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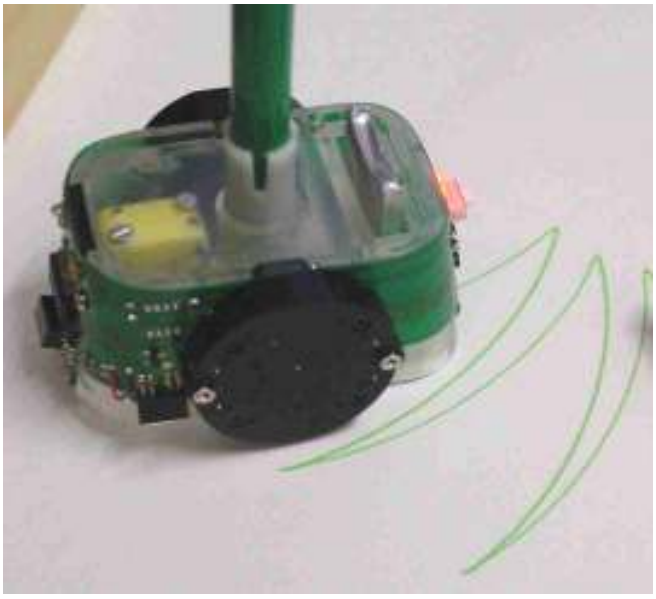
DidelBot: a robot for fun and education
Learning to program in different languages

The small Didelbot (6cm long) has a cute design. It both has a ludic and pedagogic objective, since it can be used on several different ways.



1) As a toy robot, it moves avoiding obstacles, drawing a figure, following a track, not falling from the ground.
2) It can be infrared controlled and with its pen, leave a track on a sheet of paper.
3) It can be connected to a PC via a serial line or via Bluetooth and execute a set of functions programmed in the monitor: moving for precise distances at given speed, reading the distance sensors, blinking the LEDs, producing several bips.
4) This control can be done via a VisualC, VisualBasic or Java to send order sequences driving to interesting behaviours, as drawing figures or chasing another robot and neutralizing it with its IR gun.
5) Communication can be established with **CeeBot** environment (Epsitec SA), and add to the set of exercises teaching C++/Java-like programming on a simulated robot with the control of a real robot.
6) The retractable pen option allows to make more tricky drawings with turtle LOGO programs kids can understand.
7) Small programs can be written in assembler and downloaded to understand how to program directly the PIC microcontroller for blinking the LEDs, stepping the motor, reading the distance sensors. The CALM assembler developed at the EPFL uses more clear and easy to learn instructions, compared with the Microchip ones (but the PicStart can also be used).
8) Any PIC programmer can be used to reprogram the processor according to user's idea and possible extension board added on the top of the robot.

Option with retractable pen.

With its small size, you just need a little space on your table to play with and learn from the DidelBot.

Features
Size 64 x 48 x 30mm
Weight 37g
LiPoly accumulator 3.2-4.2V, 170 mAh, weight 4g
Power need 20 – 200 mA, mean duration 1h
Charger for one Lipos, recharge in 60 minutes
Microcontroller Microchip 16F870 4 MHz
5 distance sensors, 2 LEDs, 1 beeper, 1 infrarouge LED
Wood packing box with space for the charger and the serial cable.