

How to Set Up Fluid Wall 1.0.1 Beta

5/18/2011

System Requirements (tested):

- Windows 7 x64
- Intel i7 and i5 processors

Required libraries:

- OpenCV 2.2 - (<http://opencv.willowgarage.com/wiki/InstallGuide>)
- CL NUI Platform 1.0.0.1210 - (<http://codelaboratories.com/downloads/>)
- OpenNI 1.0.0.25
- SensorKinect
- NITE Middleware 1.3.0.18

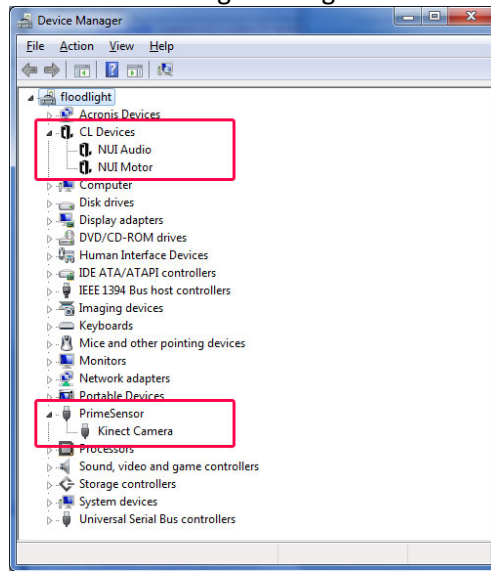
Note: Because PrimeSense drivers have user recognition, but no motor control, we've had to make an un-holy union between two Kinect drivers. We use the Kinect Camera from PrimeSense and the NUI Motor from CL NUI. Since two drivers are installed, Windows does not use the correct drivers by default when you plug in the Kinect. More about how to fix this below.

1. Install CL NUI Drivers by running **CL-NUI-Platform-1.0.0.1210.exe**
2. Install **1.openni-bin-win32-v1.0.0.25.exe**
3. Install **2.sensorkinect-win32-5.0.0.exe**
4. Install **3.nite-bin-win32-v1.3.0.18.exe**
When prompted, enter the serial: 0KOIk2JeIBYClPWVnMoRKn5cdY4=
5. Log out and log in (or restart) to update system path changes.
6. Plug in Kinect. The system will look for drivers.
7. **Each time you plug the Kinect into a different USB port**, you may have to do the following:
 - a. Open Device Manager (Press WINDOWS+R to open "Run" dialog, type in **devmgmt.msc** into the "Open" field, and hit OK)
 - b. The new Kinect devices (Audio, Motor, and Camera) will appear under **CL Devices** or under **PrimeSensor**. If **Kinect Motor** appears under **PrimeSensor**, right click on it and choose "Uninstall."
 - c. In the "Confirm Device Uninstall" dialog, check the box next to "Delete the driver software for this device"



- d. In Device Manager go to **Action > Scan for hardware changes**. The system should now install the motor in the correct location as **NUI Motor**.

Your device manager configuration should look similar to this:



8. Run fluidWall.exe
9. Press **B** to see the bounds. If most of the screen is grey, you may need to adjust the depth threshold by using the **O** key to increase max depth, and the **K** key to decrease max depth. This way, walls behind the user are not read as boundaries.
10. To enter full-screen mode, press **q**.
11. To exit program, press **ESC**.

For more keyboard commands, see the command line output.

Known issues:

- **Look of fluid depends on processor speed.**
Currently several fluid simulation parameters that govern emission rates and amounts are hard coded. We have discovered that processor speed dramatically affects the way that these parameters work in the simulation. This may cause too much or too little density to be emitted per screen refresh. Future releases will include a GUI allowing users to adjust these parameters and art direct them for their own machines.
- **"UPDATE ALL: ..." error streams in console.**
Sometimes the Kinect will not synchronize properly with the program, usually after quitting and re-launching in quick succession. If this happens, just quit, wait, and try launching again. This error is rare.