DBBC – Disk images and installations in general
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As discussed in Onsala, I have prepared a disk image for the DBBC system. **This disk image is for use with the new Advantech Atom CPUs only**. It is a fail-safe solution, if installating is necessary and doing the system from scratch does not work.

The procedures described below are exactly what we do to build a new system, a little bit of linux knowledge is neccessary.

There is an ongoing discussion about the use of Windows XP.
Only a few words about that: My favorite logic analyzer is running with Windows NT 2000, which - from the technological point of view - is from the stone age. But the analyzer is an instrument frequently used as that, and not a general purpose computer. Perhaps one should think about the DBBC in the same way.

There are three chapters:
Installation (1) - Using the disk image:
Installation (2) - Upgrading from a flash disk system to harddisk whatsoever.
Installation (3) - Doing everything from scratch (i.e. with your own campus license)

Now let's get started:

About the target device: Any disk can be used, with a minimum capacity of 8 GB. We used flash disks in the past. They have their drawbacks, i.e. they complain about swap files sometimes or there is a problem with security updates. For that reason we switched over to standard 2.5 inch laptop disks. They are small and cheap and can be mechanically inserted easily. There is no problem to use solid state disks as well.
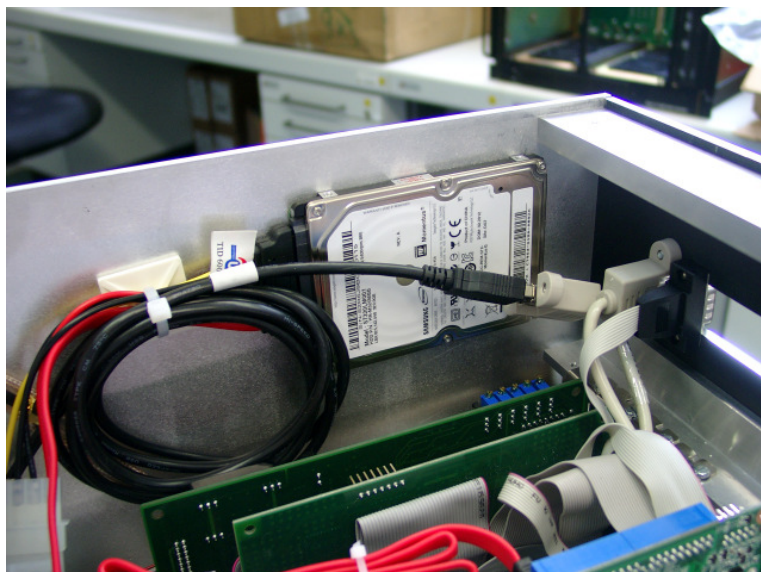
Installation (1) - Using the disk image:

The disk image contains WinXP + SP3 with the latest security updates and all drivers and software neccessary.

- Attach the new target device to a linux system or a computer running from a Linux live CD (like Knoppix).

- Download the image from **ftp://ftp.mpifr-bonn.mpg.de/outgoing/p655miw/DiskImage**.

- Due to its size, the image is compressed. Uncompress it with **gzip -d Filename.gz**

- Copy the image to the new disk with **dd if=./Filename of=/dev/target_device**. The last two commands will take a bit of time.

- If you have a look at the new device with **fdisk /dev/target_device** you will notice that there is a NTFS partition of 8GB, no matter how big the device is.

- Use a tool like **gparted** to expand this partition to the size you find appropriate.

- It could be nice also to add another partition for data for use in the future.

- Insert the new disk in the DBBC and boot. It will notice the new disk and demand a reboot. It might be neccessary to activate the swap file again. The same is true for the security updates.

- The disk image is for a **generic** system. Therefore some modifications will be necessary:

    - Change the systems name from DBBC-XX to DBBC-your_station_id

    - Change the DBBC configuration to your actual hardware, i.e. type of CAT, number and type of ADB boards, number of core modules etc.

    - Install Hamachi from the desktop icon and join the network to enable remote logins.

    - Modify the standard network settings to your need.

The system should be ready for use now.

Installation (2) - upgrading from a flash disk system to harddisk whatsoever.

- Attach both the old and the new device to a linux system as above.

- Copy the system with **dd if=/dev/old_disk of=/dev/target_device**.

- Resize the NTFS partition to your needs as described above.

- Boot the new disk and modify settings as described above.

- The copy command is very handy to have an exact backup of the running system, we strongly recommend that. You only need a second disk, best would be an identical one.

Installation (3) - Doing everything from scratch (i.e. with your own campus license)

- Attach a CD or DVD drive to the Advantec's PATA port.

- Attach your new disk.

- Install the WinXP operating system, including the drivers related to the particular board you are using (coming with a disk distribution). If there is no CD, the drivers for the new Advantech CPU can be downloaded at: **www.advantech.com** -> support -> PCI-7030

- Install the ADLINK software for the commercial PCI boards (PCI7200 and PCI9111HR). They can be downloaded at:
www.adlinktech.com -> support .
You need to register for that and will get drivers and utility software.

- Install the LABTOOLS from Xilinx, no licence is required. This takes care of the drivers for the USB programmer as well

- Create the subdirectories where DBBC the software has to be copied, and copy of its the latest version. The latest software is available from: **www.hat-lab.com** after registration.

- modify the system settings and DBBC configuration files to your needs as in (1).