

# BRICKware for Windows

for  
BIANCA/BRICK,  
BinGO!, and VICAS

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The information in this manual is subject to change without notice.

This manual provides a description of the BRICKware for Windows utility programs for the BinTec BIANCA/BRICK, BinGO!, and V!CAS routers. The information included in this manual is compatible with software version 4.9.

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# BRICKware for Windows

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# BRICKWARE FOR WINDOWS

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## Overview

*BRICKware for Windows* is a software package containing programs to help you install, configure and maintain your BIANCA/BRICK, BinGO!, or V!CAS.

*BRICKware for Windows* consists of two main parts, the *Desktop Internetworking Management Environment – DIME* for short – which is a suite of utilities for administering and tracing BRICKs from your PC, and *Remote Access Drivers* – RMCC, Remote CAPI, and Remote TAPI – which provides your PC with standardized software interfaces, such as CAPI 1.1 and CAPI 2.0 for communications applications, or TAPI 1.4 and TAPI 2.0 for telephony applications. In addition to this there is the *TAF* (Token Authentication Firewall) *Login program*, that can be used to authenticate users in connection with the established, and well-respected Token-Card-ACE/Server solution provided by Security Dynamics.

For the products BIANCA/BRICK-XS/XS office, BinGO! and BinGO! Plus/Professional a Windows-based *Configuration Wizard* is included, which can be used for a basic initial configuration of your router. For a step-by-step description on installing your router and configuring it with the *Configuration Wizard* see the *Quick Install Guide*, which is enclosed with your product

respectively can be retrieved from BinTec's file server at <http://www.bintec.de> in PDF format.

*BRICKware for Windows* has been successfully tested with the TCP/IP stack software *Microsoft TCP* and *OnNet PC/TCP*. BRICKware for Windows is also compatible with other TCP/IP stacks, such as Sun PC/NFS and Chameleon TCP.

Also included is the general-purpose communications software package *RVS-COM lite* for Windows 95 and Windows NT. *RVS-COM lite* utilizes your BRICK via the CAPI interface, and allows you to access T-Online (formerly known as Datex-J or BTX), send and receive fax messages, voice mail, etc. For information on installing and using *RVS-COM lite* please refer to its on-line manuals on the BinTec ISDN Companion CD.

## DIME

*DIME* comprises the following programs:

- ***DIME Tools*** – a suite of utilities for administrating and monitoring BRICKs from your PC. You need *Windows 3.x* or higher to run *DIME Tools*.
  - ♦ *BootP Server* – Enables your PC to act as a *Bootstrap Protocol server (BootP server for short)* for one or more BRICKs. Basic configuration information (i.e., IP address, network mask, name server, etc.) can be initially loaded remotely over the LAN.
  - ♦ *ISDN and CAPI Trace Utility* – Allows you to run an ISDN or CAPI tracer to a BRICK to examine and analyze the byte streams being sent over the B or D channel.
  - ♦ *TFTP Server* – Manages the transfer of configuration files between the BRICK and your PC via *TFTP*. You can e.g. use the TFTP Server to store different versions of your BRICK's configura-

tion, or to update its system software as described in the *User's Guide*.

- ♦ *Syslog Daemon* – Actively displays system messages received from the BRICK and stores them in various files for future review.
- ♦ *Time Server* – Enables your PC to supply your BRICK with the current time.
- ***DIME Browser*** – SNMP Manager, provides easy access to all the BRICK's SNMP tables and variables via a graphical user interface.

You can use *DIME Browser* for all configuration and administration purposes, provided you know which values need to be changed to achieve your goal. If you are new to BRICK administration the menu driven Setup Tool (explained in your *User's Guide*) might be the better choice of tools.

You need *Windows 3.1x* or higher to run *DIME Browser*.

- ***BRICK at COM1*** and ***BRICK at COM2*** – preconfigured links to Windows' terminal program for accessing a BRICK connected to COM1 or COM2 with a serial interface cable. You can then easily login to your BRICK and configure it, e.g. by using the built-in Setup Tool (see *User's Guide*).

## RMCC, Remote CAPI, and Remote TAPI

- ***Remote Multi CAPI Client (RMCC)*** – provides a CAPI 2.0 interface for multiple BRICKs for Windows NT 4.0 systems. With RMCC installed you can use the ISDN interfaces of all BRICKs available on your network for CAPI connections from one PC (applications allowing).
- ***Remote CAPI Client*** – provides the CAPI 1.1 and CAPI 2.0 interfaces for all Windows systems. With the Remote CAPI Client installed you can use the

ISDN interface of your BRICK from all PCs in your LAN as if it was locally installed in the PC.

There are a lot of communications programs available for Windows which use the CAPI interface. One of these programs—RVS-COM lite for Windows 95 and Windows NT—is included on your BinTec ISDN Companion CD.

- *Remote TAPI Client* – provides TAPI telephony services on your PC. You can use a number of Windows applications—e.g. the MS Dialer, or MS Outlook—to initiate calls which use the analog devices connected to the POTS ports of your BRICK from your PC, or to display information on the caller from a data base to help you decide whether to take the call.
- *CAPI and TAPI Configuration* – setup utility for Remote CAPI and Remote TAPI.

## Configuration Wizard

With the *Configuration Wizard* included in the *BRICKware* for Windows you can start running your BIANCA/BRICK-XS/XS office, BinGO! or BinGO! Plus/Professional in an easy and quick way. You can perform a basic initial configuration via the serial connection from your Windows PC. The *Configuration Wizard* is one of several possibilities to configure your router. Other methods to configure your router and fine tune your configuration are described in your *User's Guide*.

For a step-by-step description on installing your BIANCA/BRICK-XS/XS office, BinGO! or BinGO! Plus/Professional and configuring it with the Configuration Wizard see the *Quick Install Guide*, which is enclosed with your product respectively can be retrieved from BinTec's file server at <http://www.bintec.de> in PDF format.



## Token Authentication Firewall (TAF) Login Program

Token Authentication Firewall, TAF, is an advanced means of controlling access to central site computing resources that goes beyond the theoretical limitations of existing security mechanisms like Access Lists and Network Address Translation.

These features control access to routing services based on the contents of incoming/outgoing IP packets (IP address, TCP port number, interface, etc). In contrast, TAF is User oriented; meaning that IP connections are managed based upon authentication of the actual user at the remote host. This solves such security problems involving:

- unauthorized access to company resources by family members using teleworkers' home equipment
- stolen equipment (laptops) and the loss of sensitive configuration information (login IDs and password)

TAF Login user verification is based on the established, and well respected Token-Card-ACE/Server solution provided by Security Dynamics.



You will need a special TAF license to use TAF on your BRICK. Along with this license you will get 10 *TAF Login* licenses for PCs you wish to use as TAF clients.

## Installation

To install *BRICKware for Windows* on your PC simply start Windows and insert the *BinTec ISDN Companion CD*.



Note that *BRICKware for Windows* requires a TCP/IP stack to be installed on your computer.

*BRICKware for Windows* requires approximately 4 MB of space on your harddisk. If you are using *Windows 3.1x* and want to use *DIME Browser* you also have to install *Win32s* (included on the CD), which requires an additional 3 MB of harddisk space.

### Starting the Installation

Windows 95 will automatically start the setup program, please continue with the next section. If you use Windows 3.x close all applications, select »Run« from the »File« menu and enter

```
d:\setup
```

(where »d« is the drive letter of your CD-ROM drive) in the dialog box that appears on your screen. Click on the *OK* button.

This starts the setup program.

### Setting a Path for BRICKware

The setup program lets you choose the location, where *BRICKware for Windows* should be installed. Simply press the Return key to accept the default path setting (C:\BRICK\).

If you want to use a different path, please take care to use only short filenames (»8.3«). Long Windows 95 filenames will not work.

### Choosing Type of BRICK

The setup program now displays a dialog box, where you can select the type of BRICK you want to install *BRICKware for* (i.e. BRICK-M, BRICK-XS/XS office, BRICK-XM, BRICK-XMP, BRICK-XL/XL2, V!CAS, BinGO! and BinGO! Plus/Professional).

### Choosing Products

Following that you can choose which parts of *BRICKware for Windows* you wish to install.



Figure 1: Install Shield – Custom Installation



Please note, that you can only make use of the TAPI, if your BRICK has a POTS module (CM-AB) built in (all BinGO! Plus/Professional and V!CAS routers contain this module as a default).

When you click on a product, a short description will be displayed in the area below.



Note that you should install *DIME Browser* and *DIME Tools* on the network administrator's computer only.

The *Remote CAPI* and *Remote TAPI Clients*, on the other hand, must be installed on each computer you wish to use the BRICK's Remote CAPI or Remote TAPI feature from.

#### DIME Browser & Windows 3.1x

If you are installing *DIME Browser* from Windows 3.1x the setup program will check to see if version 1.3 of Win32s is installed on your system (*DIME Browser* is a Win32-based application, which needs the operating system extension Win32s to run under Windows 3.1x). If version 1.3 of Win32s is not found, the setup program asks if you want to install it first. If you answer yes, the program

will automatically start Win32s' own installation program (located on the CD in the `\addons\win32s` directory), which then takes over.



After the Win32s installation is complete and you have rebooted the system, you have to start *setup* again, as described above.

#### Autostart of DIME Tools

If you chose to install *DIME Tools* then at the end of the installation the setup program suggests automatically starting *DIME Tools* at every start of Windows. This is especially useful when you want to use *BootP Server*, *Syslog Daemon* or *Time Server* (see pp. [15f](#), [23f](#)).

Setup then offers to start *DIME Tools* now, so you can immediately begin configuring your new BRICK.

#### Initial Configuration

As soon as *BootP Server* receives a Bootstrap Protocol request from your new BRICK it opens the *BootP Server Configuration* window (see p. [15](#)). Here you can enter the name, IP address and netmask for your BRICK.

Once this is accomplished, you can use *DIME Browser* (see p. [27](#)) or Setup Tool (see *User's Guide*) to enter the license information and configure your BRICK.

#### BRICKware Program Group

After the installation is complete, you will find the utility programs in the BRICKware program group.



Figure 2: BRICKware Program Group

## Uninstall BRICKware

You can use the Uninstall icon from the BRICKware program group to uninstall BRICKware.

In addition to removing all the files copied to your harddisk during the installation process Uninstall also removes all entries made to the Windows system files—except for configuration entries. All BRICKware applications which are running when you start Uninstall are stopped.

Your BRICK.INI configuration file will be kept, however, so you do not lose your configuration when uninstalling BRICKware. This is especially useful for software updates.



We recommend that you uninstall BRICKware prior to installing a software update.

## DIME Tools

### Starting up the Toolkit

After starting up DIME Tools for the first time, the TFTP Server window, Syslog Daemon, BootP Server and Time Server window will open automatically.

If these windows become closed at any time they can be reopened from the **File** menu or by clicking on the appropriate icon on the toolbar.

The DIME Tracer functions are available by selecting **File – New ISDN Trace** or **File – New CAPI Trace** from the main menu or from the toolbar.

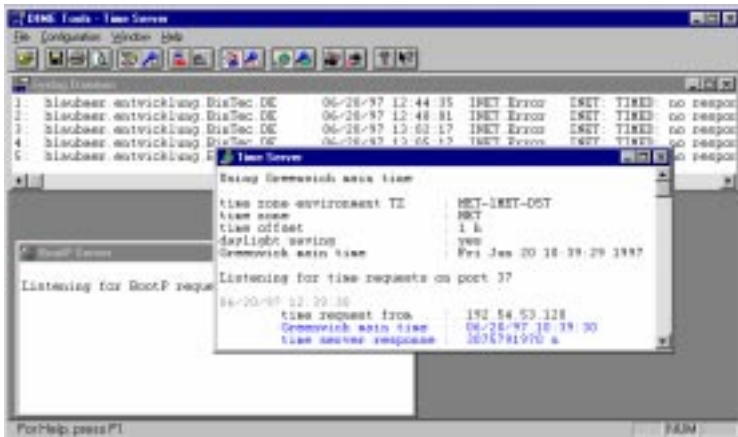


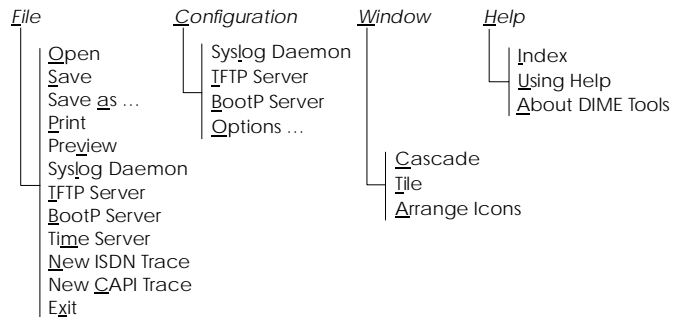
Figure 3: DIME Tools – Main window

We will now first give you a short explanation of all the icons in the toolbar, followed by a run-down of all available menu items.
















The different parts of DIME Tools are then described in detail separately.

## Menu Structure

DIME Tools has the following menu structure:





The important menu items can also be accessed by clicking on the appropriate icon in the toolbar:

-  File - Open: Open a BRICK file for viewing
-  File - Save: Save text contents of active window to file
-  File - Print: Print contents of active window
-  File - Preview: Preview contents of active window
-  File - Syslog Daemon: Open the Syslog Daemon window
-  Configuration - Syslog Daemon: Configure Syslog Daemon
-  File - TFTP Server: Open the TFTP Server window
-  Configuration - TFTP Server: Configure TFTP Server
-  File - BootP Server: Open the BootP Server window
-  Configuration - BootP Server: Configure BootP Server
-  File - Time Server: Open the Time Server window
-  File - New ISDN Trace: Open a new DIME Tracer window
-  File - New CAPI Trace: Open a new DIME Tracer window
-  Help - About DIME Tools: Display a short copyright notice
-  Activate Help in context


The following gives a short rundown of all menu items:


**File**

*Open* Opens a configuration, syslog or trace file of a BRICK for viewing or editing.  
This function can also be activated by clicking on the  icon.


*Save* Creates a file with the text contents of the active window, including all text that is currently not visible on screen, but can be reached using the scrollbars.  
This function can also be activated by clicking on the  icon.

*Save as* Save text contents of current window in the specified file.


*Print* Prints the text contents of the active window.  
This function can also be activated by clicking on the  icon.

*Preview* Displays a print-preview of the text contents of the active window.  
This function can also be activated by clicking on the  icon.

*Syslog Daemon*

Opens the Syslog Daemon window (if not already open).  
This function can also be activated by clicking on the  icon.

*TFTP Server*


Opens the TFTP Server window (if not already open).  
This function can also be activated by clicking on the  icon.



File (cont.)


***BootP Server***

Opens the BootP Server window (if not already open).

This function can also be activated by clicking on the  icon.


***Time Server***

Opens the Time Server window (if not already open).

This function can also be activated by clicking on the  icon.


***New ISDN Trace***

Opens a new DIME ISDN Tracer window. You can specify the kind of data to be traced in a dialog box (see page [19](#)).

This function can also be activated by clicking on the  icon.

***New CAPI Trace***

Opens a new DIME CAPI Tracer window. You can specify the kind of data to be traced in a dialog box (see page [19](#)).


This function can also be activated by clicking on the  icon.

***Exit*** Leave DIME Tools.

Configuration


***Syslog Daemon***



Here you can specify which syslog messages are saved to which file.

This function can also be activated by clicking on the  icon.


***TFTP Server***

Allows you to specify the TFTP path where all incoming and outgoing files are retrieved or stored respectively.

This function can also be activated by clicking on the  icon.

- Configuration (cont.)**
- BootP Server***  
Calls the Administration Editor which lets you specify the devices to be configured by BootP Server.  
This function can also be activated by clicking on the  icon.
- Options*** Opens a dialog box from which you can change the IP broadcast behaviour of the BRICK and the colours used for the output in all DIME Tools windows. You can also restore the default colour settings.
- Window**
- Cascade*** Cascade all open DIME Tools windows.
- Tile*** Tile all open DIME Tools windows horizontally.
- Arrange Icons***  
Arranges all iconified DIME Tools windows at the bottom of the main window.
- Help**
- Index*** Lets you choose from an index of the available help topics.
- Using Help***  
Provides help on how to use the help function.
- About DIME Tools***  
Displays an information box and copyright notice for DIME Tools.  
This function can also be activated by clicking on the  icon.



In addition to the three help menu items, you can get help in context by clicking on the  icon. This lets you select the item you need help on with a mouseclick.

## BootP Server

BootP Server is a Bootstrap Protocol (BootP) server for Windows. Using BootP Server, you can assign your BRICK an IP address and network mask at boot time.



Figure 4: BootP Server – Initial BRICK Configuration

If you power up your BRICK after having connected it to your network, but before supplying it with an IP address and network mask, it will start broadcasting BootP request messages over the ethernet.

When a BootP request from a BRICK is received by a PC running DIME Tools, the BootP Server Window opens as shown in [Figure 4](#) above.

Here you can enter the most important network parameters.

### BootP Configuration

**BRICK Parameters:** The following parameters – which will be sent to the requesting BRICK – are mandatory.

- **Name**  
The hostname for the BRICK.

- **IP Address**  
The IP address for the ethernet interface on the BRICK.
- **Net Mask**  
The network mask to use. Note that this field is automatically filled when a new address is entered in the IP Address field. If you are using subnets, you should change this field appropriately.
- **Ethernet Address**  
The hardware address for the BRICK's ethernet interface (the hardware address is located on either the ethernet module or the underside of your BRICK). This address is included in the BootP requests from a BRICK. The field is automatically set to the address received.

**Local Network Parameters:** The following parameters are optional and are not required by the Bootstrap Protocol.

- **Domain Name**  
Symbolic name of the LAN.
- **Domain Name Server 1 and 2**  
IP Addresses of the primary and secondary Name Servers on the LAN.
- **Time Server**  
IP Address of the Time Server. You can enter the IP address of your PC here, if you want to use it as a time server.
- **Time Offset**  
The time difference in hours between Universal Time Code UTC (previously known as GMT or Greenwich Mean Time) and local time.
- **Syslog Host**  
Host to send syslog messages to. You should enter the IP address of your PC here, if you want to use the DIME *Syslog Daemon* for collecting syslog messages.

- **Boot File**  
Specifies a configuration file from the TFTP directory to send to the BRICK. Please be aware that if a configuration file is specified, the settings stored in that file may overwrite the settings included in the previous fields.
- **Ignore boot request of this BRICK**  
If this box is checked, all subsequent BootP requests received from this hardware address will be ignored. This is useful if you want this device to be managed by another BootP server.

Administry  
Editor

With the Administry Editor (available from **Configuration – BootP Server**), you can specify any number of BRICKs (devices) to manage using BootP. The **New**, **Edit**, and **Delete** buttons shown in [Figure 5](#) below, allow you to define which BRICKs to manage from this PC.



Figure 5: BootP Server – Administry Editor



Here you can also enter BRICKs which are not directly connected to your LAN, but can be reached via TCP/IP.

## Security Considerations

The »**Ignore any further boot requests**« checkbox can be used to ignore all BootP requests originating from devices not specified in the list.

Since the BRICK automatically sends BootP requests over the LAN (if no IP Address or configuration file is present), each BootP Server set up on the LAN is capable of configuring the BRICK. To prevent the BRICK from submitting BootP requests, ensure the BRICK can load its configuration information from its local memory (i.e. store the configuration using **SNMP – Save Configuration** from DIME Browser or `cmd=save` directly on the BRICK). Refer to the section on *BRICK Configuration Files* in the *Software Reference*.

## DIME Tracer

### ISDN Trace

You can also start an ISDN tracer to a BRICK to collect and examine the actual contents being sent over an ISDN channel (B or D). This is done by selecting, **File – New ISDN Trace** from the main menu bar. You can have multiple trace windows open simultaneously (e.g. one trace window for the D channel and one for each B channel). The ISDN tracer runs (and collects trace data) as long as the trace window is open.

Setting the parameters for the trace is done by selecting the options from the ISDN Trace settings window (see [Figure 6](#) below).

- **BRICK name or IP address**  
Enter the name (e.g. mybrick) or IP address (e.g. 111.222.33.44) of your BRICK.
- **Trace port**  
Specifies the TCP port to use for the trace connection to the BRICK (default value: 7000). Make sure to use the same port as on your BRICK (Setup Tool: IP7Static Settings; SNMP shell: **admin** table).



Figure 6: DIME Trace Settings

- **ISDN Connector**

Choose which ISDN port should be traced.



You can select the BRICK type you are using from the left listbox below the BRICK graphic. Use the right listbox to select the slot and connector for the ISDN interface you wish to trace.

- **Channel**

Choose which channel should be traced (D or B1 to B31).

- **Trace length**

Restrict trace output to the first *n* bytes (usually only the first few bytes of each data packet are of interest).

- **Trace file**

Clicking »File« lets you specify a filename to store the trace results in. Such a file can be useful for longer traces, since the trace window can only hold a limited amount of data, and for troubleshooting.

- **Trace mode**

The check buttons in this section determine how the trace data is displayed as well as how it is interpreted.

- ♦ **Hexadecimal output**

All data is also displayed hexadecimally.

- ♦ **ASCII output**

All data is only displayed as ASCII characters.

- ♦ **Layer 2, Layer 3**

Layer 2 (Q921) and Layer 3 (Q931) trace data is displayed.

The remaining modes are particularly useful if you are using a special protocol (e.g. PPP, Eurofiletransfer, Fax, etc.).

The options chosen here should be appropriate for the activity you are tracing (e.g. setting PPP mode and tracing an ISDN channel where FAX data is being sent will produce improper results).

After you are finished selecting the options, the trace can be started by clicking **OK**.

Note that if many data are traced older data are scrolled off the screen; however, all data will be saved in the trace file you specified.

## CAPI Trace

The CAPI Trace utility allows you to examine the CAPI messages sent to and from your BRICK. This is done by selecting, **File – New CAPI Trace** from the main menu bar. You can have multiple trace windows open simultaneously (for tracing more than one BRICK at a time). The CAPI tracer runs (and collects trace data) as long as the trace window is open.

Setting the parameters for the trace is done by selecting the options from the CAPI Trace settings window (see [Figure 7](#) below).





Figure 7: CAPI Trace Settings

- **BRICK name or IP address**  
Enter the name (e.g. mybrick) or IP address (e.g. 111.222.33.44) of your BRICK.
- **CAPI port**  
Specifies the TCP port to use for the CAPI trace connection (default value: 2662). Make sure to use the same port as on your BRICK (Setup Tool: IP→Static Settings; SNMP shell: *admin* table).
- **Trace file**  
Clicking »File« lets you specify the name of a file to store the trace results in. This can be useful for longer traces—the trace window can only hold a limited amount of data—and for troubleshooting.
- **Trace mode**  
The check buttons in this section determine how the trace data is displayed as well as how it is interpreted.
  - ♦ **Hexadecimal output**  
All data is also displayed hexadecimally.
  - ♦ **Short description**  
Gives just the names and the most essential data for each CAPI message.
  - ♦ **Long description**  
Gives a detailed listing and explanation of all the information in each CAPI message.

## TFTP Server

*TFTP Server* manages the transfer of configuration files between the BRICK and your PC via TFTP. It can also be used to update your BRICK's system software.

Once *TFTP Server* is configured, the BRICK can send and receive TFTP files to/from the PC. TFTP requests initiated on the BRICK can then be serviced by *TFTP Server*.

### Configuration Files

There are several different ways to generate TFTP requests for the transfer of configuration files between your BRICK and your PC.

The easiest way is to use the *Configuration Management* menu of the Setup Tool on your BRICK. There you have all the options available for transferring configuration files between your BRICK's Flash ROM and memory and a TFTP server. Other ways include issuing the appropriate command by hand from the BRICK's SNMP command shell, e.g.

```
cmd=put host=199.1.1.7 path="file.cf"
```

For further information please refer to the *User's Guide*.

### System Software Updates

There are also for different ways for updating your BRICK's system software. The easiest way is to issue the **update** command from the BRICK's SNMP command shell:

```
update <TFTP server> <image file name>
```

Once the image was successfully transferred to the BRICK you will be asked whether you want to perform the update (i.e. actually write the image to Flash ROM) and then whether you want to reboot the BRICK to use the new system software.

You can also update the system software from the BOOTmonitor, as described in your *User's Guide*.



Note that all of the above will only work, if the TFTP Server is running on your PC and the TFTP Path is set (see following sections).

As long as the TFTP Server window is open, all transfer requests received from the BRICK are serviced by the TFTP daemon. The TFTP Server window shows each request it receives, along with its appropriate result status (*success or error*).

Setting the  
TFTP Path

Choosing **Configuration – TFTP Server** allows you to specify/change the TFTP path where all incoming/outgoing files are retrieved/stored (see [Figure 8](#) below).

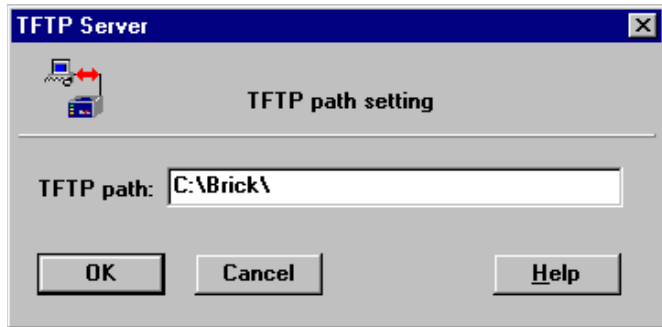


Figure 8: TFTP Server – TFTP Path Setting

If this directory is not set, the system defaults to the BRICKware installation directory. References to subdirectories while transferring files are ignored by TFTP.

## Syslog Daemon

Syslog Daemon allows system messages (see section *Syslog Messages* in Appendix E of the *Software Reference*) sent from the BRICK to be received. The only requirement is that the PC is configured to be the BRICK's syslog host (either by entering the PC's IP address in the *Syslog Host* field in the BootP Server dialog – see page [15](#) – for this BRICK, or using DIME Browser to enter it in the *addr* field of the *biboAdmLogHostTable* in the *administration* group, or by using the **SYSTEM** → **EXTERNAL SYSTEM LOGGING** menu of Setup Tool (please refer to section *Basic System Configuration* of your *User's Guide*)).

As long as the Syslog Daemon window is open, all messages are displayed to the screen and written to their respective log files. Each syslog message on the BRICK has a priority level (*administration - biboAdmLogHostTable - Level*) and facility (*administration - biboAdmLogHostTable - Facility*) associated with it. By default, all syslog messages (all facilities and all levels) are saved in the *brick.log* file.

Configuring Syslog Daemon

The configuration for Syslog Daemon is found under **Configuration - Syslog Daemon** from the main menu bar. Here, you can change the default settings or add files where syslog messages are saved and set the types of messages to save in them.



Note that these settings only affect the way syslog messages are saved in files. Regardless of these settings *all* syslog messages are displayed in the open Syslog Daemon window.

The window opens with a list of current log files and their respectively assigned *subject level* combinations on the right.



Figure 9: Syslog Daemon Configuration Dialog

There are five buttons at the bottom of this window:

- **Add**  
Lets you add a new log file to the list. If this file already exists, it will be overwritten.
- **Change**  
Allows you to change the name of the file where these message combinations are stored. If the new filename already exists, then message data will be appended to it.
- **Remove**  
Removes a file from the list, but not from the physical disk.
- **View**  
Lets you view the contents of a log file on screen.
- **Edit list**  
Once a log file is highlighted, you can select this button to change the file's Facility/Level combinations. A new window will be opened as shown in [Figure 10](#).

#### Subject/Priority Combinations

Here, you can define the Subject/Priority Level combinations for messages to be saved in the log file.

Each Subject can have a different range of Priority Levels associated with it. After highlighting a Subject, its levels are displayed to the right. Subjects which have been selected (are to be used for the saving of messages) are displayed with an (\*) after its name.

As soon as one or more Subjects are highlighted, you can then make Level selections from the check buttons on the right. Selecting a message Level includes all messages at Levels below it, i.e. setting the *Critical* level would select *Critical*, *Alert*, and *Emergency* levels. To deselect the highlighted Levels, you have to click the *Emergency* button twice. Selecting the **OK** button accepts the list and the logging of messages can begin.

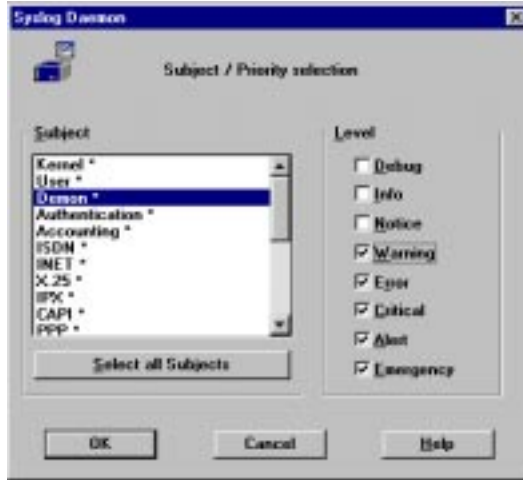


Figure 10: Syslog Daemon – Subject / Priority Selection

## New file BRICK.INI

DIME Tools adds a new file *BRICK.INI* to your Windows directory. This file contains the required configuration information for the programs to work properly. If this file is removed, the configuration will be lost.

## BRICK at COM1

*BRICK at COM1* and *BRICK at COM2* are links to Windows' terminal.exe program, configured to allow you to communicate directly with a BRICK connected to serial port COM1 or COM2 of your PC respectively.

You can use these programs to configure and administer your BRICK manually using either the Setup Tool described in the *User's Guide*, or the SNMP shell commands described in the *Software Reference*.

## DIME Browser

The DIME Browser allows you to access all SNMP tables and variables on your BRICK from a graphical user interface, thus facilitating the configuration of the BRICK.

DIME Browser first scans the local network for any connected BRICKs and lists them in a tree diagram on the left hand side of the main window in a fashion similar to Windows' file manager's directory trees.



Figure 11: DIME Browser

You can now double-click on the BRICK you want to configure or click on the »+« to its left. This produces a list of the SNMP table groups in alphabetical order. You can expand or compress the list of tables contained in a group by alternately double-clicking on the group folder icon or clicking on the »+« or »-« sign to its left (see [Figure 12](#) below).

When you first select a table to be modified, you are prompted for a community password of the BRICK (default passwords are *bintec* for the admin community and *public* for the write and read communities; for further information on communities please refer to section *Basic System Configuration* in your BRICK's *User's Guide*).

All editable indices of a table are displayed in **bold** print, read-only values are displayed in normal print (see [Figure 12](#) below).



Figure 12: DIME Browser – ifTable

When double-clicking on an editable index you get a dialog box in which you can enter a new value for this index. Note that most numerical values can be entered in either decimal, hexadecimal, or octal format.

Format	Prefix	Example
Decimal	none	12
Hexadecimal	0x	0xc
Octal	0	014



For an explanation of all SNMP tables and variables please refer to your BRICK's *Software Reference*.




















## Menu Structure






DIME Browser has the following menu structure:

<u>B</u> rowse	<u>V</u> iew	<u>N</u> etwork	<u>S</u> NMP	<u>W</u> indow	<u>H</u> elp
<u>N</u> ew Window	<u>T</u> oolbar	<u>A</u> dd BRICK	<u>N</u> ew Index	<u>C</u> ascade	<u>H</u> elp Topics
<u>P</u> rint	<u>S</u> tatusbar	<u>R</u> emove BRICK	<u>D</u> elete Index	<u>T</u> ile <u>H</u> orizontally	<u>A</u> bout DIME Browser
<u>F</u> ind	<u>S</u> witch <u>V</u> iew	<u>S</u> can Network	<u>S</u> ave <u>C</u> onfiguration	<u>T</u> ile <u>V</u> ertically	
<u>F</u> ind <u>n</u> ext		<u>S</u> et <u>C</u> ommunity	<u>R</u> efresh Tables	<u>A</u> rrange Icons	
<u>E</u> xit		<u>O</u> ptions ...	<u>A</u> utomatic Refresh Settings		
			<u>A</u> utomatic Refresh		
			<u>S</u> NMP <u>S</u> tatistics		
			<u>S</u> top <u>O</u> perations		


The important menu items can also be accessed by clicking on the appropriate icon in the toolbar:

	Browse - New: Open new Browser window
	Browse - Print: Print current table
	Browse - Find: Search for first match of given string in a table name
	Browse - Find next: Search for the next occurrence of the string
	View - Switch View: Swap rows and columns in current table
	Network - Scan Network: Search for connected BRICKs
	Network - Add BRICK: Add new BRICK
	SNMP - New Index: Create new index in current table
	SNMP - Delete Index: Delete selected index from current table
	SNMP - Save Configuration: Store current configuration on the BRICK
	SNMP - Refresh Tables: Update all tables
	SNMP - Automatic Refresh: Toggle automatic refresh on/off
	SNMP - Stop operations: Cancel all current SNMP operations
	Windows - Cascade: Cascade all open windows
	Windows - Tile Horizontally
	Windows - Tile Vertically
	Help - About DIME Browser: Display a short copyright notice

The following gives a short rundown of all menu items:

- Browse**
- New* Opens a new Browser window.  
This command can also be activated by clicking on the  icon.
- Print* Prints the current table.  
This command can also be activated by clicking on the  icon.
- Find* Finds the first occurrence of the given string in a SNMP table name and selects that table for viewing.  
This command can also be activated by clicking on the  icon.
- Find Next*  
Finds the next occurrence of the string supplied in the *Find* dialog box.  
This command can also be activated by clicking on the  icon.
- Exit* Leaves DIME Browser.
- View**
- Toolbar* Toggles toolbar on/off.
- Statusbar*  
Toggles statusbar on/off.
- Switch View*  
Swaps table view from rows to columns and vice versa.  
This command can also be activated by clicking on the  icon or on the top left field of a table (Index or Description).
- Network**
- Add BRICK*  
Add a new BRICK; e.g. to maintain a BRICK from a remote network.

Network (cont.)


This command can also be activated by clicking on the  icon.

*Remove BRICK*

Removes the selected BRICK from the tree.

*Scan Network*

Scans the local network for connected BRICKS. This function can be used to update the list of BRICKS currently on-line.

This command can also be activated by clicking on the  icon.

*Set Community*


Prompts you to enter a community password to gain access to the SNMP tables of a BRICK.

*Options* Opens a dialog box from which you can change the IP broadcast behaviour of the BRICK and the scanning sequence at program start.

SNMP

*New Index*

Creates a new index in the current table. Note that this command and its icon are disabled if no new indices are permitted in this table.


This command can also be activated by clicking on the  icon.



Note that you can also access the commands from the SNMP menu by clicking the right mouse button inside the table part of a Browser window.

*Delete Index*


Deletes the selected index from a table. Note that this command and its icon are enabled only if the current table contains removable indices.

This command can also be activated by clicking on the  icon.

SNMP (cont.)


*Save Configuration*

Stores the current contents of all tables to the BRICK as the default boot file *boot* (same as »cmd=save« issued from the SNMPC shell).

This command can also be activated by clicking on the  icon.

*Refresh Tables*

Updates the contents of all tables.


This command can also be activated by clicking on the  icon.

*Automatic Refresh Settings*

Lets you enter the settings for the automatic refresh of all tables.

*Automatic Refresh*

Toggles automatic refresh of all tables on/off.


This command can also be activated by clicking on the  icon.

*SNMP Statistics*

Displays statistical data on SNMP packets received or sent by the current BRICK.


*Stop Operations*

Cancels all current SNMP operations. This can be useful to terminate operations for a BRICK no longer on-line.

This command can also be activated by clicking on the  icon.


Windows

*Cascade* Cascades all open Browser windows.

This command can also be activated by clicking on the  icon.


*Tile Horizontally*

Tiles all open Browser windows horizontally.

This command can also be activated by clicking on the  icon.

**Windows (cont.)** *Tile Vertically*

Tiles all open Browser windows vertically.

This command can also be activated by clicking on the  icon.

*Arrange Icons*


Arranges all iconified Browser windows in an orderly fashion.

**Help***Help Topics*

Opens the help window. This function can also be activated by pressing the »F1« key

*About DIME Browser*

Displays a copyright notice and version information for the DIME Browser.

This command can also be activated by clicking on the  icon.

**Using the Keyboard**

You can operate DIME Browser from your keyboard without using the mouse.

Select a menu by pressing the »Alt« key together with the underlined letter in the desired menu (e.g. Alt-V for the View menu). You can then select the menu items by either pressing the »Alt« key together with the underlined letter in the item or you can use the cursor up and down keys to highlight an item and the cursor left and right keys to change menus – »Return« selects the highlighted item.

When not in the menu you can switch between the tree display and the table display using the »Tab« key, and move around in the tree or table using the cursor keys. Again, to select the highlighted table or Variable press the »Return« key.

**Shortcuts**

There are a few keyboard shortcuts for frequently used commands. These are activated by simultaneously pressing the »Ctrl« key and the appropriate letter.

Shortcut	Function	Menu
Ctrl-N	open new Browser window	
Ctrl-P	Print current table	Browse
Ctrl-F3	Find ...	
F3	Find next	
Ctrl-A	Add BRICK	
Ctrl-Del	Remove BRICK	Network
Ctrl-Alt-S	Scan Network	
Ctrl-E	Set Community	
Ctrl-I	New Index	
Ctrl-Alt-I	Delete Index	
Ctrl-S	Save Configuration	SNMP
Ctrl-R	Refresh Tables	
Ctrl-O	Stop Operation	
Ctrl-W	Switch View	View

The shortcuts are also displayed next to the appropriate menu item.

# Remote CAPI and Remote TAPI

## Remote CAPI Client

The *Remote CAPI Client* acts as a mediator between local CAPI applications (running on the PC) and the CAPI Server (running on the BRICK). The CAPI Server allows CAPI applications running on different hosts (on the local network) simultaneous access to the ISDN interfaces of the BRICK.

The *Remote CAPI Client* comprises the 16 bit CAPI 1.1 and CAPI 2.0 dynamic link libraries (*CAPI.DLL* and *CAPI20.DLL* for Windows 3.x) and a 32 bit CAPI 2.0 library (*CAPI2032.DLL* for Windows 95 and Windows NT), and the »hidden application« *CAPI2WSA*.

For CAPI applications to be able to access the server the *CAPI.DLL* or *CAPI20.DLL* must be available locally. Each PC that you intend to run CAPI applications from, should have the following files present:

### **CAPI.DLL and CAPI20.DLL**

Dynamic link libraries for Windows 3.x, providing an interface for 16 bit CAPI 1.1 and CAPI 2.0 applications respectively.

### **CAPI2032.DLL**

Dynamic link library for Windows 95 and Windows NT, providing an interface for 32 bit CAPI 2.0 applications.

### **CAPI2WSA.EXE**

Required by *CAPI.DLL* and *CAPI20.DLL*. CAPI messages are sent to this »hidden application« by the DLLs. Here, the messages are placed in TCP/IP packets and subsequently sent to the CAPI server on your BRICK.

### **CAPIVIEW.EXE**

Remote CAPI Configuration program for 16bit

CAPI 1.1 and 2.0 under Windows 3.x. For a description of this application please refer to page [37](#).

### **Remote Clients Configuration program**

Windows 95 and NT configuration tool for CAPI and TAPI. For a description of this application (Rxc\_cfg.exe) please refer to page [38](#).

## **Remote TAPI Client**

The *Remote TAPI Client* acts as a mediator between local telephony applications running on the PC and the TAPI Server running on the BRICK. The TAPI Server allows TAPI applications running on your PC access to the POTS interfaces<sup>1</sup> of your BRICK.

The *Remote TAPI Client* comprises the 16bit TAPI 1.4 Telephony Service Provider (RTC\_SPI.TSP for Windows 95) and the 32bit TAPI 2.0 Telephony Service Provider (RTC32.TSP for Windows NT 4.x).

Each PC that you intend to run TAPI telephony applications from, should have the following files present:

### **RTC\_SPI.TSP**

Telephony Service Provider for Windows 95, providing an interface for 16 bit TAPI 1.4 applications.

### **RTC32.TSP**

Telephony Service Provider for Windows NT 4.x, providing an interface for 32 bit TAPI 2.0 applications.

### **Remote Clients Configuration program**

For a description of this application please refer to page [38](#).

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1. Please note that POTS interfaces are only available with the BinGO! Plus / BinGO! Professional and V!CAS teleworking routers.



## Remote CAPI Configuration / 16bit

On Windows 3.x systems the **Remote CAPI Configuration / 16 bit** program can be used to set up a BRICK as a CAPI Server for running remote 16 bit CAPI applications or to view the activity of CAPI applications. After starting the program the Remote CAPI Configuration dialog box will be displayed as shown in [Figure 13](#) below.



Figure 13: Remote CAPI Configuration / 16 bit – Main Window



Please note that Windows 3.x systems are not capable of storing CAPI User and password data. The 16bit CAPI will always try to use the **default** user with no password. Make sure that the **default** user is configured on your BinGO! Plus/Professional (in the [PABX][User] menu of Setup Tool) if you want to use its CAPI features from your Windows 3.x system.

- **BRICK settings**

Enter the BRICK's IP address (or Hostname) here. The CAPI port where remote CAPI applications should be connected to can remain at its default value (2662) unless you changed this parameter in the **admin** table of the BRICK (*biboAdmCapiTcp-Port*).

The status line in this section shows the CAPI status based on its current settings. Note that the status may change to »CAPI is NOT ready« if the remote CAPI server is detected as not active.

- **Registered CAPI application IDs**

This section shows a list of all registered CAPI application IDs.

- **CAPI viewer**

When the viewer is turned on CAPI messages are displayed. Normally, the CAPI Viewer is turned off. Since turning on the viewer may slow down data throughput of the CAPI client on slower systems, it is recommended that the viewer only be turned on when you need to verify messages for specific CAPI IDs.

## Remote Clients Configuration

On Windows 95 and NT systems the **Remote Clients Configuration** program can be used to set up a BRICK as a CAPI or TAPI Server for running remote CAPI or TAPI applications on your PC. After starting the program a configuration page will be displayed as shown in [Figure 14](#) below. Depending on whether you installed TAPI this will either be the TAPI or the CAPI page.

If you want to configure CAPI instead of TAPI, simply select the *Remote CAPI* tab. The CAPI page contains the same fields as the TAPI page, so we'll only explain these fields once.

- **BRICK IP address or host name**

Enter the BRICK's IP address or Hostname here. You can use the listbox to choose from the BRICKs already known to your PC, or enter a name or IP address manually.

- **TCP Port of remote CAPI/TAPI server**

This field contains the default TCP port for CAPI or TAPI connections, 2662 for CAPI, 2663 for TAPI.

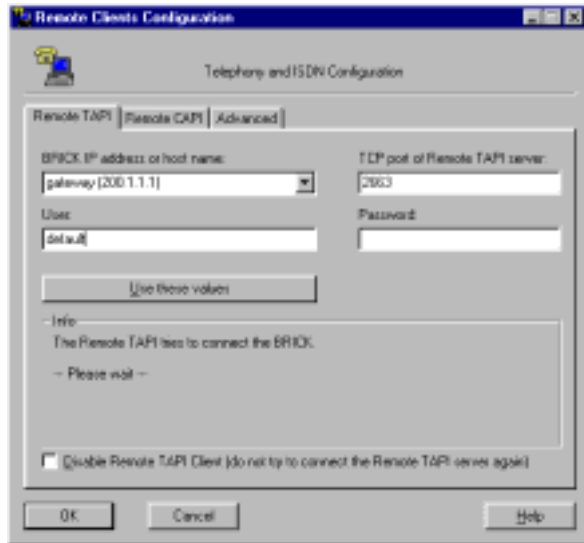


Figure 14: Remote Clients Configuration



Make sure to use the same ports as on your BRICK (Setup Tool: *[IP][Static Settings]* for the CAPI port, *[PABX][Static Settings]* for the TAPI port; SNMP shell: **admin** table for both ports).

You should only change these values if—for some reason—these TCP ports are already used for other purposes on your PC.

- **User**

In this field you can enter the user who is authorized to use the CAPI (or TAPI) features of this BRICK. You can configure a maximum of two different users for each BRICK, one for the CAPI features, the other for the TAPI features.

Note that these users must also be configured on the BRICK (in the *[PABX][User]* menu of Setup Tool).

On the BRICK there is a factory-configured user,

**default**, who does not have a password, and who has all rights for CAPI and TAPI usage.

This user is also the default setting used in the Remote Clients Configuration program.

- **Password**

The password for this user. If you leave this field empty, no password is used. On the BRICK (in the [PABX][User] menu of Setup Tool) the corresponding Password field must then also be empty.



CAPI and TAPI user and password settings are stored in the Registry of Windows 95 or NT separately for each Windows user. This way you can configure different CAPI/TAPI user settings for each Windows user.

If a new Windows user logs in to your system he will get the BRICK configuration of the previous user, but all CAPI and TAPI users will be set to user **default**.

Under Windows NT system services which are started automatically normally login using the NT **system account**. Since you cannot login to the **system account** yourself—and therefore cannot configure CAPI or TAPI users and passwords for the **system account**—you will have to configure the services which use CAPI or TAPI to login as some Windows NT user other than **system** (e.g. your own Windows account). This can be achieved from the *Control Panel – Services* dialog.

- **Use these values**

Once you have entered the correct host and TCP port click on the »Use these values« button to activate your settings.

- **Info**

The info area in the lower half of the page shows the CAPI or TAPI status based on its current settings. Note that the status may change, depending

on the current operating status, e.g. »Trying to connect to host 'mybrick', port 2662«.

On the Advanced page you can specify a source TCP port range to be used for CAPI and TAPI connections.

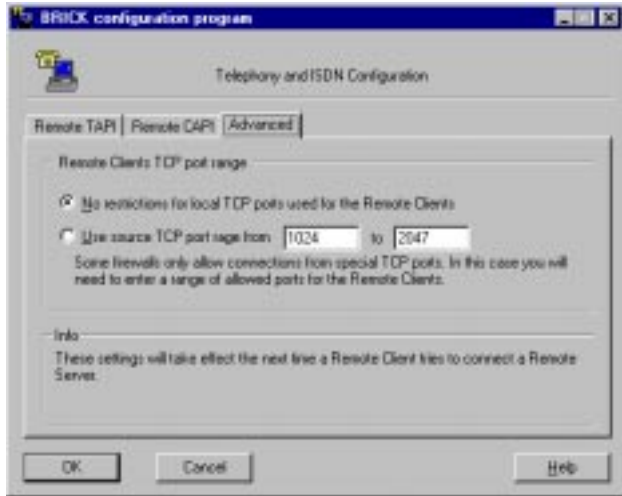


Figure 15: Source TCP port range settings

As a default there are no restrictions for the TCP ports, which should be fine for most environments.

However, in conjunction with certain firewalls, which—for security reasons—do only allow TCP traffic over a limited range of TCP ports, these settings are necessary.

# Remote Multi CAPI Client

## What is it?

The Remote Multi CAPI Client (RMCC) enables you to use multiple BRICKs for CAPI 2.0 connections from one PC running Windows NT 4.0. The RMCC allows your CAPI 2.0 applications to take advantage of all ISDN controllers available through one or more BRICKs on the LAN. By providing a pool of available ISDN controllers, access to the ISDN (whether via a remote or local controller) remains transparent to the application.

This can e.g. be useful for fax server applications which can then send and receive several faxes at the same time.

To make use of the RMCC feature your 32bit CAPI 2.0 application must be able to address several different CAPI controllers at the same time.

RMCC is also able to automatically reconnect to a BRICK after it rebooted, i.e. you do not manually have to stop and restart all CAPI 2.0 applications if the BRICK reboots.

## Installation

If you have Windows NT 4.0 running on your PC the Remote Multi CAPI Client (an enhanced version of the CAPI2032.DLL) will be installed automatically during the BRICKware for Windows installation.

The 16bit versions of CAPI 1.1 (CAPI.DLL) and of CAPI 2.0 (CAPI20.DLL) are, of course, still available for use with one BRICK at a time.

## Configuration



Make sure to close all CAPI applications before changing your CAPI configuration.

You can configure the 16bit CAPI versions and TAPI as described above in section [Remote Clients Configuration](#). The BRICK configured in this dialog will be used for 16bit CAPI applications and is also used initially for 32bit CAPI applications, i.e. for the Remote Multi CAPI.

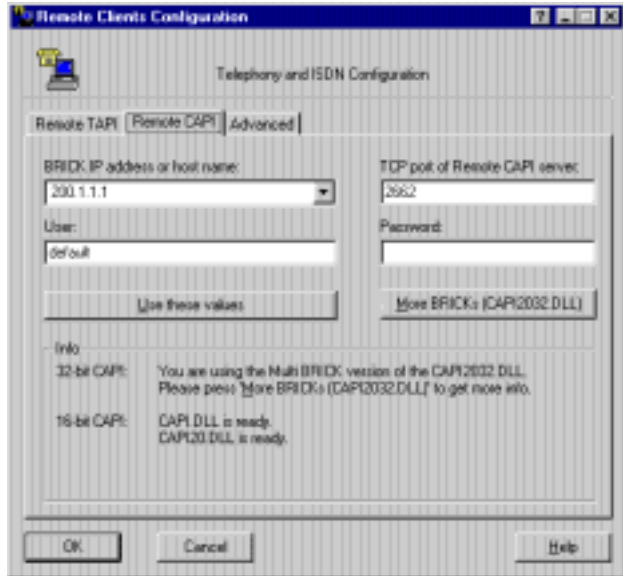


Figure 16: Remote Clients Configuration—CAPI page

#### More BRICKs

To configure the *Remote Multi CAPI Client*—i.e. if you want to use two or more BRICKs simultaneously—press the *More BRICKs* button.

You will then get a list of all BRICKs currently configured and their controllers (for 32bit CAPI 2.0 applications)

The list will initially be empty (unless you already configured a BRICK on the main CAPI page, see [Figure 16](#) above).

If you select a BRICK from this list, the Info field in the lower half of the dialog box will display the number of controllers available on this BRICK, the system software revision, the serial number, and the CAPI version.

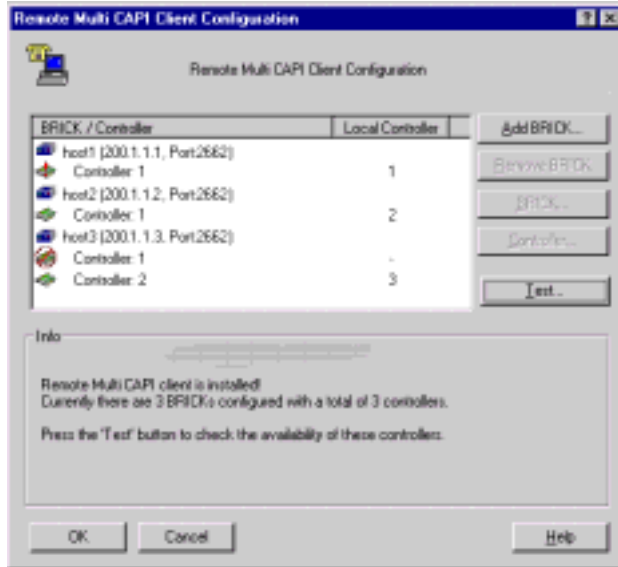


Figure 17: Remote Multi CAPI Configuration—More BRICKs

If you select a Controller from this list, the Info field will display the number of B channels available from this controller, whether DTMF tones are supported, and the supported B1, B2, and B3 layer protocols.



Changes made to this list (for 32bit CAPI applications) will *not* affect the settings made for 16bit CAPI applications in the main CAPI dialog.

The buttons on the right hand side of the *More BRICKs* dialog have the following meanings.

#### Add BRICK

To add a BRICK click the *Add BRICK* button. Enter its hostname or IP address, its CAPI TCP port, the User name and his Password (see explanation of User and Password on page 39 above) in the appropriate fields. When you click on the *OK* button to confirm your entries, the application will try to establish a connection to the BRICK, verify the given User and Password entries, and



retrieve information on the number of controllers available on this BRICK and on its system software release and serial number.

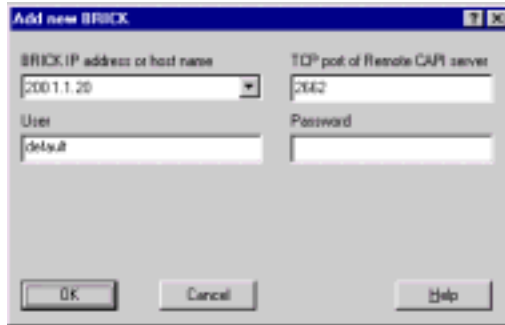


Figure 18: Add BRICK

This may take a couple of seconds. If the connection fails make sure the BRICK is switched on, connected to the network, the IP address and CAPI TCP port are correct, and try again.

All controllers of the BRICK will be added to the list of available controllers and will automatically be assigned a new local controller number.



The list of local controller numbers always starts with controller #1 and does not contain any gaps, e.g., if you remove a BRICK or disable a controller the remaining controllers are automatically renumbered.

**Remove BRICK** Removes the selected BRICK and its controllers from the list of available controllers.

**BRICK..** By double-clicking on a BRICK (or first selecting the BRICK and then clicking the *BRICK..* button) you get the following dialog.

Here you can change the CAPI TCP port, User and Password settings for this BRICK. When you click the OK

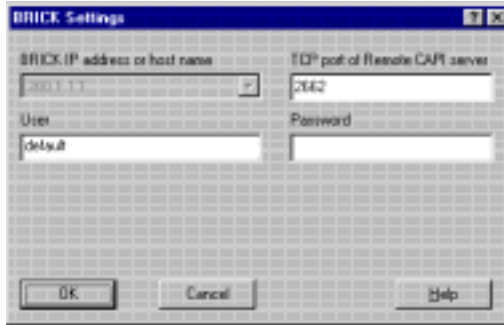


Figure 19: BRICK Settings

button the application will try to establish a connection to the BRICK. See section [Add BRICK](#) above for details.

Controller..

By double-clicking on a controller (or first selecting the controller and then clicking the *Controller..* button) you get the following dialog.

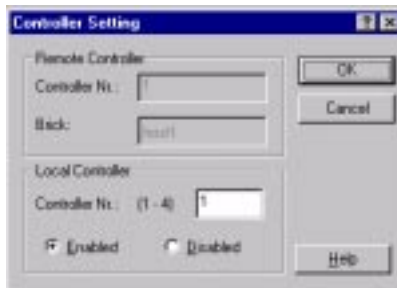


Figure 20: Configure Controller

Here you can assign a different local controller number to the controller, or Enable or Disable it for CAPI connections.

Test

After changing your configuration you should click the *Test* button. The program will try to verify the data of all BRICKs and controllers currently configured. You can interrupt the test with the *Stop Test* button. If the test reports OK you can save your configuration with the *OK* button.

If any errors are detected the program will display a dialog box similar to the following, suggesting what to do in the case of the detected discrepancies.

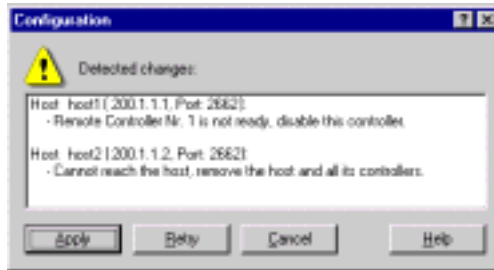


Figure 21: Error message

Click on the *Apply* button to make the suggested changes. Clicking *Cancel* will leave your configuration unchanged, but the discrepancies found will be marked with an exclamation point (🚩 or 🚩) in the list of BRICKs and controllers (see [Figure 17](#)).

## TAF Login Program

BRICKware for Windows now contains the TAF Login program, which must be installed on client PCs used for TAF authentication purposes.

### Configuring the PC

When installing BRICKware for Windows on the PC make sure that you select *TAF Login* to be installed.

The TAF Login program will automatically be installed in your Start Menu folder. After the installation is complete the program will automatically be started and will prompt you for the license key. In this dialog you can also enter the BRICK's IP address, and modify the Listen Port (the listen port setting on the PC must be identical to the setting on the BRICK).

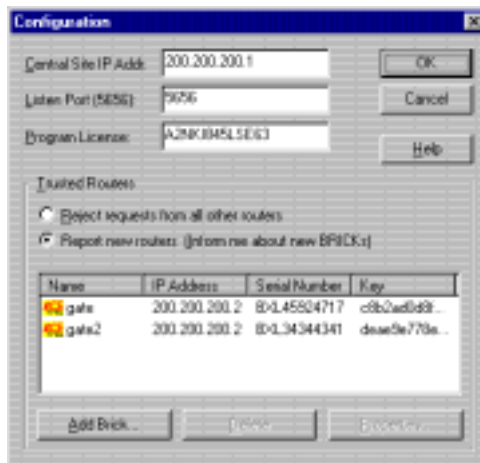


Figure 22: TAF Configuration

Repeat this procedure on each PC you want to use for TAF authentication purposes.

## Using TAF Login

The program will be added to your Start Menu folder and will remain in the background until it receives an authentication request.

You can also activate the program by double-clicking on the TAF icon in the task bar or by starting it from the BRICKware program group.

After the installation the program will prompt you for the TAF Login license key (see [Figure 22](#)). Here you can also enter the configuration data for the BRICK to use for user-initiated logins.

The *Trusted Routers* list contains all routers which sent an authentication request to the PC and which were accepted by the user.

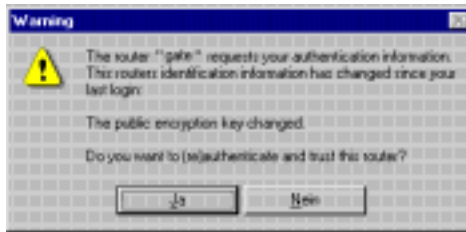


Figure 23: Source TCP port range settings

Once you have entered the license information and configured a BRICK you can commence with the actual authentication procedure.

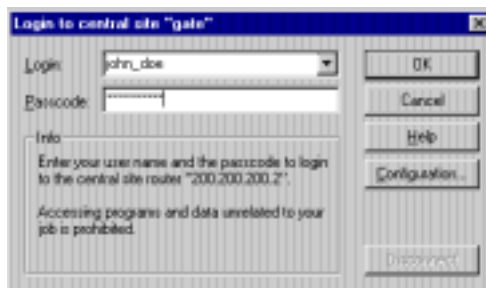


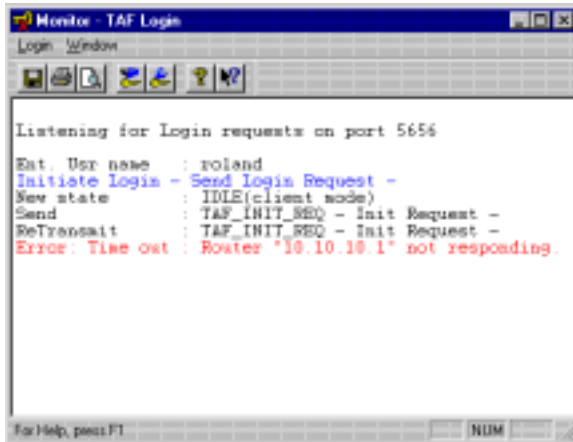


Figure 24: Source TCP port range settings

Enter your login name for the ACE/Server and the passcode displayed on your Token Card. Click on the *OK* button.

If the authentication was successful the TAF Login dialog will be closed and the TAF icon in the task bar will change to , if the authentication failed an error message is displayed, and the icon will remain .

TAF Login also includes a monitoring function. If you right-click on the TAF icon you will get a menu from which you can select *Show Monitor Window*.



**Figure 25:** Source TCP port range settings

All important activities concerning TAF are logged in this window. You can also initiate a login or configure the program from this window.