Developing with Kinect2Scratch

This file was written in 2012, and probably has lots of out of date information. If you get lost or stuck, my email is stephenhowell@outlook.com

Setup

1. You should use a fast PC and you must use Windows 7, Windows 8, or Windows 10.
2. Download and install the MS Kinect Runtime v1.8.
3. You must have a powered Kinect (one with its own electricity plug)
    a. Plug your Kinect into the electricity socket
    b. Plug the USB lead on the Kinect into your PC
        i. Try to use a USB section with no other device in use (like webcam)
        ii. USB 2.0 or better may be required
4. Run Kinect2Scratch and Scratch.

In Scratch:

a. Start a new project (if you weren't already using Scratch, it will probably be a new project already)
b. Click on Sensing
c. Right click on <Slider Sensor Value> Block
d. Select 'enable remove sensor connections' (see fig 1)

In Kinect2Scratch:

a. If you want 3D and 2 Player mode, click Configure Skeleton and tick them on
b. Click Launch Kinect, wait for video to appear
c. Click Connect to Scratch
d. Adjust your Kinect so that you can easily stand in front of your Kinect
e. Stand in front of your Kinect, it must see your whole body
    i. You need lots of room, clear your furniture away!
    ii. Only one person at a time (later add another)
    iii. No direct sunlight!
f. If the left hand video shows your shape in red, it has detected you
g. Now go back to Scratch and follow the next section

Programming Kinect in Scratch

1. Assuming you followed the steps above:
    a. Click Sensing
    b. In the <<slider> sensor value> block, click on the small down arrow beside slider
    c. If you see a long list of values like this: head_x HandRight_y etc. then it is working perfectly d. Now write this small program to test (fig 2):
        i. When Green Flag Clicked
        ii. Forever
            1. Go to X: mouse x Y: mouse y

e. Run the program and move your mouse around the stage
f. Does the Cat follow the mouse?
g. Now the Kinect bit, replace both the mouse x and mouse y sensor blocks with HandRight_x and HandRight_y sensor blocks (fig 3).
h. Now run the program, stand in front of your Kinect and wave your hand

Have fun, there are much more details in Kinect Hacks from O'Reilly, and I wrote some more versions for new hardware and Scratch versions, look for them on GitHub.

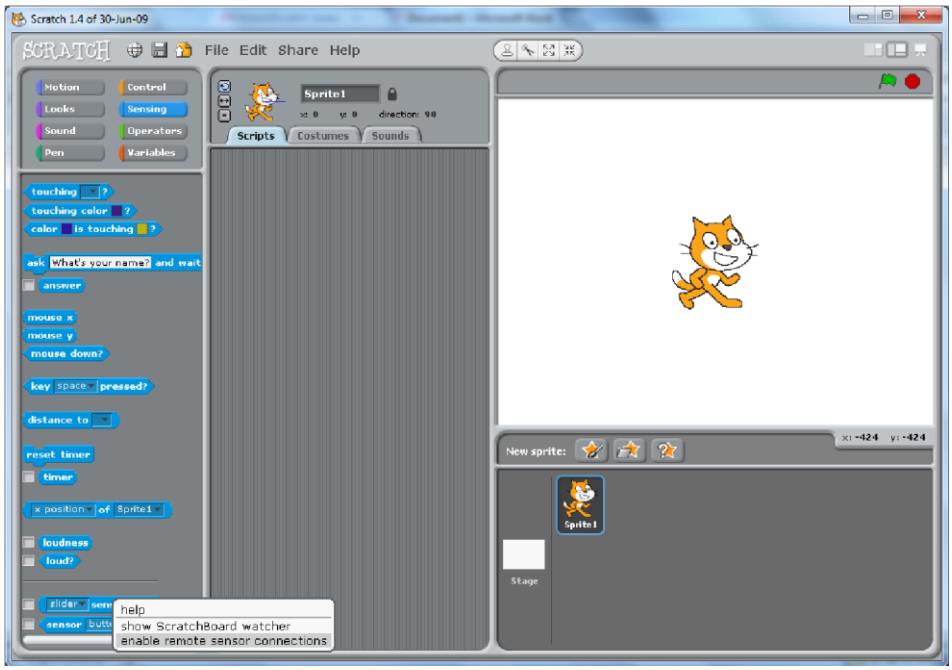

Fig 1: Switch on Scratch to receive sensor data

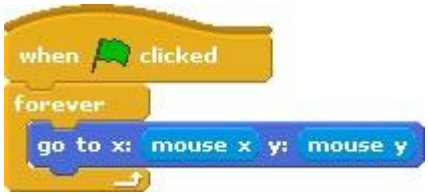

Fig 2: A sample Scratch program

Fig 3: A sample Kinect2Scratch program