## Instructions for re-program the e-puck bootloader

The following instructions explain how to restore the original Bluetooth bootloader of the e-puck robot. It is useful if you cannot upload new HEX program through Bluetooth to your e-puck robot any more. This may happen because the bootloader was corrupted due to a failed upload, a buggy program or a wrong manipulation.

## Bluetooth bootloader re-programming

For this manipulation, you need the following items:

- A PC computer running Windows.
- A MPLAB ICD 2 microchip programmer (you can purchase it from www.microchip.com, part number: DV164005)
- a special programming cable from the ICD 2 to the e-puck

## Then follow the procedure:

- 1. Connect the programming cable of the ICD 2 (which is connected by USB to the PC) and switch on the e-puck robot.
- Start the environment MPLAB IDE; select device dsPIC30F6014A (Configure->"Select Device..."); import BTconf\_bootloader.hex file (File->Import); select ICD2 as programmer (Programmer->"Select Programmer"->"MPLAB ICD 2") and connect it (Programmer->Connect)
- 3. Then program the e-puck (Programmer->Program). The result window should be like Fig.1
- 4. When ok (it might take up to 2 minutes) unplug the programming cable and all is over.

🗖 Output	
Build Version Control Find in Files MPLAB ICD 2	
Connected	
Setting Vdd source to target	
Target Device dsPIC30Fe014A found, revision = Rev 0x1002	
Reading ICD Product ID	
Personal Description	
MPI ASSEU	
Programming Target	
Validating configuration fields	
Erasing Part	
Programming Programming Executive	
Verifying Programming Executive	<u></u>
Programming Program Memory (UxU - Ux1 / FFF)	-
Verliging	
Weife Succeeded	
Programming Configuration Bits	
Config Memory	
Verifying configuration memory	
Programming succeeded	
07-Jul-2006, 11:08:50	
MPLAB ICD 2 Ready	~

Figure 1: normal result when programming successfully.

## Testing

- First establish the Bluetooth pairing between the e-puck and the computer.
- Then, use Webots or Tiny Bootloader to upload a hex file like Webots "*firmwarex.y.z.hex*" or your compiled program over the Bluetooth connection.
- You should now be able to establish a remote control Bluetooth connection between PC and the e-puck robot. For example with Webots you can monitor the sensors values.