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TRADEMARK ACKNOWLEDGMENTS:

IBM PC: International Business Machine Corp.

Macintosh: Apple Corp.

SUN Sparc-Station: SUN Microsystems Corp.

LabView: National Instruments Corp.

MatLab: MathWorks Corp.

Webots: Cyberbotics

Khepera: K-Team and LAMI

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- The content of this manual is subject to change without notice.
- All effort have been made to ensure the accuracy of the content of this manual. However, should any error be detected, please inform K-Team S.A.
- The above notwithstanding K-Team can assume no responsibility for any error in this manual.

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1 U-BOOT BOOTLOADER



u-boot is now installed on Korebot as the system bootloader. It is compiled with u-boot-1.2.0 source code and minor configuration to be adapted for the korebot. The modified u-boot source code is available here:

<http://ftp.k-team.com/korebot/u-boot/>

The *u-boot.bin* image file can be built using:

```
make korebot_config  
make
```

Refer to the bootloader K-Team document for instructions to install u-boot on the korebot.

2 KTBOOT FLASH SCRIPT



The ktboot utility is a set of script to upload and program kernel and ditribution images using the serial line. The Makefile must be edited to match the local system setting (serial port name, location of imgages, etc...). The utility package is available here:

<http://ftp.k-team.com/korebot/u-boot/>

Before using a command, use minicom to check u-boot prompt (press any key at boot time), and suspend minicom with ctrl+A to make sure the line is properly configured.

Available commands are:

- make flashk: copy the kernel image from selected location, upload the image to RAM, flash the image to the proper partition.
- make flashd: copy the distribution image from selected location, upload the image to RAM, flash the image to the proper partition.
- make bootargs: configure the right boot args parameter for the korebot kernel.
- make clean: delete local images

3 OE TOOLCHAIN



Korebot toolchain is now based on OpenEmbedded. The package name is *korebot-oetools* and it must be installed in */usr/local*. The Linux i386 binaries are available here:

<http://ftp.k-team.com/korebot/toolchain-i386/korebot-oetools-1.0.tar.gz>

The toolchain is built as part of the Angstrom distribution, as described in section 5.

4 KOREBOT KERNEL 2.6



The kernel is based on release 2.6.20.1 with minor modifications. The kernel image and modules can be compiled by loading the provided configuration file *korebot-config-9m* and running the usual sequence:

```
make zImage  
make modules
```

The modified linux kernel sources are available here:

<http://ftp.k-team.com/pub/misc/kernel-2.6-beta/zImage-2.6.20-kb1-beta1>

5 ANGSTROM DISTRIBUTION



OpenEmbedded is now used to build the entire korebot distribution based on Angstrom. The *korebot-oetools-src* package contains everything required to build the distribution, including the arm-linux toolchain.

The *start-build.sh* is provided to start building OE packages. The following commands are available:

-

To start building the entire angstrom distribution, use the following command:

```
./start-build.sh rebuild angstrom-console-image
```