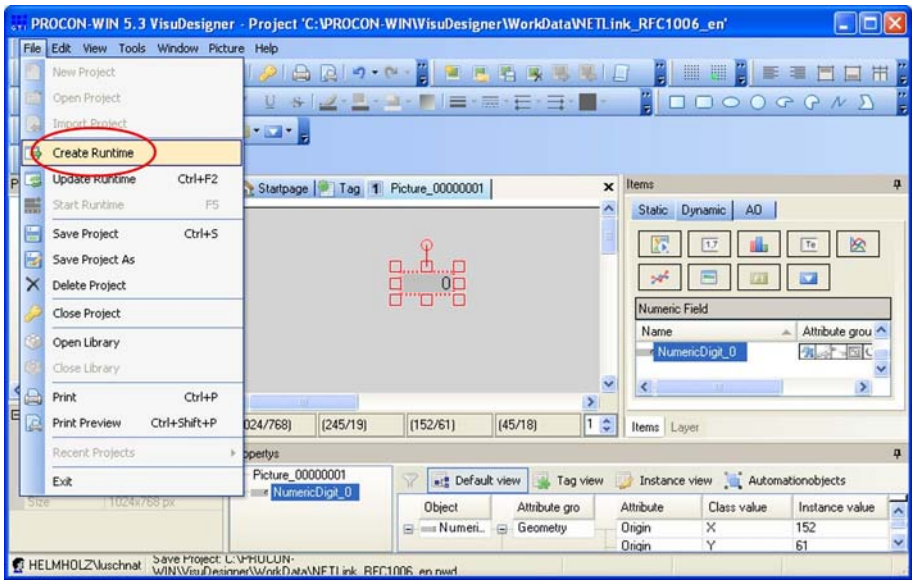


- Close *"Numberfield Control"* by pressing *"OK"*.

- Create an instance of the newly created numeric digit by pulling it on the picture using drag & drop.

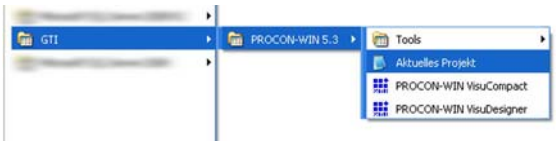


- Save the project (CTRL+S) and from the menu bar press *"File" -> "Create Runtime"*.



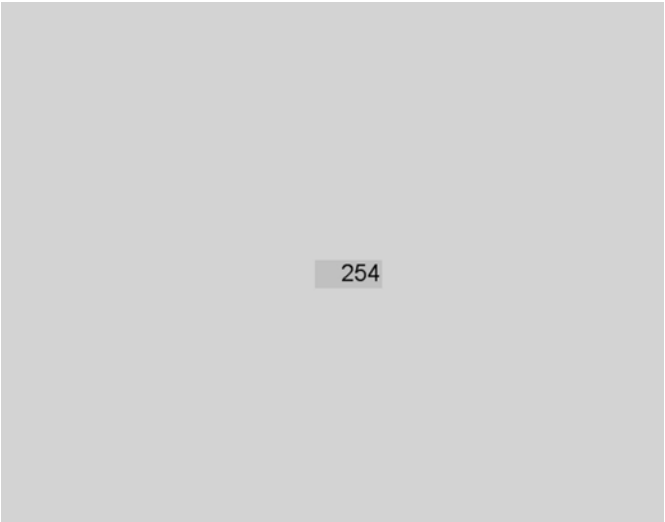
If no start menu entry exists, you can find the file "projects.pcs" in the folder "\PROCON\WIN\Projects". It can be opened with a texteditor!

- Open the Windows start menu and select *"Aktuelles Projekt"* under *"All programs" -> "GTI" -> "PROCON-WIN 5.3"*



- Enter the name of the project in the text file and save it.

- Now start *„PROCON-WIN 5 VisuCompact“*.
- A numeric field containing the content of the flag byte 0 in decimal format should be visible now.



- To close *VisuCompact* double tap *“Esc”*

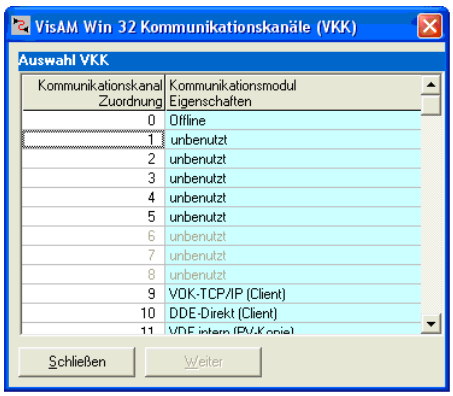
9 VisAM Win32 (VISAM GmbH)

The following steps must be performed in the described sequence (status May 2008):

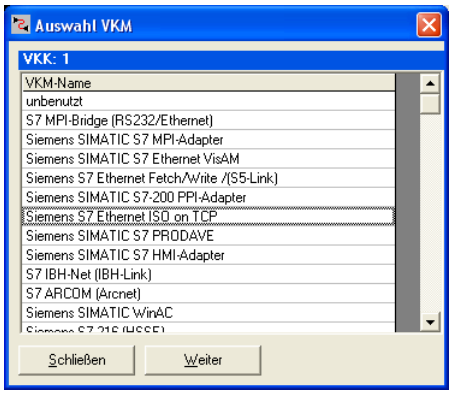
9.1 Configuring VisAM Win 32

Open the program module VisAM editor

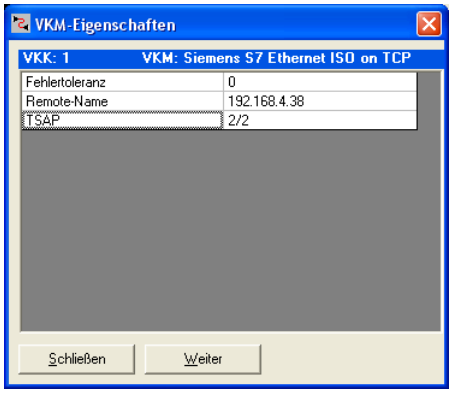
- Communication -> Select channels
- Click assignment 1 in the communication channel selection.



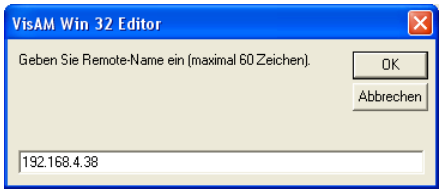
In the selection, select assignment *"Siemens S7 Ethernet ISO on TCP"* as the VKM name and confirm with *"Continue"*.



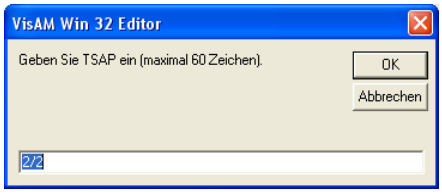
Click the remote name and…



...enter the IP address of the NETLink®

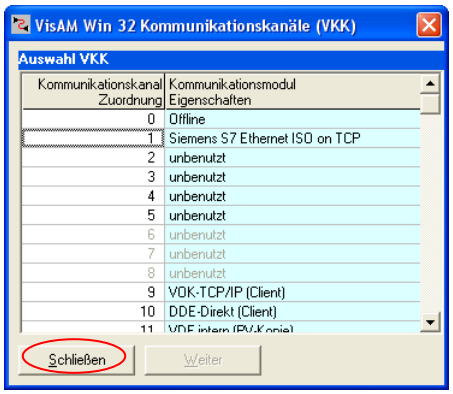


Confirm with *"OK"* and click TSAP...



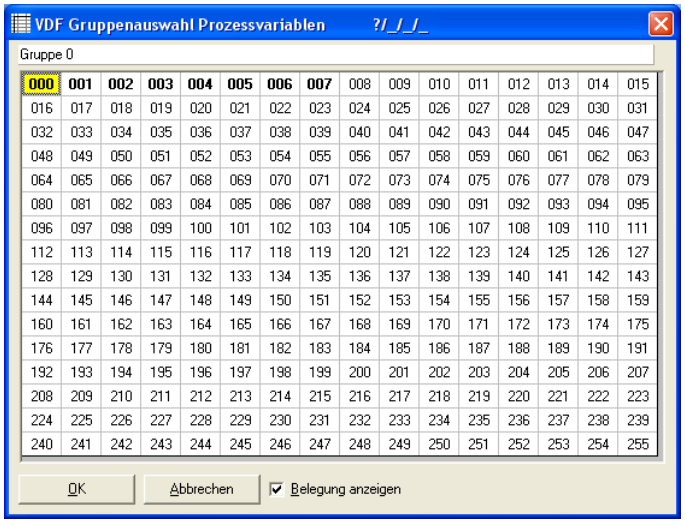
...and enter address. In this case 2/2 for bus address 2, rack 0, slot 2 (see the relevant chapters with the "Address conversion table" in the NETLink® manual).

Confirm with *"OK"*.

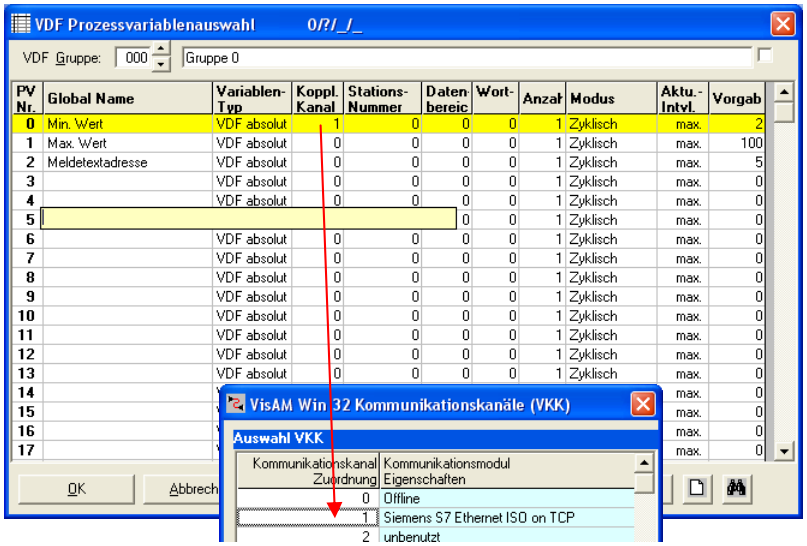


You have now created the communications channel and can apply the settings with *"Close"*.

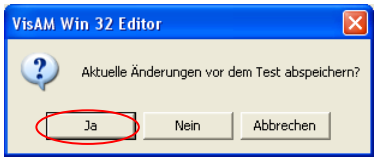
Select Communication -> VDF Data Field



Select Group 0 and click the “000" field to activate process variable selection.



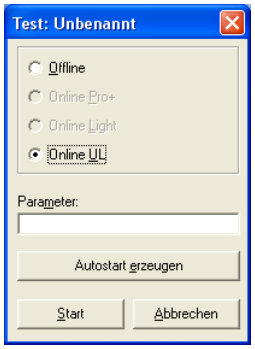
Coupling channel 1 is referenced to the previously defined communications channel. Confirm with *“OK”*.



Save the settings.

9.2 Starting visualization

Select Project -> Test (hotkey F5)

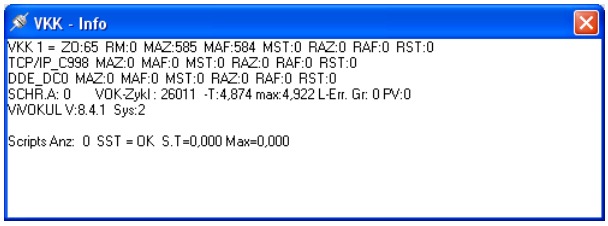


Select *"Online UL"* and click *"Start"*

Process visualization opens and the communications link is started.

The connection monitor switches from *"offline"* to *"online"* mode.

The transmission information can be displayed in Info.



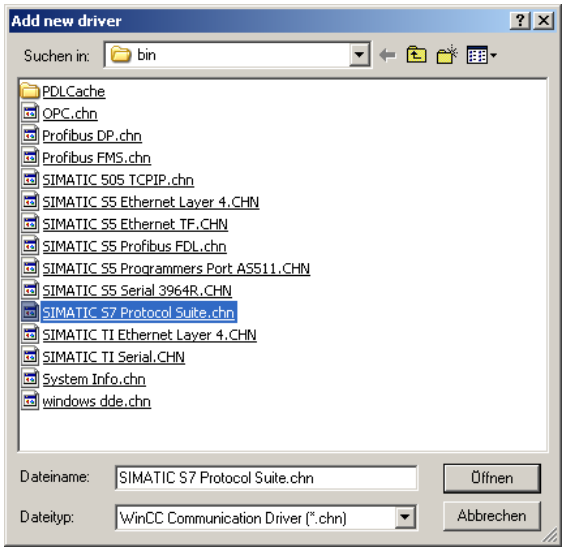
10 WinCC V7.0 (Siemens AG)

The following steps must be performed in the described sequence (Version August 2012):

10.1 Add the protocol driver

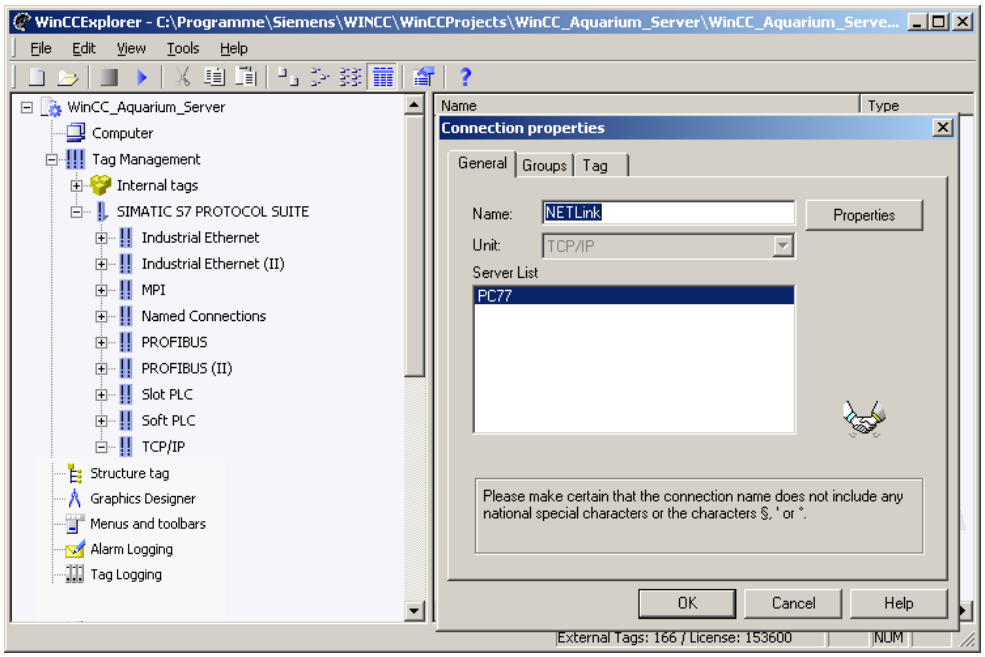
To parameterize a RFC1006 link in a WinCC project, a new TCP/IP link must first be created in the *'SIMATIC S7 PROTOCOL SUITE.'*

- Right click: Tag Management -> Add new driver…
- Select: *‚SIMATIC S7 Protocol Suite.chn'*



- create a new TCP / IP connection in *‚SIMATIC S7 PROTOCOL SUITE'*

Here, this connection is called *'NETLink.'*



with right-click: TCP / IP -> System parameter you have to select the correct logical device name in the 'Unit' tab

With a click on '*Properties*' you go to a setting form in which the IP address of the NETLink® device and the rack/slot combination of the destination have to be entered.

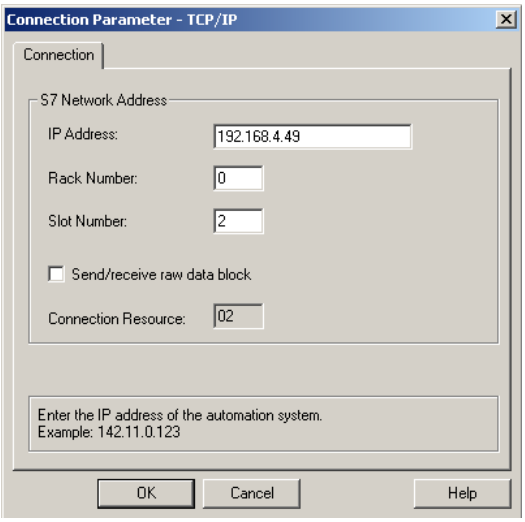
In this case, the NETLink® Gateway has the IP address 192.168.4.49

All NETLink have the IP address 192.168.4.49 on delivery from the factory.

- click on ‚*Properties*'
- type in the IP address of the NETLink device
- Enter the rack/slot combination of the end device

Here 192.168.4.49 and 0, 2.

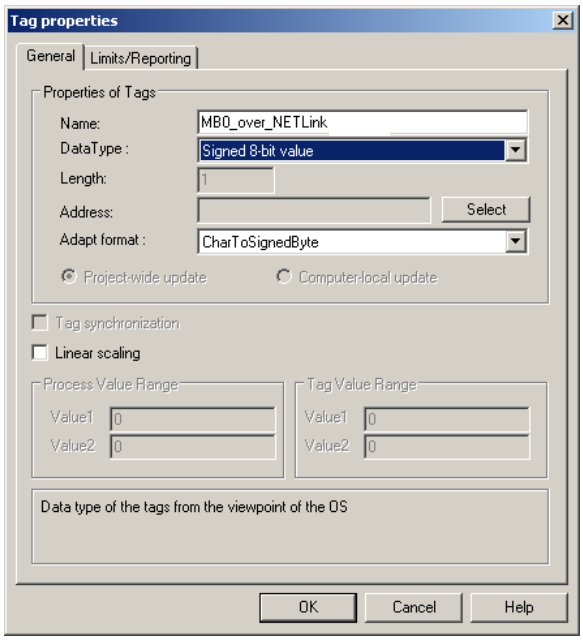
The destination CPU with which we want to communicate has the bus address 2.



10.2 Creating a variable

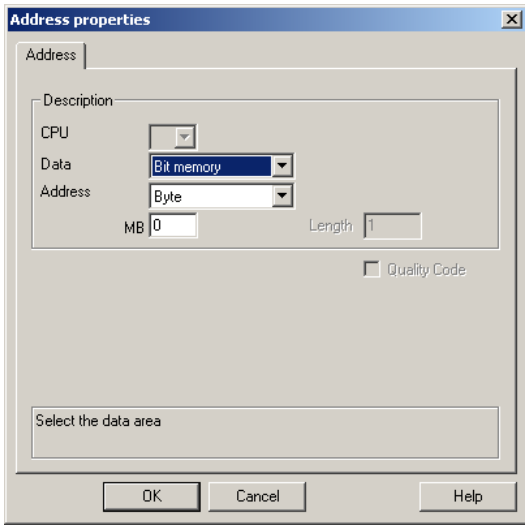
Under this connection we have just configured, we now have to create a variable.

This is done by right-clicking to open the context menu of the new connection and selecting *'New variable…'*.

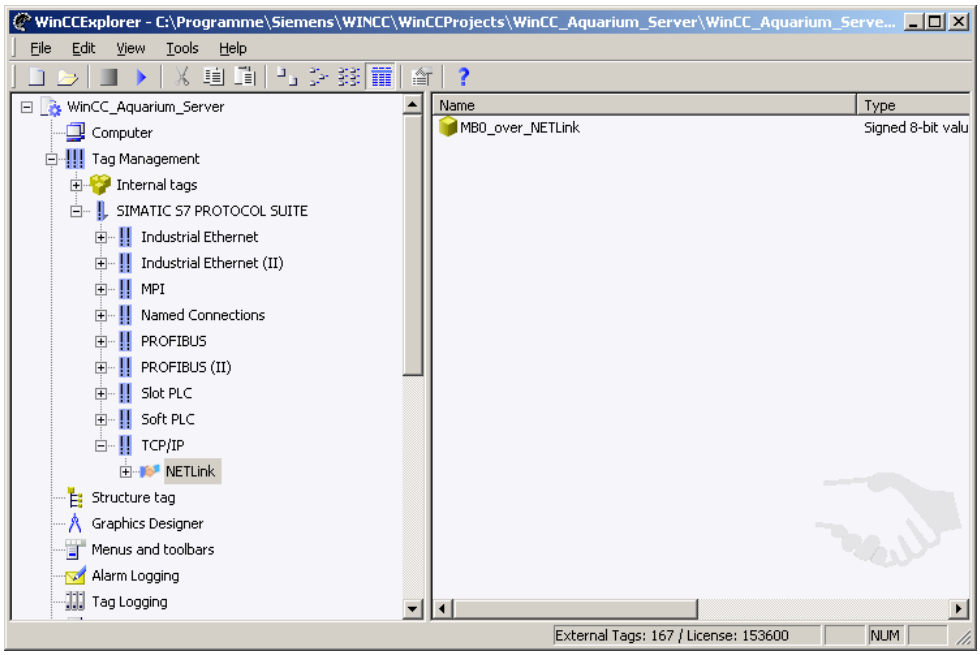


In the properties window of the variable, which was named *'MB0_over_NETLink'* in this case, we can now select the type of variable by clicking the *'Select'* button.

Marker byte 0 is configured here.



The following screenshot shows that a variable named *'MB0_over_NETLink'* now exists under the *'NETLink'* connection.



If this variable is now included in the initial screen of the WinCC project, for example, a connection will be established to the CPU with address 2 via the NETLink® Gateway to read or write marker byte 0 from this address.

Further variables of different types can, of course, be created and used according to the same scheme.

It is also possible to create additional TCP/IP connections in order to communicate not only with the CPU with bus address 2 but also with other CPUs.

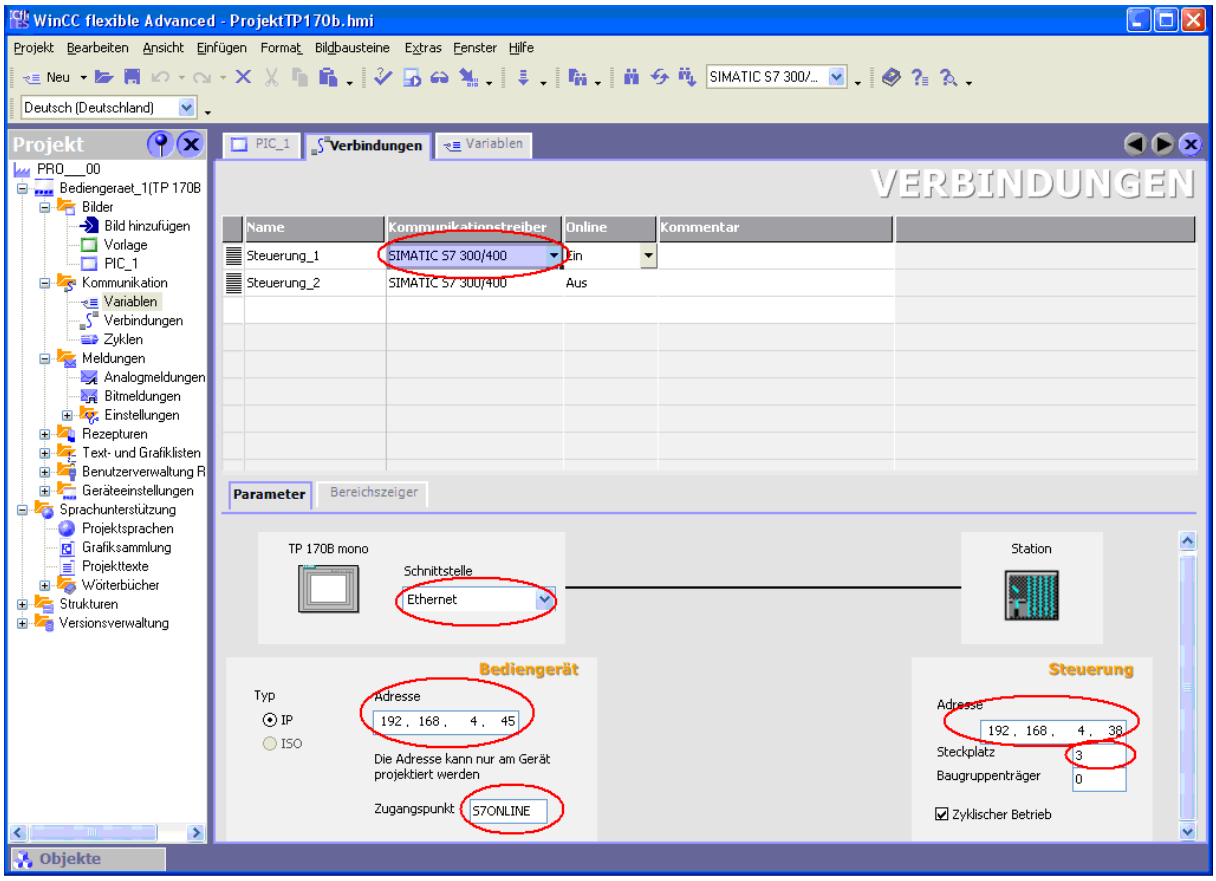
11 WinCC flexible 2005/2007 (Siemens AG)

The following steps must be performed in the described sequence (status April 2008):

11.1 Configuring connections

Start WINCC flexible Project and open the connections in the communications register:

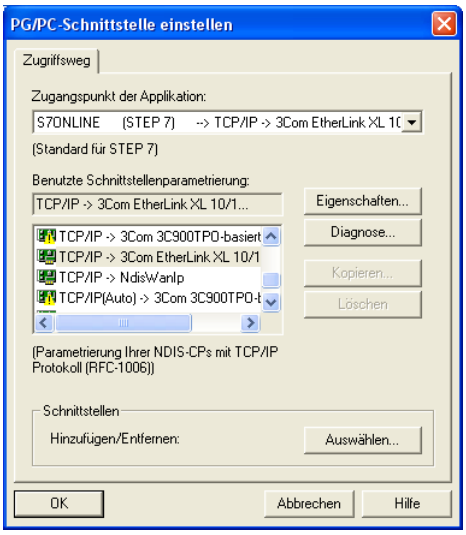
- Select communications driver *"SIMATIC S7 300/400"*
- Interface: Ethernet
- The operator panel address is the local IP address of the computer network card
- Access point: S7ONLINE
- The Control address is the IP address set in NETLink®
- The Slot is the MPI address of the CPU to be addressed



11.2 Configuring the PG/PC interface

In the control panel, open the "*Setting the PG/PC Interface*" module.

- Select the network card with protocol "*TCP/IP*" installed in the computer system as the *"Used Interface Parameterization"*.
- Check whether "*S7ONLINE (Step7) --> TCP/IP ->…"* is active for *"Access point of application"*
- Confirm with *"OK"*.



All variables that are linked to *"Controller_1"* can now be accessed via the RFC 1006 protocol.

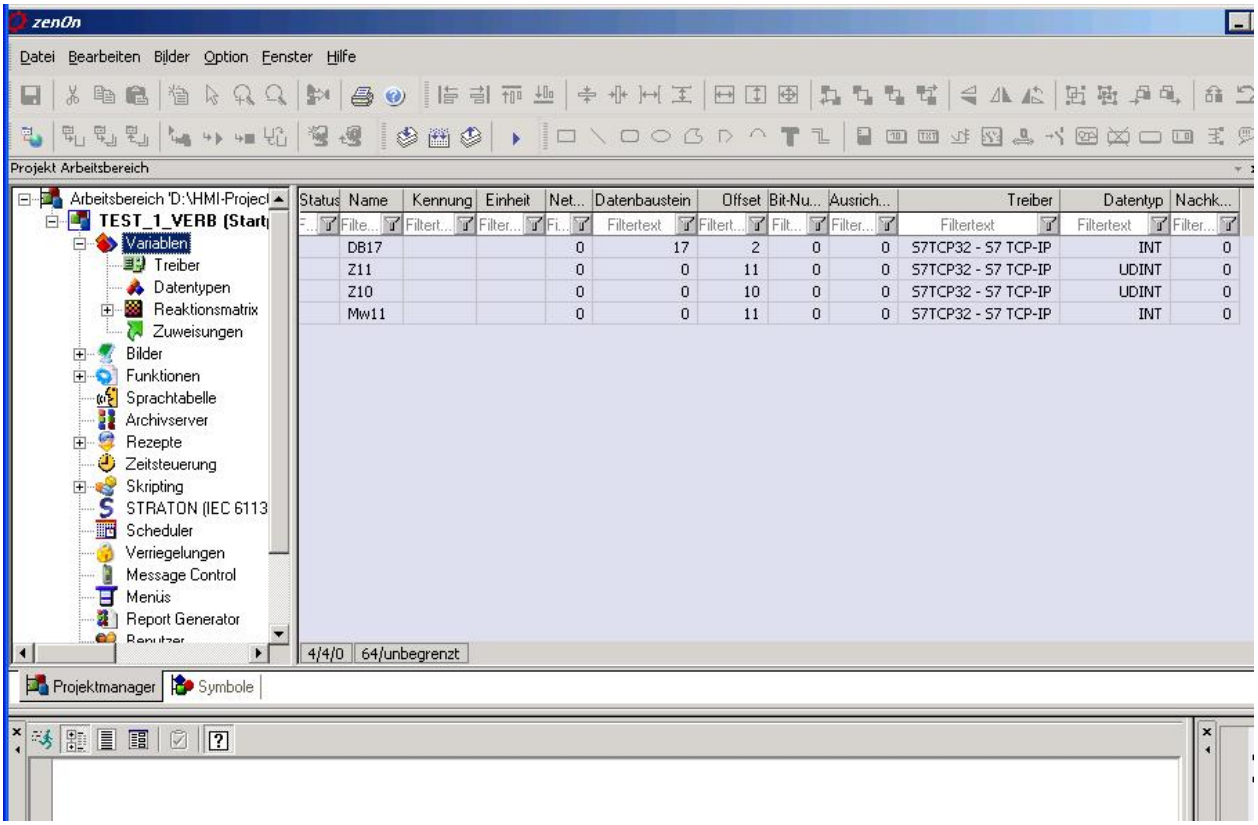
12 ZenOn V6.2 (COPA-DATA)

The following steps must be performed in the described sequence (status August 2007):

12.1 Configuring Zenon

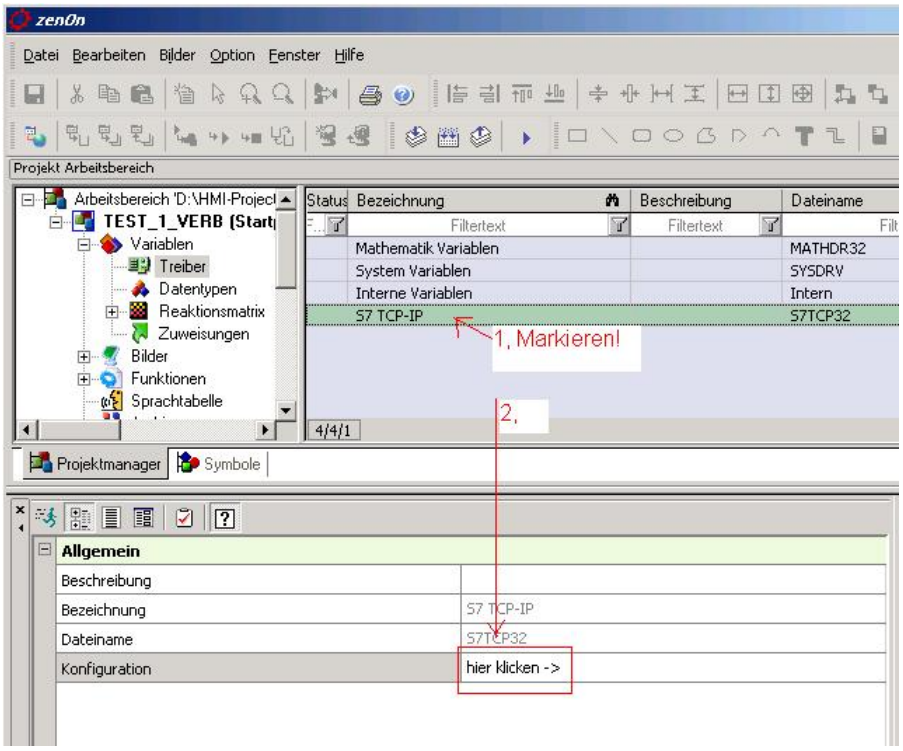
Start Zenon and create a new project or adapt an existing one and define variables.

Configuring variables:



12.2 Setting the driver

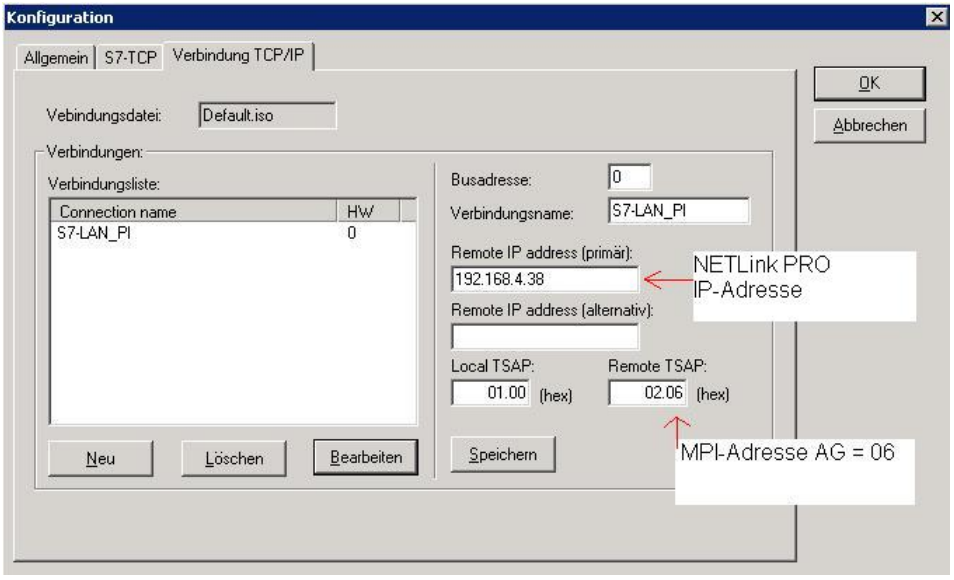
- Mark *"S7 TCP-IP"*
- Press *"Click here->"* in the configuration



12.3 Driver configuration

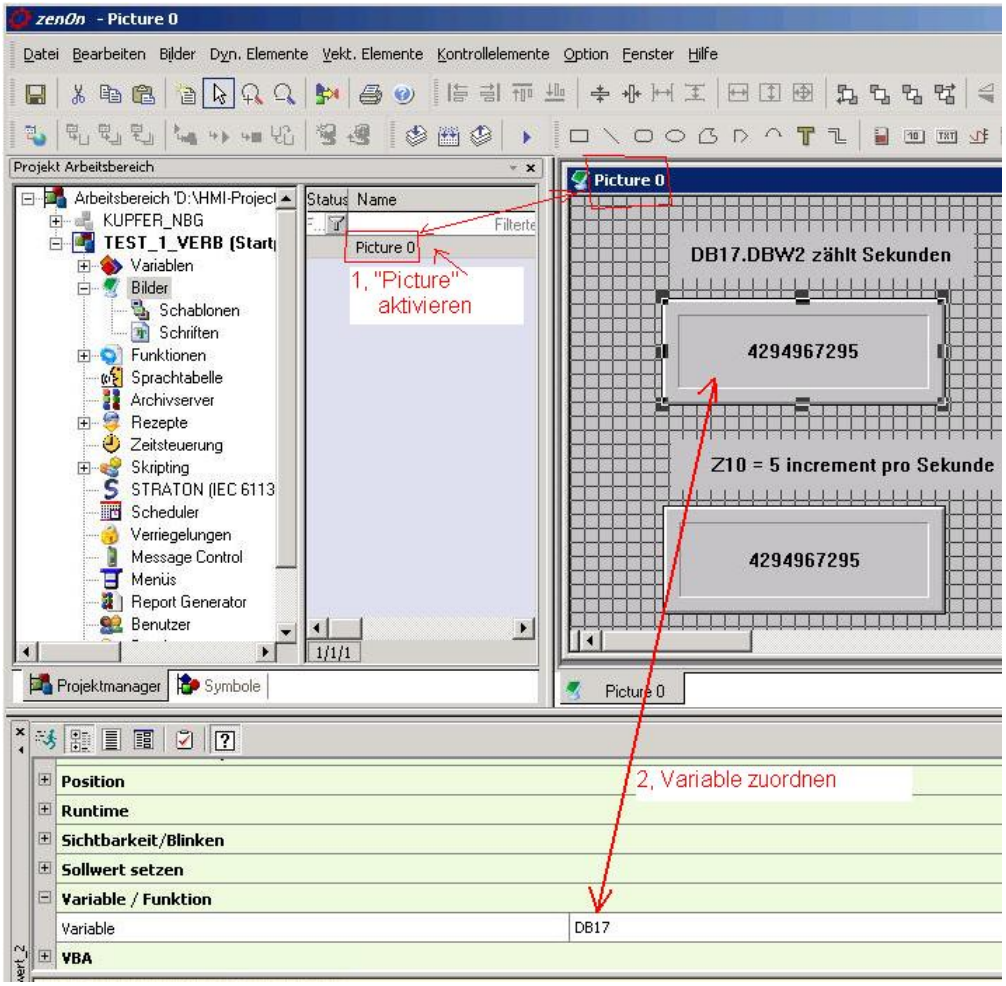
- *"New"* button:
- Enter data
- (remote IP address = IP address from NETLink®
  Remote TSAP = MPI address of PLC)
- First the *"Save"* button
- Then *"OK"* button

First the "Save" button and only then confirm "OK".

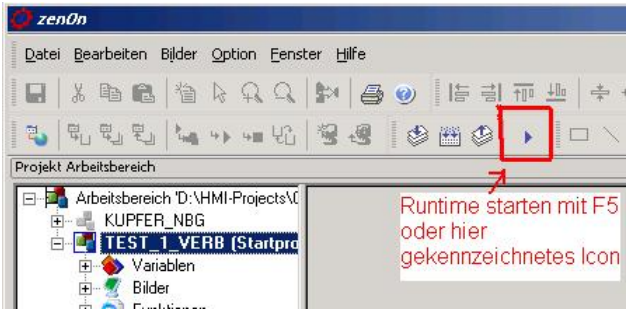


12.4 Integrating variables in images

Configuring images



Finally, start the runtime:



13 Address conversion table

The following table is a parameterization aid for fining the correct settings for Routing over RFC or for remote TSAP in addressed mode. Please note that the rack and slot together fill only one byte which is divided as follows:

- Rack fills the upper three bits (11100000_{bin})
- Slot fills the lower five bits (00011111_{bin})

Bus-addr.	Rack	Slot	TSAP		Bus-addr.	Rack	Slot	TSAP		Bus-addr.	Rack	Slot	TSAP		Bus-addr.	Rack	Slot	TSAP
0	0	0	0200		32	1	0	0220		64	2	0	0240		96	3	0	0260
1	0	1	0201		33	1	1	0221		65	2	1	0241		97	3	1	0261
2	0	2	0202		34	1	2	0222		66	2	2	0242		98	3	2	0262
3	0	3	0203		35	1	3	0223		67	2	3	0243		99	3	3	0263
4	0	4	0204		36	1	4	0224		68	2	4	0244		100	3	4	0264
5	0	5	0205		37	1	5	0225		69	2	5	0245		101	3	5	0265
6	0	6	0206		38	1	6	0226		70	2	6	0246		102	3	6	0266
7	0	7	0207		39	1	7	0227		71	2	7	0247		103	3	7	0267
8	0	8	0208		40	1	8	0228		72	2	8	0248		104	3	8	0268
9	0	9	0209		41	1	9	0229		73	2	9	0249		105	3	9	0269
10	0	10	020A		42	1	10	022A		74	2	10	024A		106	3	10	026A
11	0	11	020B		43	1	11	022B		75	2	11	024B		107	3	11	026B
12	0	12	020C		44	1	12	022C		76	2	12	024C		108	3	12	026C
13	0	13	020D		45	1	13	022D		77	2	13	024D		109	3	13	026D
14	0	14	020E		46	1	14	022E		78	2	14	024E		110	3	14	026E
15	0	15	020F		47	1	15	022F		79	2	15	024F		111	3	15	026F
16	0	16	0210		48	1	16	0230		80	2	16	0250		112	3	16	0270
17	0	17	0211		49	1	17	0231		81	2	17	0251		113	3	17	0271
18	0	18	0212		50	1	18	0232		82	2	18	0252		114	3	18	0272
19	0	19	0213		51	1	19	0233		83	2	19	0253		115	3	19	0273
20	0	20	0214		52	1	20	0234		84	2	20	0254		116	3	20	0274
21	0	21	0215		53	1	21	0235		85	2	21	0255		117	3	21	0275
22	0	22	0216		54	1	22	0236		86	2	22	0256		118	3	22	0276
23	0	23	0217		55	1	23	0237		87	2	23	0257		119	3	23	0277
24	0	24	0218		56	1	24	0238		88	2	24	0258		120	3	24	0278
25	0	25	0219		57	1	25	0239		89	2	25	0259		121	3	25	0279
26	0	26	021A		58	1	26	023A		90	2	26	025A		122	3	26	027A
27	0	27	021B		59	1	27	023B		91	2	27	025B		123	3	27	027B
28	0	28	021C		60	1	28	023C		92	2	28	025C		124	3	28	027C
29	0	29	021D		61	1	29	023D		93	2	29	025D		125	3	29	027D
30	0	30	021E		62	1	30	023E		94	2	30	025E					
31	0	31	022F		63	1	31	023F		95	2	31	025F					

14 Troubleshooting

The points described here show some typical errors that can occur when using the RFC 1006 function.

Please also refer to the descriptions for troubleshooting in the accordant NETLink® manual!

If a problem is not described here and this manual does not provide any information on how to remedy it, the support of Systeme Helmholz GmbH will gladly help you to solve the problem.

Q: How can I specify the target station(s) for RFC 1006 communications in WinCC by using the Rack/Slot fields?

A: Since the RFC protocol does not have a default entry for specifying the PROFIBUS/MPI address of a target station (PLC), you will have to use the 2 byte-long TSAP field. The first byte of the TSAP ID is the rack value, while the second is the slot value (the value range for the slot field will often have a maximum value of 31, e.g., in WinCC).

This is why the NETLink unit will have to evaluate both of the TSAP field bytes in order to determine the address of the target station.

Scenario 1: Your application allows slot field values of up to 126

---> You will have to enter “0” into the Rack field and the PROFIBUS address of your CPU into the Slot field.

Scenario 2: Your application only allows slot field values of up to 31

---> You will have to enter a 32x multiplier into the Rack field and the missing remainder of the PROFIBUS address into the Slot field.

Address assignments using the Rack and Slot input fields:

Example 1: Entry for address 17 ≙ | 0 | 17 | Calculation: (0* 32 + 17)

Example 2: Entry for address 34 ≙ | 1 | 2 | Calculation: (1* 32 + 2)

Example 3: Entry for address 69 ≙ | 2 | 5 | Calculation: (2* 32 + 5)

Q: Why do I get an address conflict when trying to communicate via Step 7 with the RFC 1006 mode activated even though the station-related address has been adapted in the driver?

A: You have probably changed your own address in the Web interface (default = 0). The NETLink® automatically tries to go online with this address on the bus in RFC mode. Conflicts will occur if another node uses the same address. In this case, the altered entry in Step 7 is ignored. Check the status of the active stations in the Web interface.

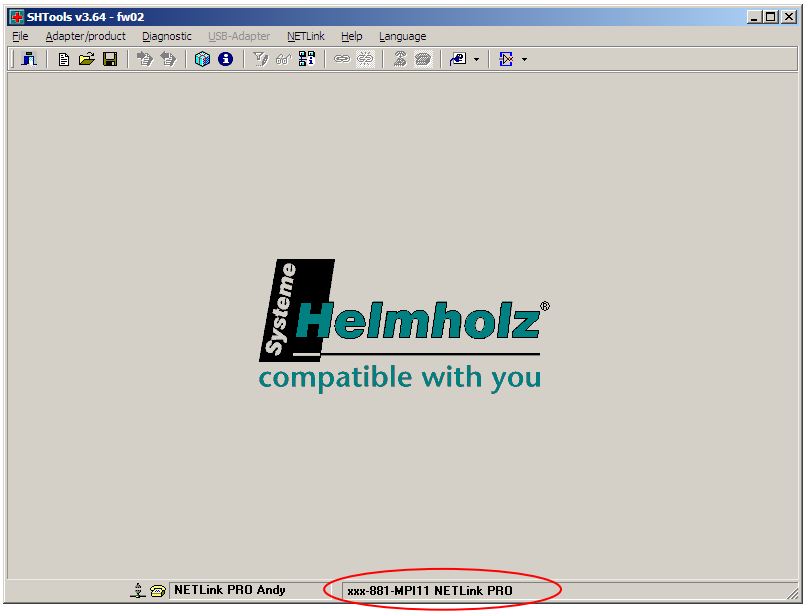
A firmware update on the NETLink® WLAN must always be performed via the network socket.

Q: How is a firmware update performed in a NETLink® adapter?

A: The following steps must be performed:

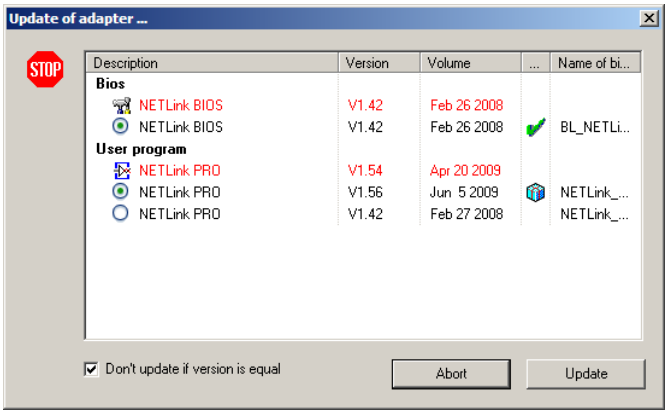
1) Download the up-do-date “*SHTools*” software from the Systeme Helmholz web site and install this on your computer.

2) After "*SHTools*" has been started, make sure that the appropriate NETLink® product is activated on the status bar



If there appear another product, so simply press the right mouse button over the status bar and select the product based on its name and order number in the dialog box that then opens.

3) After you have pressed the "*Adapter->Update adapter*" menu, the dialog box shown below appears (example):



To perform an update from a firmware version lower than V1.42 to a version higher than V1.42, it is first necessary to update to version 1.42 as an intermediate step.
After that, an update to all higher versions can be performed in a further step.

Q: What must I observe when calling your technical support?

A: Please have all relevant data of your system constellation with the connected stations and program modules at hand when you contact technical support at Systeme Helmholz GmbH.

15 Directory of Sources

INAT-OPC-Server
(http://www.inat.de/index.php?18&backPID=18&tt_products_sof=236)

InduSoft Web Studio v7.0
(http://www.indusoft.com/indusoftart.php?catid=1&name=IWS/webstudio)

InTouch V9.5 (Wonderware GmbH)
(http://global.wonderware.com/EN/Pages/WonderwareInTouch-HMI.aspx)

KEPserverEx V5.4.135.0
(http://www.kepware.com/Products/OPC_Servers.html)

PROCON-Win V5.3 (http://www.gti.de/index.php?id=45)

S7/S5 OPC-Server
(http://www.helmholz.de/prod.d,18_30_34.html?p_id=39)

VisAM Win32
(http://www.visam.de/03_produkte/visam/index.php)

WINCC V7.0
(http://www.automation.siemens.com/mcms/human-machine-interface/de/visualisierungssoftware/scada-wincc/Seiten/Default.aspx)

WinCC flexible 2005/2007
(http://www.automation.siemens.com/hmi/html_00/products/software/wincc-flexible/index.htm)

ZenOn V6.2 (http://www.copadata.at/de/ger/home.html)