Scratch Conference 2013 - Scratch for Arduino Demo

Connecting Scratch to the real world through Arduino boards

Presenters

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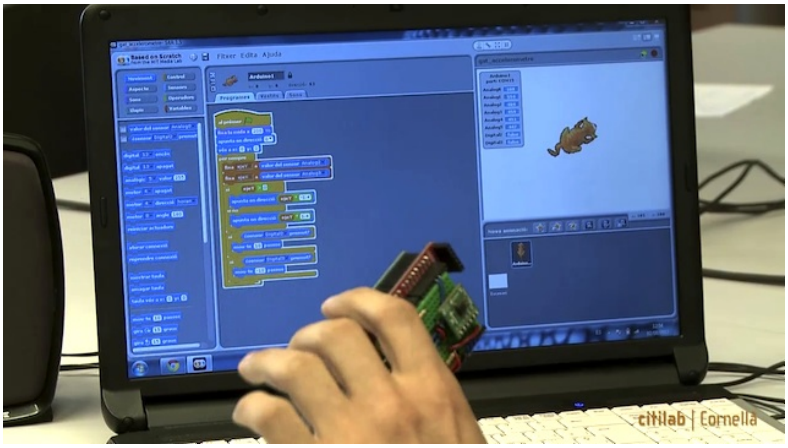
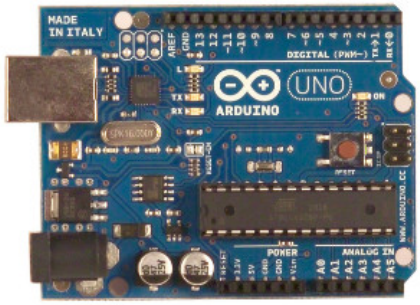
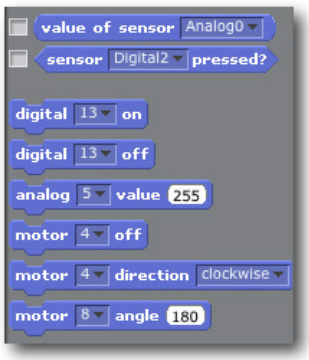
Scratch for Arduino developer, main maintainer and in charge of S4A courses.

Scratch for Arduino (S4A) is a modified version of Scratch, ready to interact with Arduino boards. It was developed in 2010 by the Citilab Smalltalk Team and it has been used since by many people in a lot of differents projects around the world. Our main purpose was to provide an easy way to interact with the real world by taking advantage of the ease of use of Scratch.



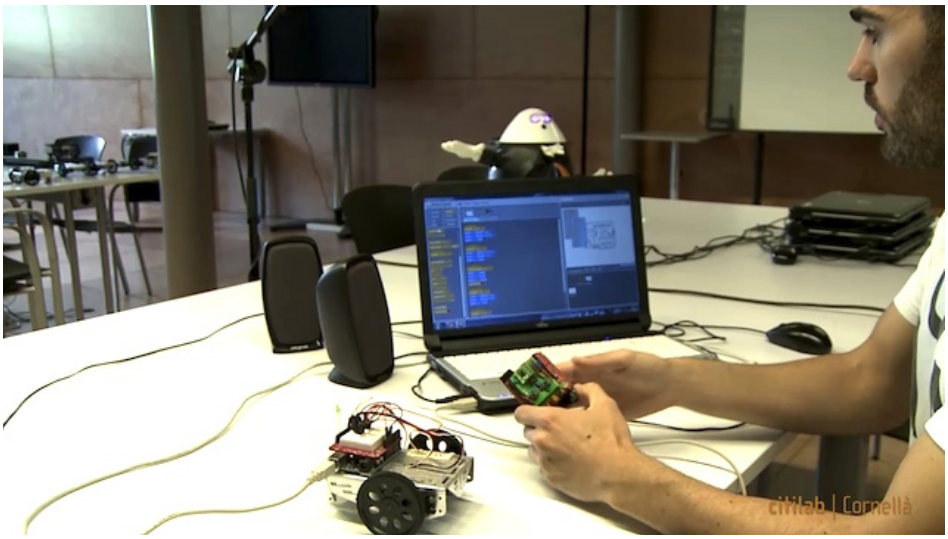
S4A provides Scratch with new pieces, allowing to get data from the board's digital and analog inputs, as well as controlling digital and analog outputs. It's also possible to use several kinds of servos (standard/continuous rotation) and many other devices that can interact with the real world.





As a unique feature, it can control more than one Arduino Board at the same time. Each board is represented as a separate object with its own input and output pieces.

The latest version (1.4) comes with an Android mobile application that can communicate with S4A. Using this feature, it is possible to connect with the real word by using mobile devices



In this presentation we will show 3 real samples made with Scratch for Arduino. An accelerometer based remote control, a theremin-like musical instrument, and a simple robot that can be driven with the computer keyboard.

An Arduino sketch (S4AFirmware) has to be loaded into the board for it to work properly with S4A.

Examples, firmware, and installer can all be downloaded from our website: http://seaside.citilab.eu.

A demo video showing the possibilities of Scratch for Arduino can be watched at: http://www.youtube.com/watch?v=RJAgSUIf12U