RELEASE NOTE
BIANCA/BRICK-M

10.09.1996

New System Software Release 4.2.1

The new BIANCA/BRICK-M system software release 4.2 revision 1 contains several new features and fixes a number of bugs from the previous release 4.1 revision 5.

Performing the Update is explained on Page 2.

Once Software Release 4.2.1 is installed, you will find:

When upgrading your BRICK-M, it is recommended that you also use the most recent version of *BRICKware for Windows* and *UNIXTools*. Both can be retrieved from BinTec's FTP server at http://www.bintec.de

Performing the Update

Using 4.1.5 Configurations

You can continue to use your existing configuration files once you have installed and booted the new PROM version.

To upgrade your BRICK-M to version 4.2 follow these instructions:

1. Save your existing boot configuration to a TFPT host[1].

   `cmd=put host=`*<a.b.c.d>* **`file=brick41.cf`**

   Verify that the file has been transferred correctly to the host specified by a.b.c.d.

2. Install the new PROMs. This is described in detail in the *User Guide* on page 19.

3. Reattach your LAN and WAN cables and power up the BRICK-M. Version 4.2 will now boot up.

   - If you configured a BootP server on the LAN for the BRICK, the BRICK-M will then retrieve / load its boot file locally or from the BootP server, as before.

4. Retrieve your boot configuration file from the TFTP host in step 1. The following retrieves the “brick41.cf” file from the host at *a.b.c.d* and saves the information in the “boot” file in flash ROM.

   `cmd=get host=`*<a.b.c.d>* **`file=brick41.cf`**

5. Reboot the “boot” configuration with:

   `cmd=reboot`

6. Your BRICK is now running software version 4.2.

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1. Make sure the destination file (here brick41.cf) on the remote host exists in the TFTP directory and is world writable

New Features

Improved Setup Tool

The BIANCA/BRICK now comes with a new, enhanced Setup Tool for easy first-time configuration. Using the new Setup Tool, practically all of the BRICK's features can now be configured.

Manuals for the Setup Tool are supplied in both English (*BIANCA/BRICK-M – Getting Started*) and German (*BIANCA/BRICK-M – Los Geht's*).

New Communications Module

The BRICK-M now supports the Token Ring interface using BinTec's newest communications module, CM-TR.

Information on configuring the BRICK's LAN interface when using the Token Ring module is included in the User's Guide.

New Encapsulations

Two new encapsulations are available:

mpr-lapb can be used, when error correction or data compression (V.42bis) is desired.
Data compression can be enabled on LAPB links only, because V.42bis requires an error free connection (either *ip-lapb* or *mpr-lapb* will work).

mpr-hdlc allows for compatibility with Cisco's HDLC encapsulation.
On IP-only links it is also possible to use the ISO LAPB protocol (*ip-lapb*, also known as *X.75*), or raw HDLC framing (*ip-hdlc*).

New Syslog Mechanism

The BRICK's syslog mechanism has been simplified. When sending syslog messages to remote hosts, the BRICK now sends messages from its different subsystems using one facility.

New Debugging Tool

A new **debug** command is now available from the SNMP shell. Debug can be used from a telnet session, console or ISDN login shell to selectively display system messages originating from the BRICK's various subsystems.

Access with X.25

The BRICK-M will now *receive* X.25 calls even if no X.25 license is present.

This means you can now access a new BRICK-M using X.25—over all possible media, i.e. via a dedicated X.21 interface module, using X.31 on a D channel, via Ethernet, or via TokenRing—for remote installation of an X.25 license and subsequent configuration.

Domain Nameservers

If the primary domain nameserver (DNS) can not be reached via IP-Routing, and an ICMP unreachable message is received, the secondary nameserver is now used immediately (i.e. without further attempts to reach the primary nameserver).

XON/XOFF protocol now supported

The serial console interface now supports the XON/XOFF protocol, to allow slow terminals to reduce the output speed of the BRICK.

Switchable V.42bis Data Compression in CAPI 2.0

V.42bis data compression can now be switched off on a per call basis by appending an »N« or »n« to the called party number.

FAX G3 Calling Tone Recognition

In transparent mode with DTMF recognition CAPI 1.1 and CAPI 2.0 now recognise the Fax G3 Calling Tone (CNG) on incoming calls. The CNG is signalled as »X« in the DTMF indication message.

Future Software Upgrades

With future software upgrades (beginning with versions greater than 4.2) it will be possible to load older configurations files directly from flash ROM. Until now system tables that had changed could not always be properly loaded (from flash ROM) with newer software releases.

MIB Changes

Configuration Files

Several changes have been made to the MIB (management information base) which may affect the loading of 4.1 configuration files stored in flash ROM.

To ensure all configuration information is retained, save your configuration files to a TFTP host as explained in the section Performing the Update. These files can then be properly loaded via TFTP.

New System Tables

Several system tables have been added since version 4.1:

- ***tokenringIfTable***
- ***x21IfTable***
- ***x25MprTable***

Bug Fixes

CAPI

Both CAPI 1.1 and 2.0

- CAPI 1.1 and CAPI 2.0 now correctly recognize DTMF tones.
- When using the National ISDN 1 profile (USA) the CIP values are now correctly set to use the µlaw coding for voice connections.
- When successfully closing a fax connection the *CAPI_DISCONNECTB3_IND* message now correctly indicates *reason_b3=0*.

- If a fax connection cannot be established (e.g. if the fax number is called from a telephone) the disconnect cause is now indicated in the *CAPI_DISCONNECTB3_IND* as a CAPI error message.

CAPI 1.1 only

- Changing of B channel protocols during a connection using the CAPI_SELECTB2_REQ and CAPI_SELECTB3_REQ messages now works as specified. Previously the B channel protocol remained unchanged.

CAPI 2.0 only

- The capi_getprofile() message now returns the correct number of installed B channels, previously the returned number was too large by one.
- The coding and decoding of the elements bearer capability, low layer compatibility, and high layer compatibility within the CAPI_CONNECT_IND and CAPI_CONNECT_REQ messages now correctly begins with octet three, instead of octet one as before.
- Illegal digits (not »0«-»9«, »#«, »*«) within the called party number and the calling party number are now filtered by the CAPI.
- Incoming X.31 connections (X.25 on the D channel) are now signalled as specified.
- CAPI now supports selecting of analog modem (V.22bis) as B1 protocol, as described in the CAPI addendum “Modem and Faxpolling over ISDN”.
- Incoming Calls with no associated B-channel are now signalled to the CAPI application with B-channel parameter 2 (use neither B- or D-channel). Using this mechanism, the application can detect CALL AWAITING situations.

PPP

- Deleting entries for active PPP interfaces from the *pppTable* is now possible.
- At boot time the *State* field of the *biboPPPipAssign-Table* is now initialized correctly.
- PPP IDs and passwords for use with the PAP and CHAP authentication protocols can be up to 32 characters long. If longer strings are used, the authentication fails.
- There can now be several entries in the *biboPPPTable* which use *dynamic* IP address assignment and have identical entries for *AuthIdent* (PPP ID) and *AuthSecret* (PPP password).
- A problem concerning connections which were authenticated inband (e.g. *x.25_ppp* connections) was resolved. Now an arbitrary number of these calls can be handled.
- If *MaxConn* is set to *1* (use only one B channel) the MRRU option (Multilink PPP) is not used for this connection. This is to ensure compatibility with older routers from other vendors.
- If the variable *biboPPPMaxRetries* is set to *0* now only one dialling attempt is made.‘

SNMP

- The correct type (timeticks) is now used for the timestamp field in outgoing SNMP trap packets.

TCP/IP and Telnet

- Connections using TCP/IP—such as Telnet, BRICKtrace, and Remote CAPI applications—between the BRICK-M and NetManage Chameleon TCP/IP now work correctly.

Miscellaneous

- The output of the tool *isdnlogin* is now formatted correctly on all terminal types.
- Sometimes, after an ISDN connection was setup the first packet was received improperly resulting in a delayed B channel setup.
- The configuration of an ISDN leased channel from *leased_dce* to *leased_dte* was not possible while the system was running. A reboot was necessary to allow this configuration to work. The configuration from *leased_dte* to *leased_dce* worked without problems.
- Some arbitrary interface state changes (interface moved from up→down and back from down→up) when changes to IP routing tables were made have been removed.
- *RIP* packets are now transmitted with *ttl=1* (time-to-live) and are discarded after the next hop.
- When using the *1TR6 Point-to-Point* protocol, the telephone number is now correctly displayed in the *isdnCallTable*.
- Configuration changes via BOOTP sometimes did not have an effect. They now work correctly.
- *TFTP* transfer of configuration files is now handled correctly, even when the BRICK's system load is very high.
- Dynamic IP address allocation and subsequent IPCP negotiations are now handled correctly.
- The IP driver now reliably handles more messages and in rapid succession (especially insecure UDP messages).
- The entries for call Duration, Charge, and transmitted and received packets and octets in the ***isdnCallTable***, ***isdnChTable***, ***isdnCallHistoryTable*** and in accounting outputs are now correct.

- During automatic reorganization of flash ROM, sometimes configuration files were inadvertently deleted. The BRICK-M now reorganizes flash ROM properly.

Known Problems

BRICKware and Windows NT

Problem

If you want to install *BRICKware for Windows* on a computer running Windows NT using the NTFS file system please note that the NTFS file system is case sensitive.

When browsing for the installation directory at the start of the installation procedure, the dialog box will convert all pathnames to *lowercase* letters.

This causes the installation to fail.

Solution

You can avoid this problem by entering the desired pathname by hand, instead of selecting it with a mouseclick.