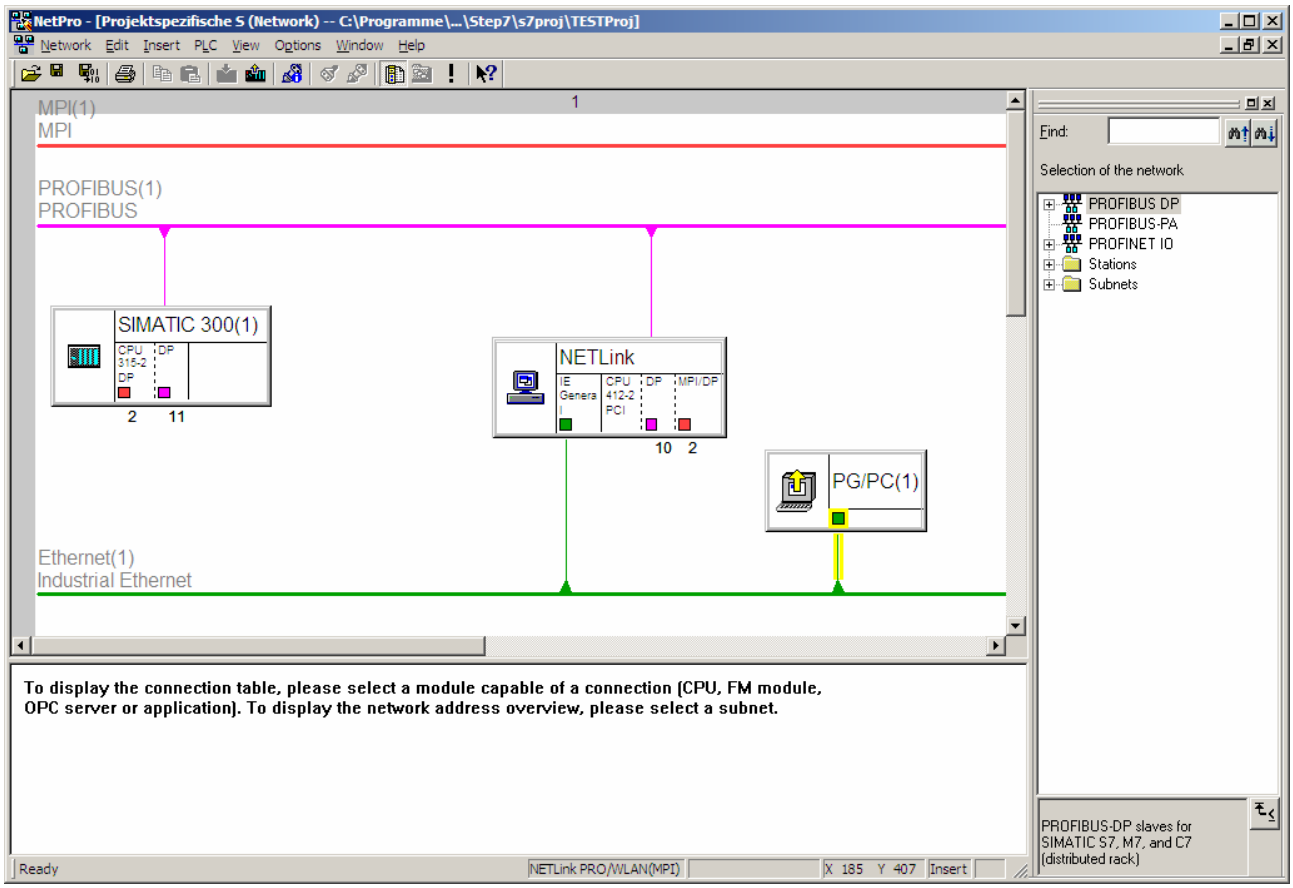
Systeme Helmholz®
compatible with you

NETLink® PRO / WLAN

Example of Expanded NETLink Functions

Project-Specific Interface

Edition 1 / 13.07.2009



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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.de, from where it can also be downloaded.

Our customers are important to us. We are always glad to receive suggestions for improvement and ideas.

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Revision history of this document:

Edition	Date	Revision
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1 Overview

1.1 Application and function description

This document is intended as a supplement to NETLink® PRO or NETLink® WLAN Manual.

You frequently come across applications that demand permanent installation of a NETLink® PRO/WLAN. Access to the various permanently installed controllers from one central point is complicated because the access point has to be altered in the NETLink driver every time.

A new integrated function has been provided to make this easier. The interface can now be stored in the project from the NETLink PRO FW 1.56 or the NETLink WLAN FW 2.14, so that the PG/PC settings depend on the project in question.

It is a precondition of using the project-specific interface that the RFC1006 function has been activated in the web interface (see Section 2).

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

All the examples described here require the prior activation of the RFC 1006 functionality in NETLink® PRO/WLAN.

A detailed description is also given in the NETLink® PRO/WLAN Manual!

2.1 Requirements

The NETLink® PRO/WLAN is connected to the PC via a network card. The STEP 7 software is also installed on this PC. The function of the web interface must be activated. It is accessed via one of Internet browsers (for example, Mozilla Firefox, Opera, Konqueror, or Internet Explorer).

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

The applications described here were performed on the Windows XP Operating System with Service Package 3.

2.2 Adapting the configuration side

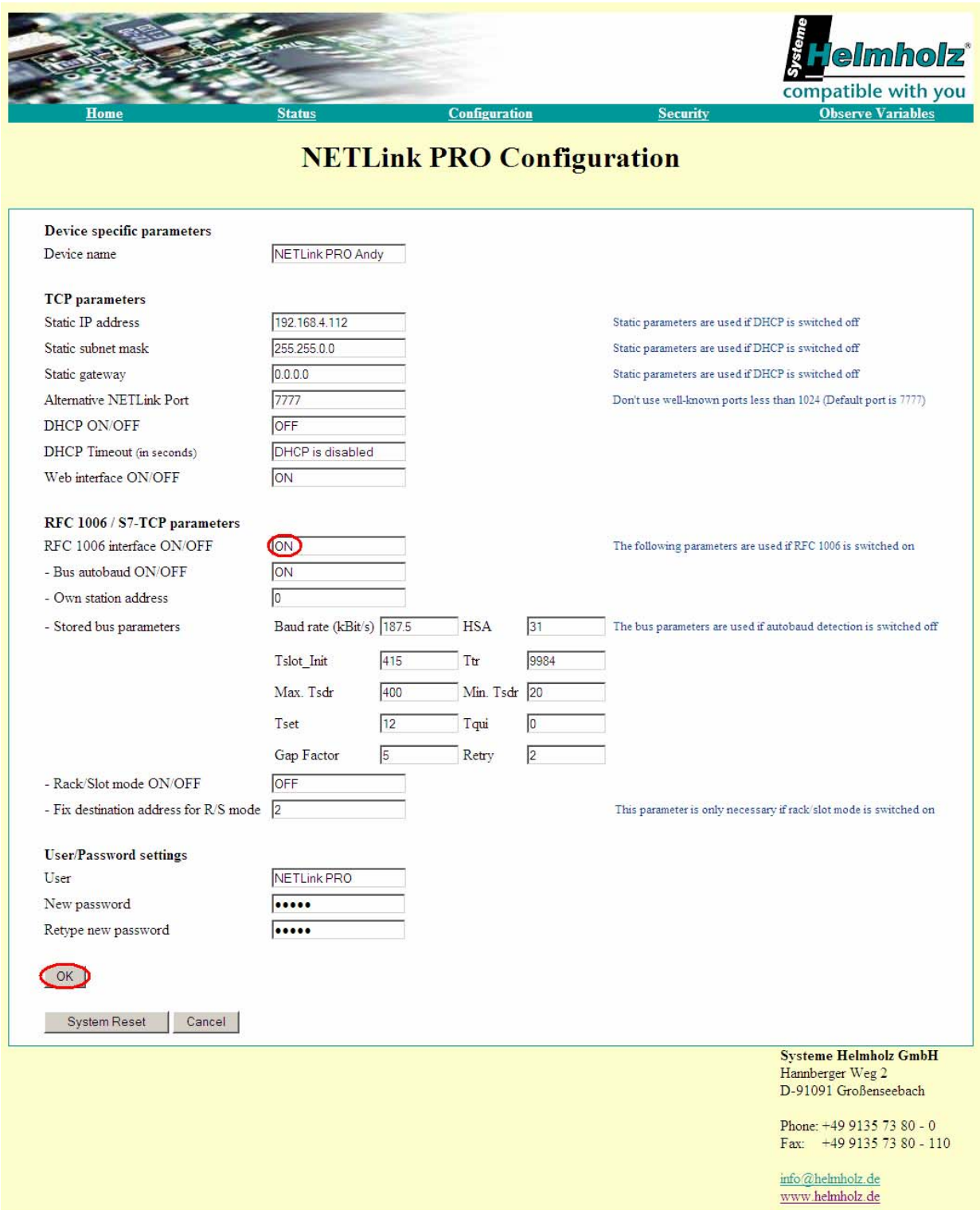
As soon as the Web interface has been opened by entering the relevant URL "*http://<ip address>"* the link to "*Configuration"* opens. As soon as you have answered the security query, you have write access to all parameters.

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® PRO/WLAN.

The following screenshots were created with NETLink PRO. The settings can also be made in NETLink WLAN.

Configuration user interface of the NETLink® PRO:

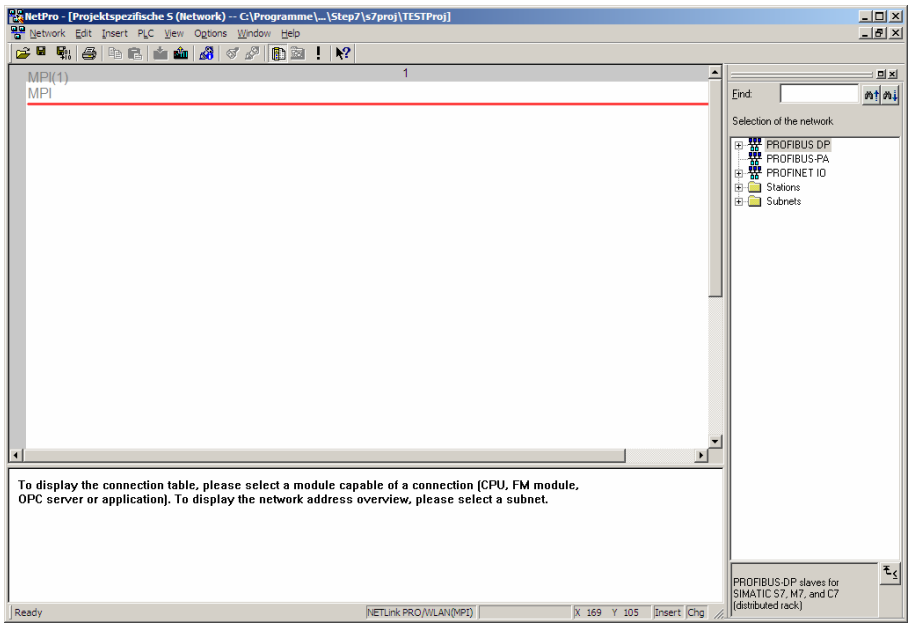


Rebooting can take up to 40 seconds.

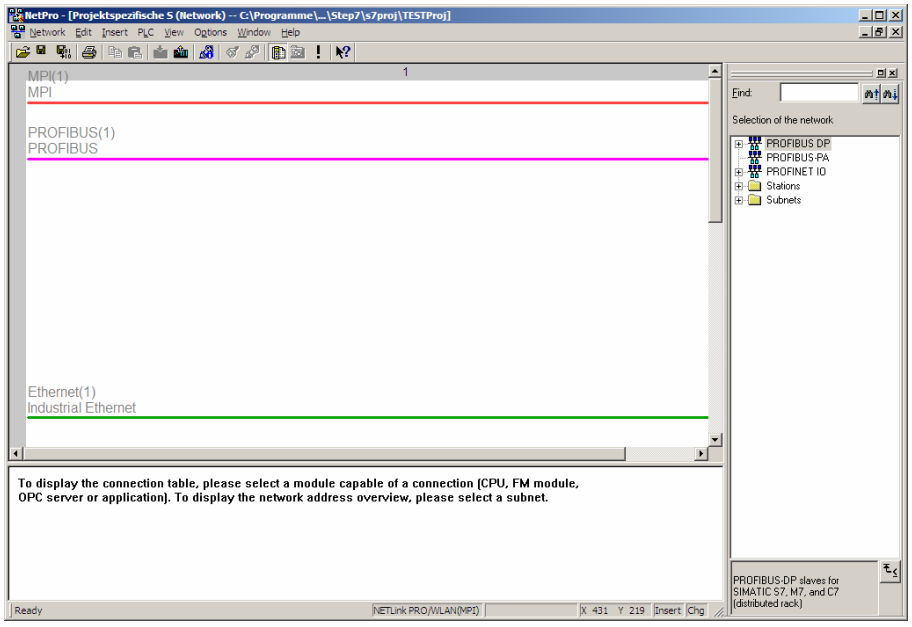
After the new parameterization data have been stored, the NETLink® PRO is restarted to activate the new configuration.

3 Settings in Step 7 NETPro

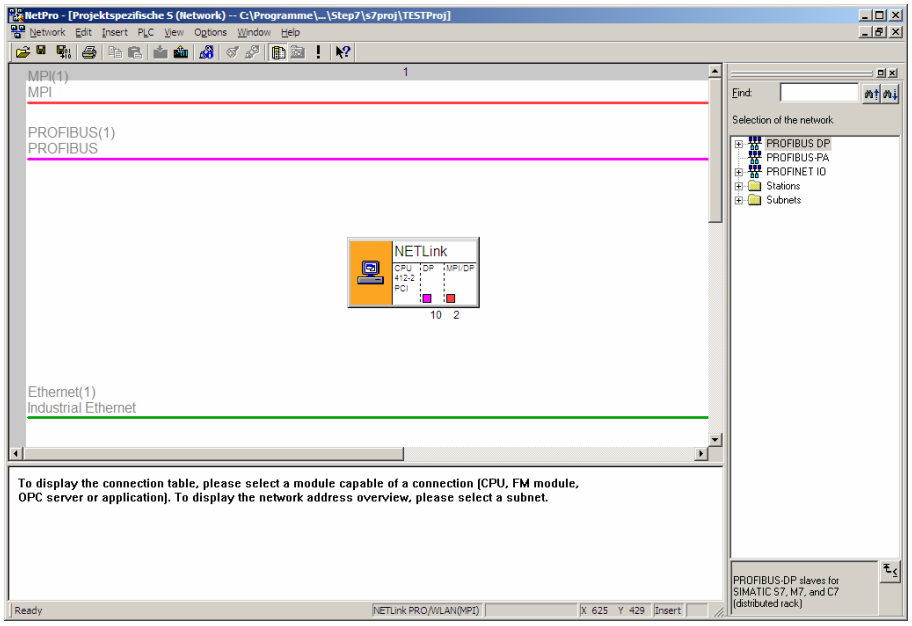
1. "*NETPro*" from Siemens is required for configuration, as shown below.



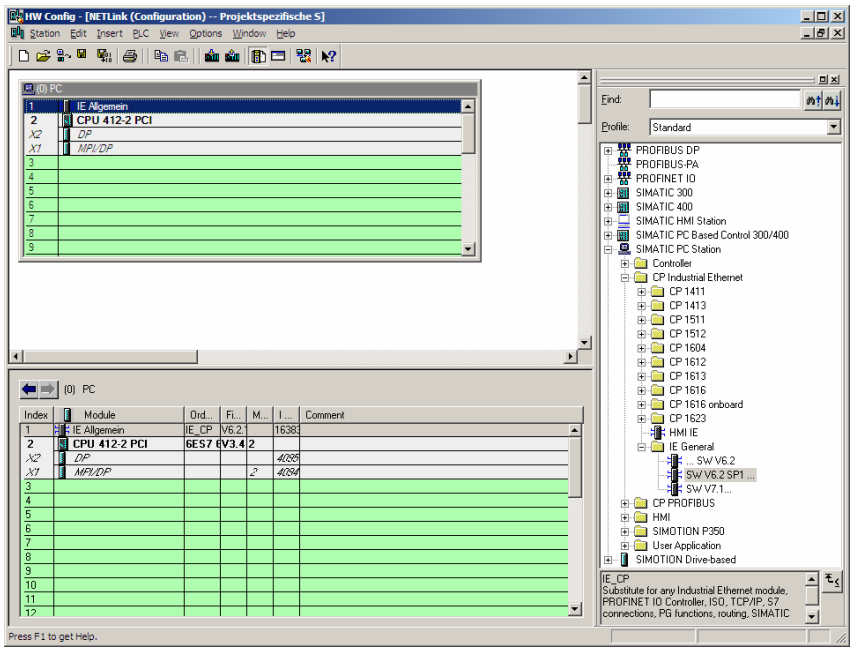
2. Now, a PROFIBUS and Industrial Ethernet subnet must be created.



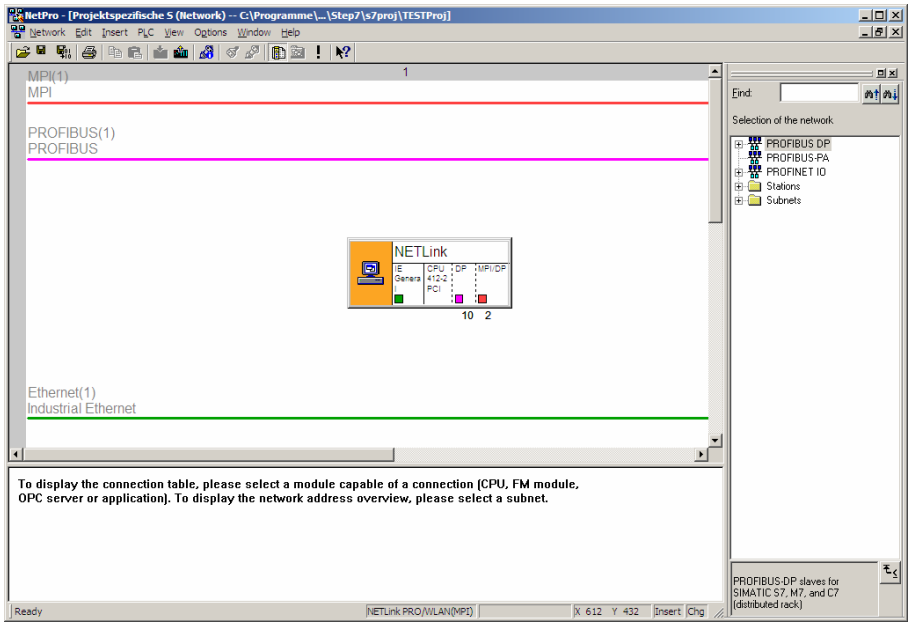
3. And now it is necessary to insert a "*PC station*". This can be found under "*Stations -> Simatic PC Station*" in the catalog of NETPro. A CPU 412-2 PCI (6ES7 612-2QH00-0AB4 V3.4) must be integrated into this "*PC Station*". You can also skip steps 3 to 4 if you use the import function of "*NETPro*". You will find a ready-configured NETLink Station on the NETLink CD.



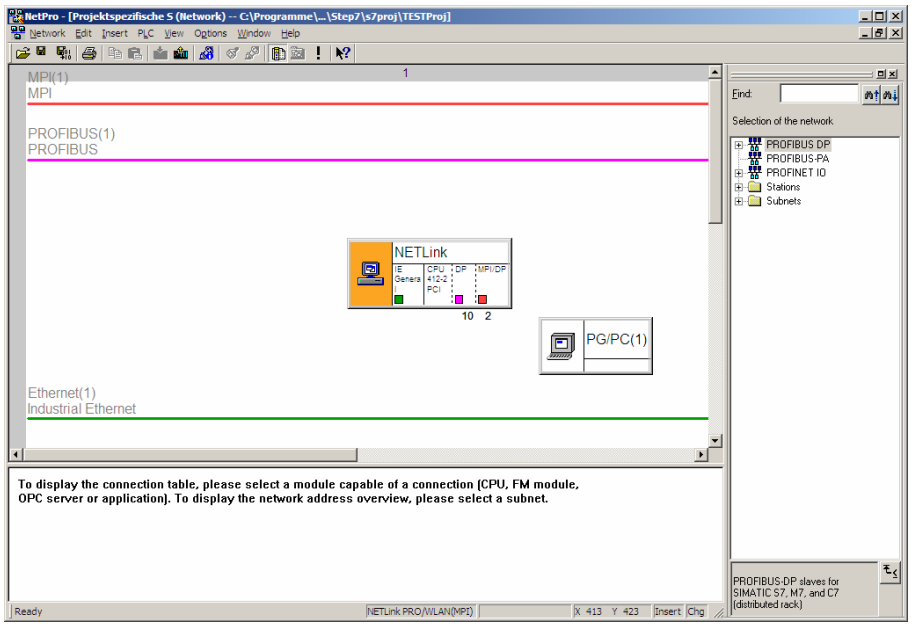
4. An "*IE_CP V6.2.1 (IE General)*" must be integrated into the "*PC station*". This must be done using the hardware manager. You will find this under "*Simatic PC Station -> CP-Industrial Ethernet -> IE General -> IE_CP SW V6.2 SP1*"



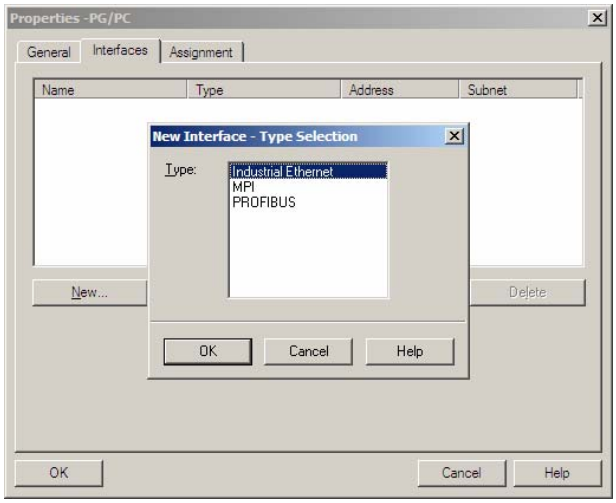
5. The completed station can now be saved and will appear in *"NETPro"*.



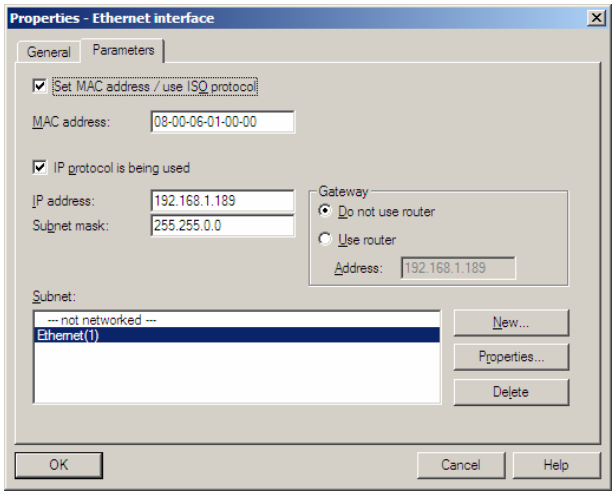
6. Now a *"PG/PC Station"* is inserted that can be found under *"Stations -> PG/PC"*.



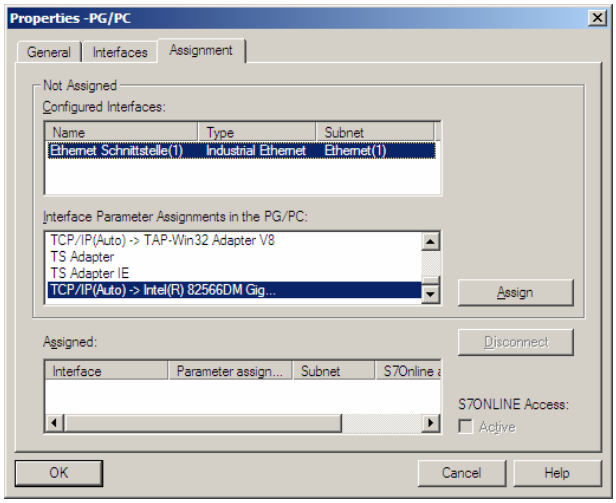
7. Double-clicking the "*PG/PC station*" displays its properties window. This interface must be added there under "*Interfaces -> New… -> Industrial Ethernet*".



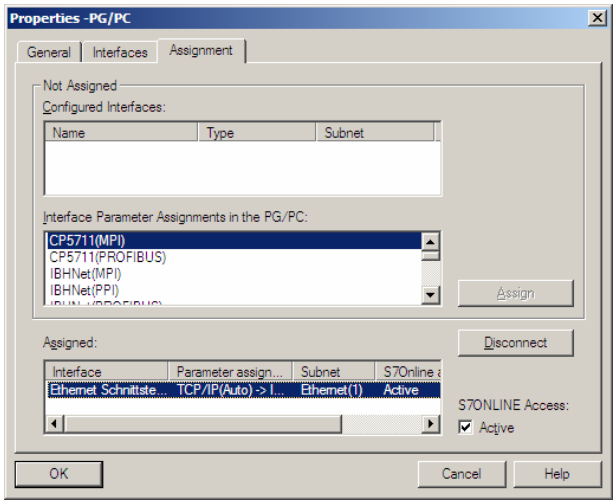
8. A window then appears in which the "*Industrial Ethernet*" settings must be made for the PC (IP / subnet mask). The subnet must also be set ("*Industrial Ethernet*", to which the NETLink is connected)



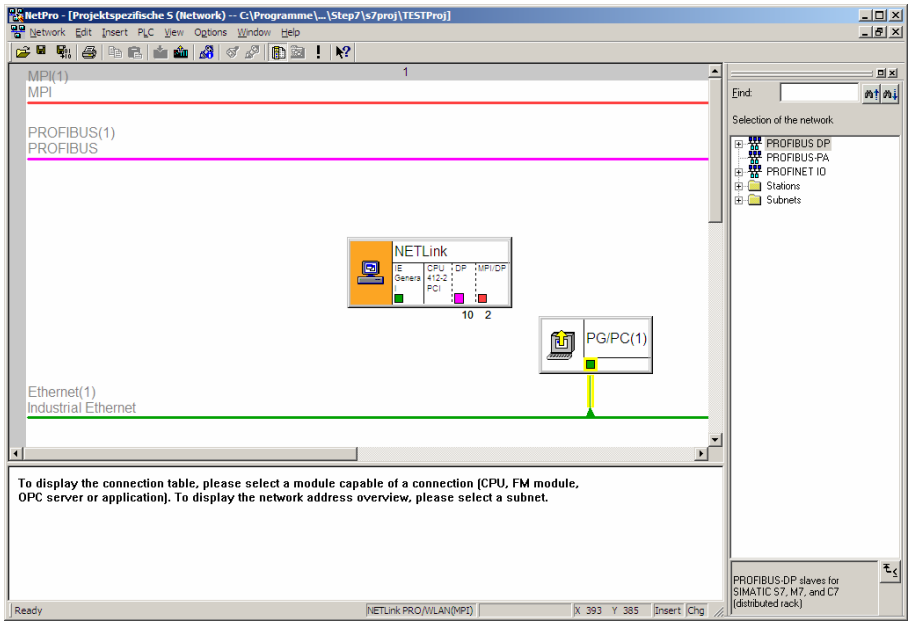
9. Now look for the configured interface Ethernet Interface on the "*Assignment*" tab card and link it with "*TCP/IP(Auto) -> xxx*" (LAN card used) using the "*Assign…*" button.



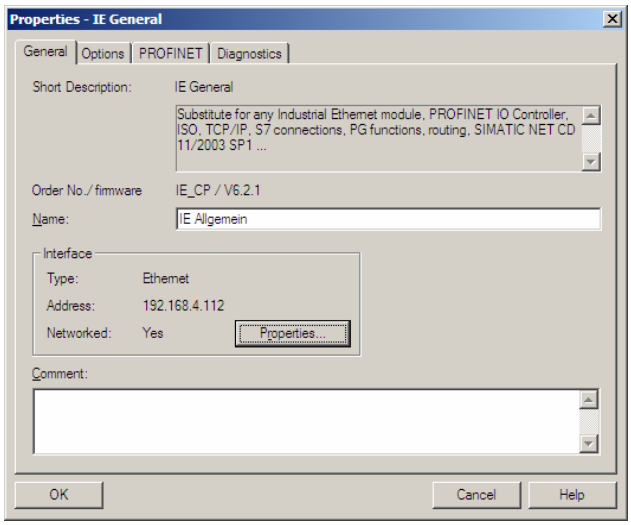
10. After the configured interface as been assigned, the window should look like this.



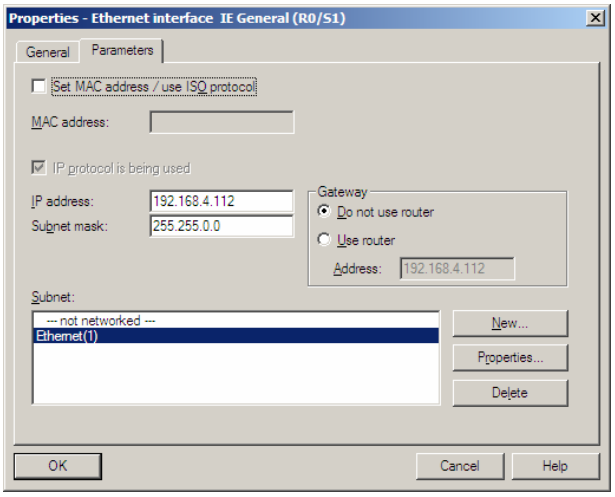
11. Now the "*Industrial Ethernet*" is connected to the "*PG/PC*".



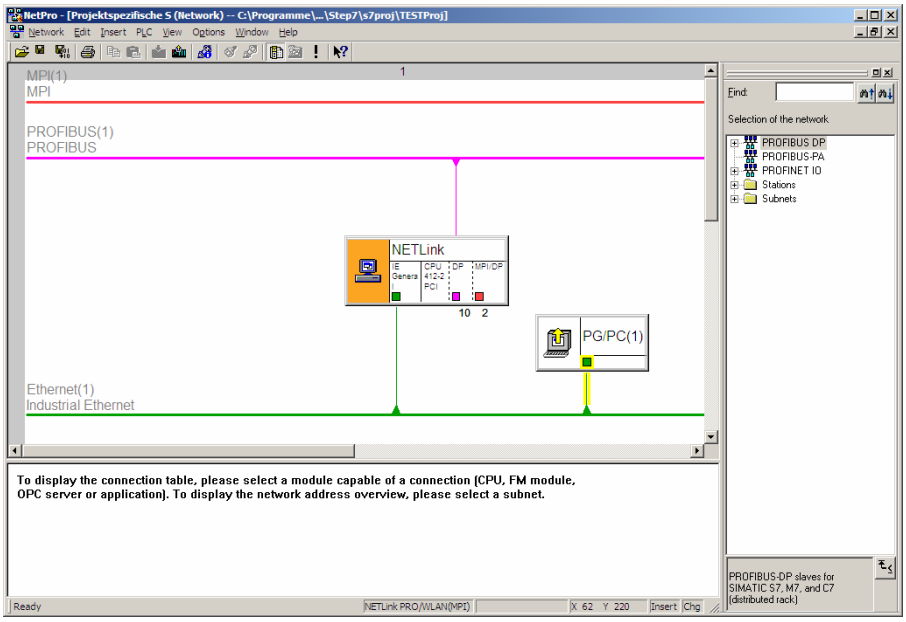
12. Then the PC station (in this case: NETLink) must be configured by double-clicking "*IE General*".



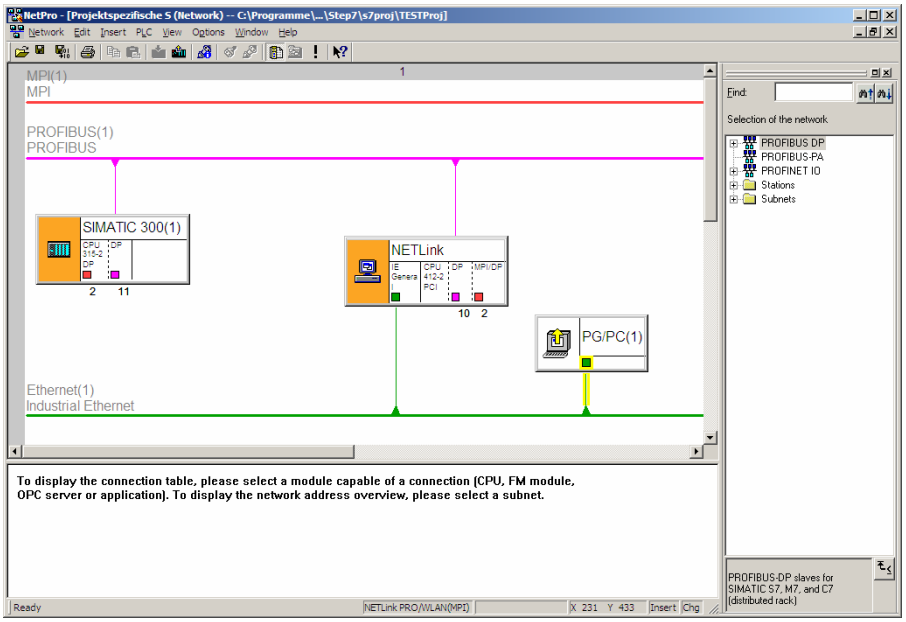
13. A click on “*Properties…*” parameterizes the interface. The IP and subnet mask have to be entered here. The subnet to which the “*PG/PC*” is connected must also be selected.



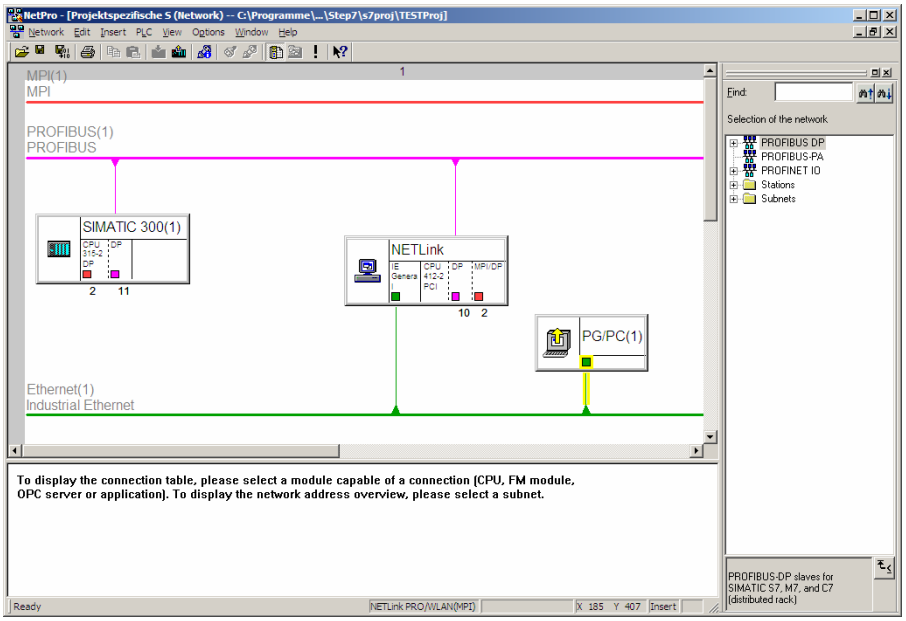
14. The main window of “*NETPro*” now likes like this. If everything has worked, (“*TCP/IP(Auto) -> xxx (network card*”) will be entered as the “*PG/PC*” interface on the bottom line. Now it is necessary to assign a bus address (PROFIBUS in this case) to the DP or MPI interface of the NETLink and to connect this with the subnet.



15. Now a CPU can be added to the corresponding subnet as required. “*CPU 315-2 DP*” is this example



16. Then the project has to be saved and compiled.



4 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 NETLink® PRO / WLAN 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.

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

Q: How is a firmware update performed in the NETLink® PRO / WLAN adapter?

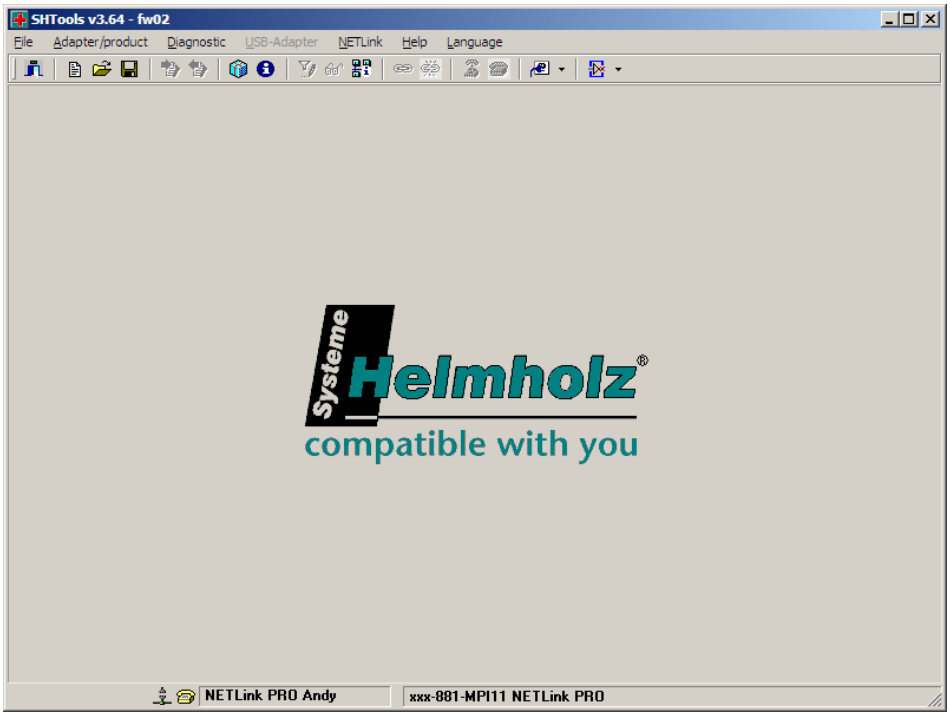
A: The following steps must be performed:

1) Download the up-do-date "*SHTools*" software from the Systeme Helmholz web site.

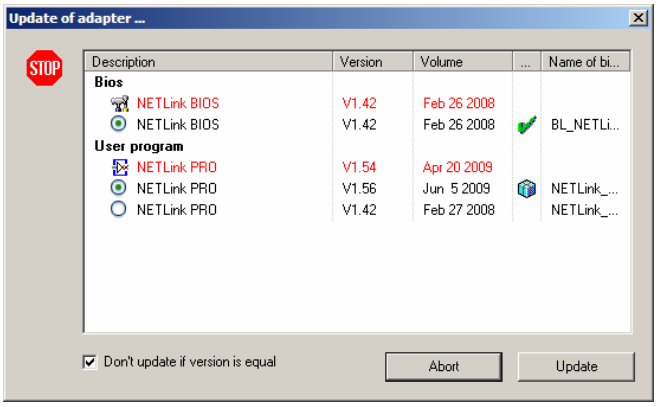
www.helmholz.de -> Download -> NETLink®-PRO or WLAN

2) After "*SHTools*" has been started, make sure that the "*NETLink® – family*" is activated on the status bar (if not, simply press the right mouse button over the status bar and select the "*NETLink® family*" in the dialog box that then opens).

Select a product based on its name and order number:



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: 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® PRO 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.

Q: My adapter can't go online. Why?

A: Is the online LED on the adapter lit? If not, check the BUS parameters with which the adapter is to go online via RFC. You will find the parameters in the web interface in section *"Configuration."*

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.

5 Directory of Sources

NETLink PRO Manual German
http://www.helmholz.de/dnl/Handbuch_NETLink-PRO_8.zip

NETLink PRO Manual English
http://www.helmholz.de/dnl/manual_NETLink-PRO_8.zip

NETLink WLAN Manual German
http://www.helmholz.de/dnl/Handbuch_NETLink-WLAN_2.zip

NETLink WLAN Manual English
http://www.helmholz.de/dnl/manual_NETLink-WLAN_2.zip