The Wonderful World Of NXT

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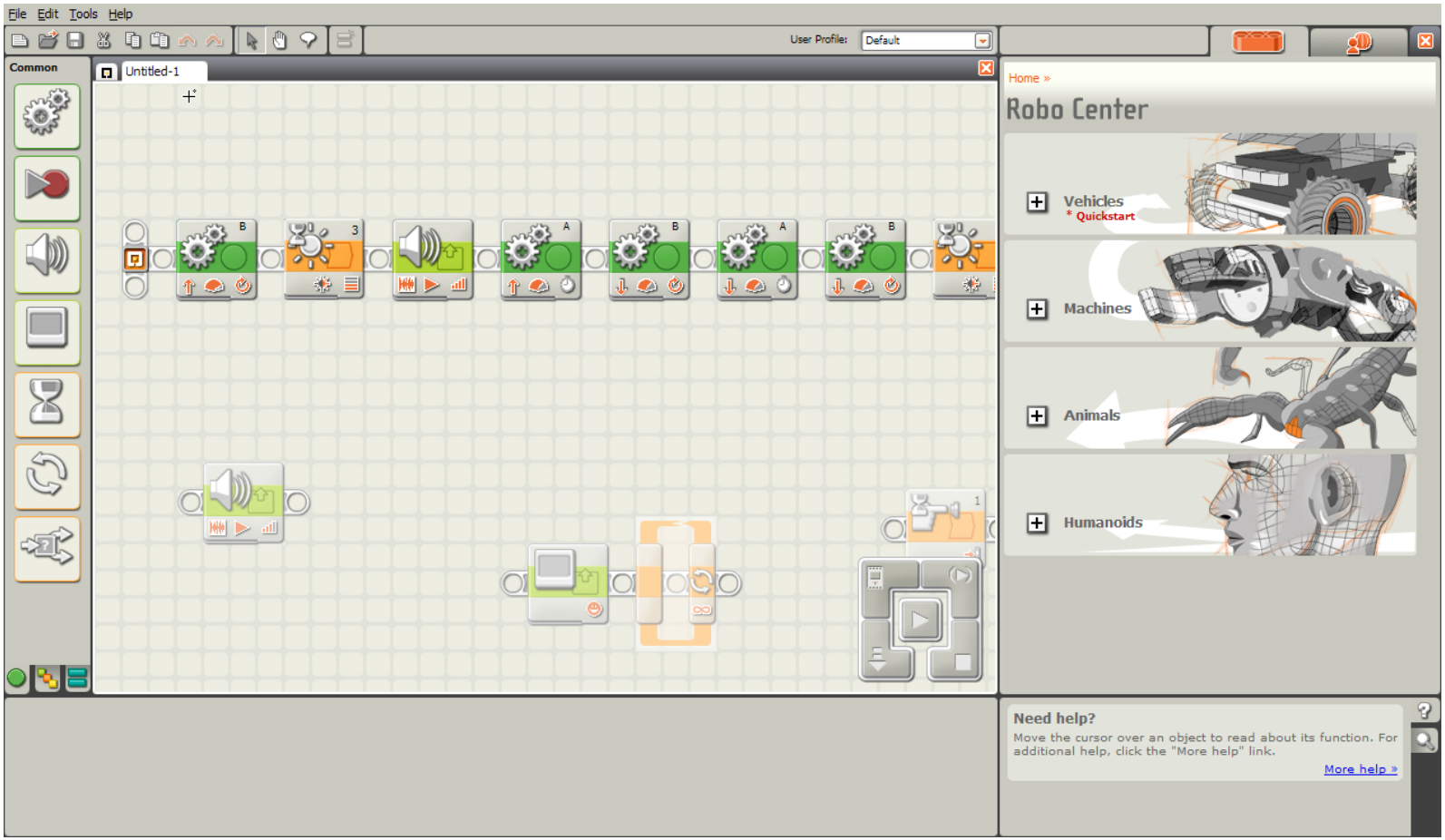
SUCS Lightning Talks

What is NXT?

- Lego's next generation robotics kits in the Mindstorms series
- Based around the NXT brick computer
- 32-bit ARM7 microcontroller, 64KB main memory, 256KB secondary storage
- Bluetooth enabled
- Firmware has been open sourced by Lego

I/O?

Programming?



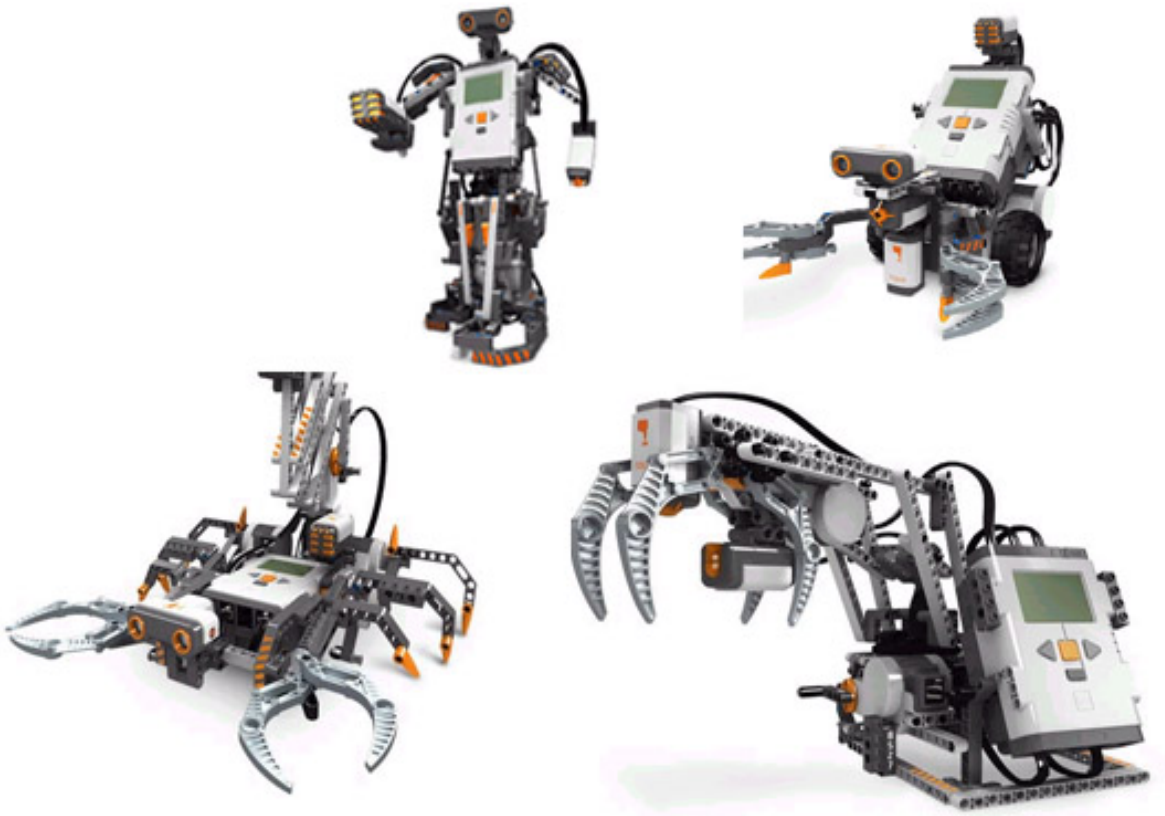
Ports?

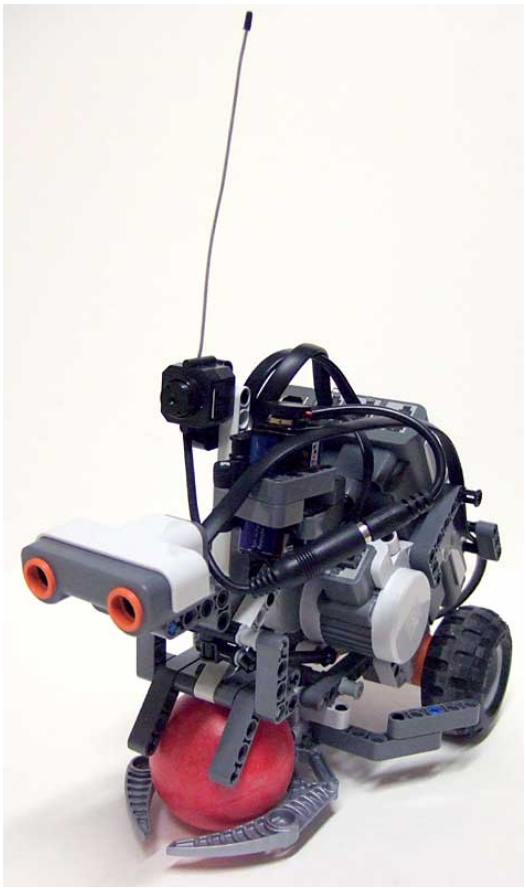
Here are just a few of the languages for which an NXT port exists:

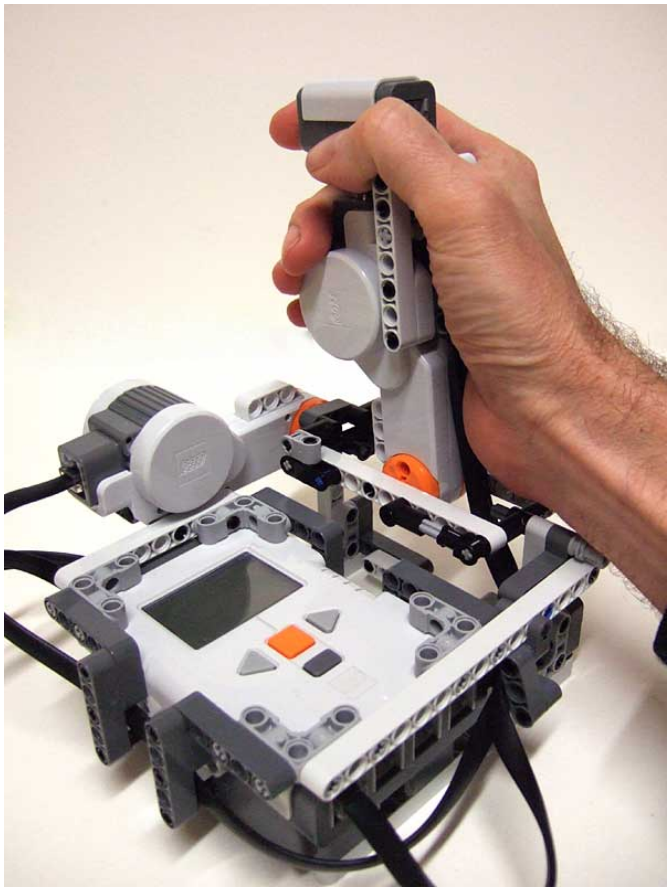
- Java
- NQC (Not Quite C)
- C#
- Lisp
- ASM
- Prolog
- Logo

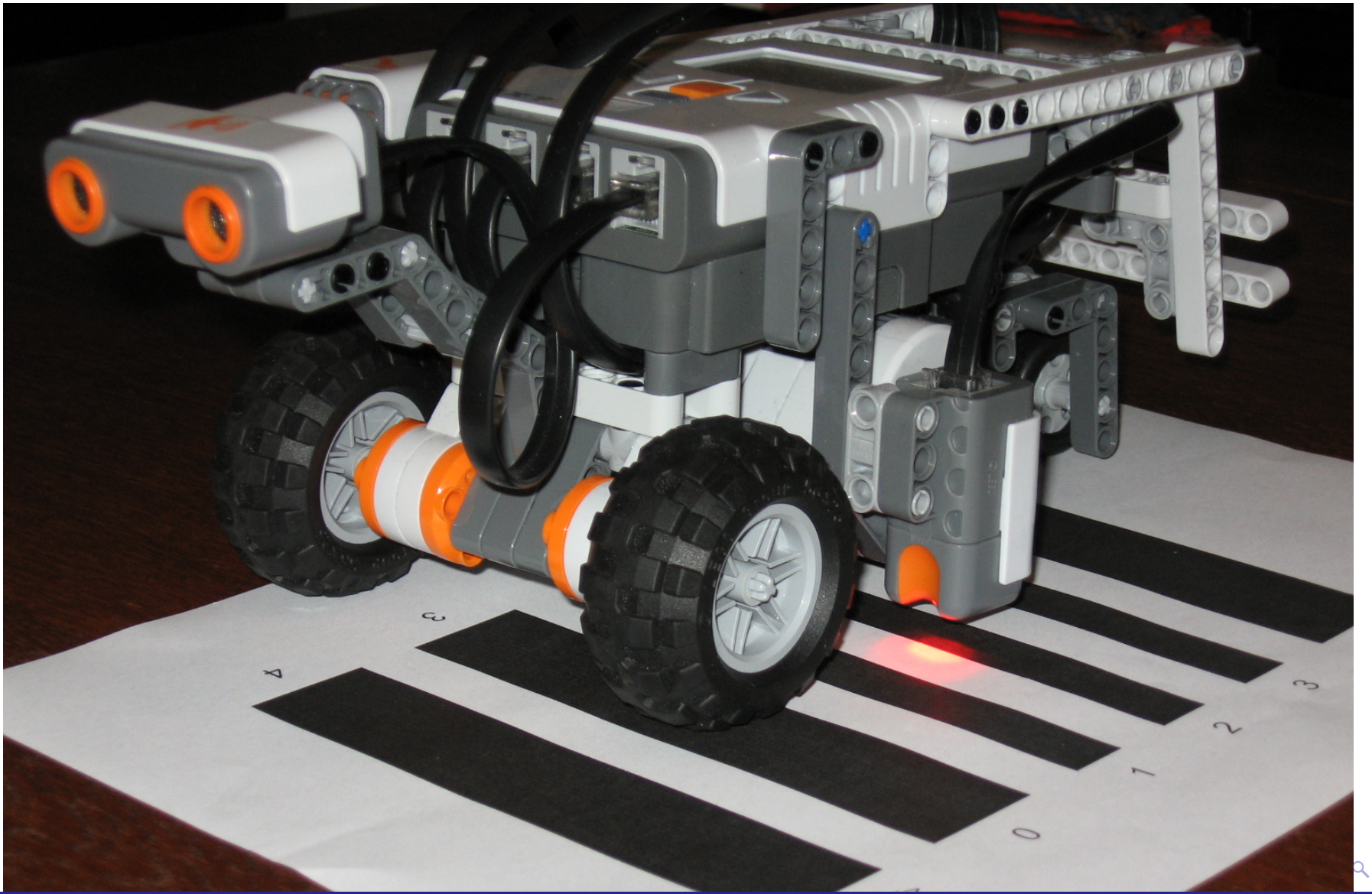
What can it do?

Anything your devious mind can come up with!





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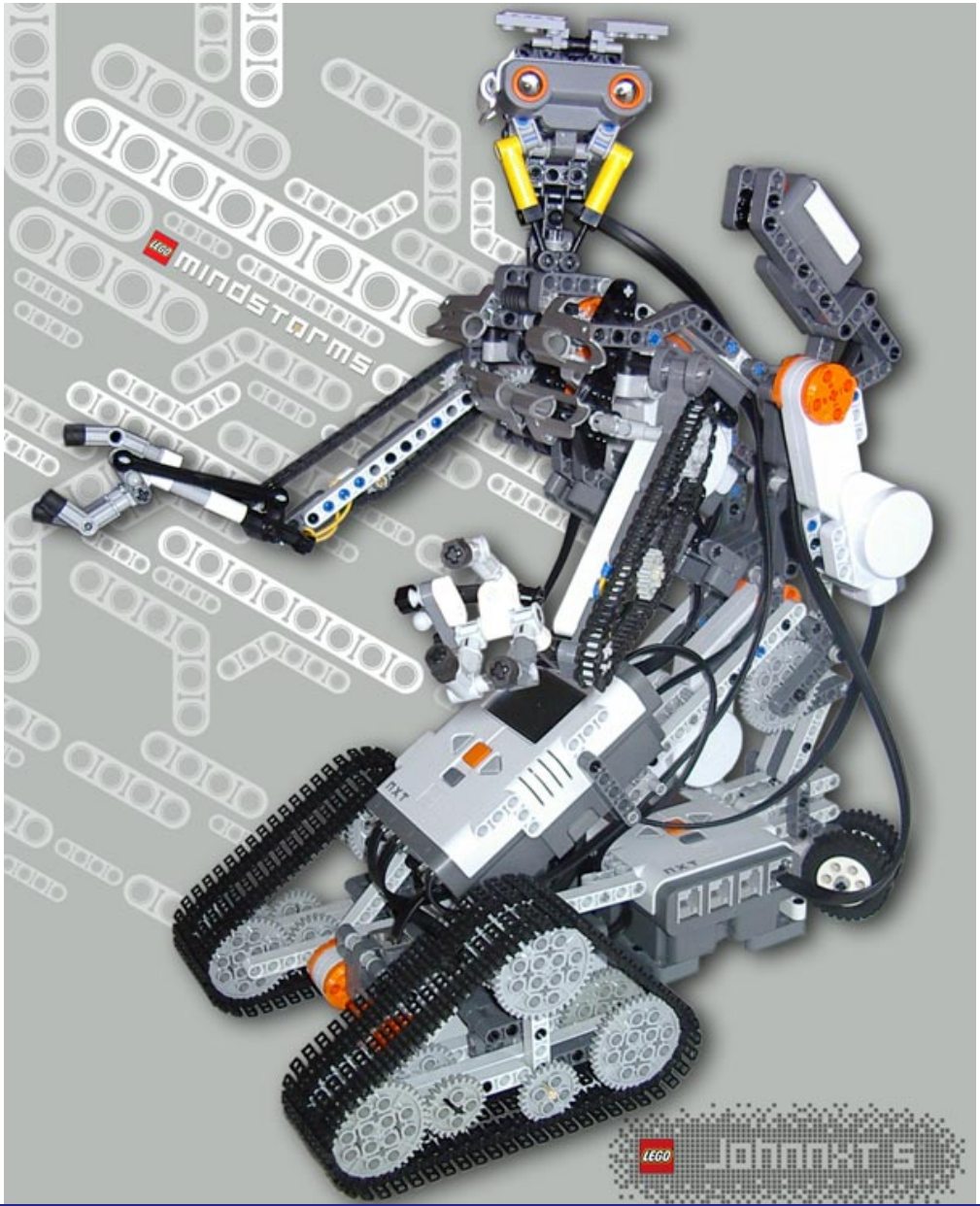
mindstorms
LEGO
JOHNNXT 5

Other ideas...

- Racing car controlled via Bluetooth-enabled mobile phone or Nintendo Wiimote
- Stair-climber
- Self-balancing robot
- Maze solver
- Radar
- Dancer
- Cuckoo clock

The Future?

- Since Lego open-sourced the NXT firmware, an official NXT SDK has been released
- This has resulted in a vibrant community of developers and enthusiasts
- The release of a Bluetooth SDK for NXT has paved the way for integration with other devices
- There are several communities of NXT enthusiasts, the most notable being NXTasy.org
- Users publish instructions for their own custom robot designs
- Custom program blocks (i.e. floating point arithmetic etc) are released regularly and often
- Third party manufacturers have released their own sensors i.e. cameras, gyros, infra-red

Questions?