

# Geospatial Modeling & Visualization

A Method Store for Advanced Survey and Modeling Technologies

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## Microsoft Kinect – Additional Resources

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Links: Resources & Learning

### Resources and Learning

1. [www.kinecthacks.com](http://www.kinecthacks.com)
2. [www.kinect.dashhacks.com](http://www.kinect.dashhacks.com)
3. [www.kinecteducation.com](http://www.kinecteducation.com)
4. [www.developkinect.com](http://www.developkinect.com)
5. [www.scratch.saorog.com](http://www.scratch.saorog.com)
6. [www.microsoft.com/education/ww/partners-in-learning/Pages/index.aspx](http://www.microsoft.com/education/ww/partners-in-learning/Pages/index.aspx)
7. [blogs.msdn.com/b/uk\\_faculty\\_connection/archive/2012/04/21/kinect-for-windows-curriculum](http://blogs.msdn.com/b/uk_faculty_connection/archive/2012/04/21/kinect-for-windows-curriculum)
8. [dotnet.dzone.com/articles/kinect-sdk-resources](http://dotnet.dzone.com/articles/kinect-sdk-resources)
9. [hackaday.com/2012/03/22/kinect-for-windows-resources](http://hackaday.com/2012/03/22/kinect-for-windows-resources)
10. [channel9.msdn.com/coding4fun/kinect](http://channel9.msdn.com/coding4fun/kinect)
11. [www.pcworld.com/article/217283/top\\_15\\_kinect\\_hacks\\_so\\_far.html](http://www.pcworld.com/article/217283/top_15_kinect_hacks_so_far.html)

Links: OpenNI

### OpenNI

- [openni.org](http://openni.org) – Open Natural Interaction, an industry-led, not-for-profit organization formed to certify and promote the compatibility and interoperability of Natural Interaction (NI) devices, applications and middleware
- [github.com/openni](https://github.com/openni) – Open source framework for natural interaction devices
- [github.com/PrimeSense/Sensor](https://github.com/PrimeSense/Sensor) – Open source driver for the PrimeSense Development Kit

Links: Tech

## Tech

1. [www.ifixit.com/Teardown/Microsoft-Kinect-Teardown/4066](http://www.ifixit.com/Teardown/Microsoft-Kinect-Teardown/4066) – Hardware teardown. Chip info is here. (via adafruit)
2. [kinecthacks.net/kinect-pinout](http://kinecthacks.net/kinect-pinout) – Pinout info of the Kinect Sensor
3. [www.primesense.com/?p=535](http://www.primesense.com/?p=535) – Primesense reference implementation (via adafruit thread)
4. [www.sensorland.com/HowPage090.html](http://www.sensorland.com/HowPage090.html) – How sensors work and the bayer filter
5. [www.numenta.com/htm-overview/education/HTM\\_CorticalLearningAlgorithms.pdf](http://www.numenta.com/htm-overview/education/HTM_CorticalLearningAlgorithms.pdf) – Suggestions to implement pseudocode near the end
6. <http://www.dwheeler.com/essays/floss-license-slide.html> – Which licenses are compatible with which
7. <http://www.eetimes.com/design/signal-processing-dsp/4211071/Inside-Xbox-360-s-Kinect-controller> – Another Hardware Teardown. Note this article incorrectly states that the PS1080 talks to the Marvell chip.
8. <http://nvie.com/posts/a-successful-git-branching-model/> – Model for branching within Git
9. <http://git.kernel.org/?p=linux/kernel/git/torvalds/linux-2.6.git;a=blob:f=Documentation/SubmittingPatches> – Linux contribution procedure
10. [http://git.kernel.org/?p=git/git.git;a=blob\\_plain:f=Documentation/SubmittingPatches;hb=HEAD](http://git.kernel.org/?p=git/git.git;a=blob_plain:f=Documentation/SubmittingPatches;hb=HEAD) – Git project contribution procedure

## Hardware Options

Well the first option is to build your own, here's a how-to:

<http://www.hackengineer.com/3dcam/>

But since not all of us have the time or skills to do that there are other options, like....

- 1- ASUS Xtion PRO:  
Price: \$140  
Spec's: <http://www.newegg.com/Product/Product.aspx?Item=N82E16826785030>
- 2- Leap Motion:  
Price: \$70  
Spec's: <https://live.leapmotion.com/about.html>

Of course there may be more and there is talk of Sony recently filing a patent resembling their own "Kinect-like" device.

## Xbox Kinect vs. Kinect for Windows

**As you may know there are actually two "Kinect" sensors out on the market today...**

both under the Microsoft company but one was the original made for the Xbox 360 Game console, while the other is the recently released "Kinect for Windows".

## Overview

As far as I can tell the two hardware stacks are identical except for the name plate on the front (XBOX or KINECT FOR WINDOWS) and the Windows version has a shorter power cord with a higher price tag due to licensing issues.

There are constant changes being done to the Kinect for Windows to distance itself from it's Xbox twin, like a firmware

update to support "Near Mode" in the Windows SDK....

Microsoft even goes as far as saying the following:

*'The Kinect for Windows SDK has been designed for the Kinect for Windows hardware and application development is only licensed with use of the Kinect for Windows sensor. We do not recommend using Kinect for Xbox 360 to assist in the development of Kinect for Windows applications. Developers should plan to transition to Kinect for Windows hardware for development purposes and should expect that their users will also be using Kinect for Windows hardware as well.'*

If you are currently using the Kinect for Xbox you will find that the automatic registration functions found with the Microsoft SDK will not recognize your Kinect and therefore kick out an error every time you try to run one of their samples.

As far as I know, you can however, still manually register the Kinect with the Microsoft SDK and utilize the functions already developed in the API AT THIS POINT with the XBOX version of the sensor. I wouldn't be surprised if this changes in the near future however.



## Published Resources

### Published Resources

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Please cite this document as: Tenney, Matthew. 2012. Microsoft Kinect – Additional Resources. CAST Technical Publications Series. Number 10453. <http://gmv.cast.uark.edu/uncategorized/microsoft-kinect-additional-resources/>. [Date accessed: 27 April 2013]. [Last Updated: 18 February 2013]. *Disclaimer: All logos and trademarks remain the property of their respective owners.*

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