

Installing Loki Software onto a new laptop

- Install software in this order:
- Win7
- Visual Studio 2010
- MSDN from the same disk
- OpenCV 2.0? – Install to C:\OpenCV
- Rebecca AIML 1.1tp3(Slatter) – Install to C:\RebeccaAIML
- ??Microsoft Speech SDK (SAPI) 5.1
- Install MS DDK – see CD marked “DDK for WiiMote”. Needed for Release Build.
- Install GPA to enable Tracing

Copy following:

- To Program Files (overwrite installed version as needed)
 - Select files from RebeccaAIML see ReadMeDave on the homeserver
 - ??Copy OpenCV 2.0 to C:\Dev\OpenCV2.0
 - ???Copy modified SAPI include to: C:\Microsoft Speech SDK 5.1\Include
- Copy c:\Dev_Robot to new PC
- Make sure files are not read-only! Right click on _Dev and uncheck Read Only

Update Visual Studio paths as needed:

- Open: Project → Robot Properties...
- Confirm all the paths exist and are correct:
 - C++ → General → Additional Include Directories
 - Linker → General → Additional Library Directories
 - Add the following to the System Path
(Computer → Properties → Advanced System Settings → Environment Variables)
 - ;C:\OpenCV\bin;C:\Dev_Robot\AI\bin\release

Start Rebecca AIML Server

Note: run server shell as admin!

- Edit and make sure all paths are correct!: C:\RebeccaAIML\conf\serverconfig.properties

C:\RebeccaAIML\bin\cpp\rebecca-server.exe --Ice.Config=

"C:\RebeccaAIML\conf\serverconfig.properties" --install RebeccaAIML

```
C:\RebeccaAIML\bin\cpp\rebecca-server.exe --Ice.Config=
"C:\RebeccaAIML\conf\serverconfig.properties" --start RebeccaAIML
```

```
rs-admin --getAIMLFileListSize (should return 0)
```

```
rs-admin -aduaa "C:\Dev\_Robot\AI\aiml\loki"
```

```
rs-admin --createGraph
```

```
rs-admin --gafls (should return about 49)
```

```
rs-admin --gr "hi" (should return "hello there")
```

Rebecca AIML notes

- Main database:
- C:\Documents and Settings\All Users\Application Data\.RebeccaAIMLDB
- Config params:
- C:\Program Files\RebeccaAIML\conf
- To edit database: use Eclipse (see user's guide)
- To control server, use rs-admin console

Install Kinect software:

Either Kinect SDK or the following:

Follow instructions at: <http://www.studentguru.gr/blogs/vangos/archive/2011/01/20/how-to-successfully-install-kinect-windows-openni-nite.aspx> (copied below):

How-to: Successfully install Kinect on Windows (OpenNI and NITE)

Playing Kinect games is a really great experience. Programming for Kinect is even greater! Browsing the web, you can find many cool "hacks" ([CLNUI](#), [OpenKinect](#)) which allow Kinect be used by a PC rather than an XBOX. Via these hacks, we gain access to Kinect's cameras

(color and depth), LED, accelerometer and motor. Obtaining both the raw and the depth image, it is easier to build Machine Vision applications. But the main problem remains: Kinect magic is its software and the device simply cannot give us all those body-tracking algorithms by itself.

Fortunately, PrimeSense, the company behind Kinect, released OpenNI framework and NITE middleware. This means that we can now have access to features such as real-time skeleton tracking, gesture recognition, wave detection and much more!

OpenNI and NITE installation can be painful if not done properly. Let's do it step by step:

Step 0

Uninstall any previews drivers, such as CLNUI. *Look at the end of this post if you want to see how you can have multiple drivers installed.*

Step 1

- Download [Kinect Drivers](#) and unzip.
- Open the unzipped folder and navigate to Platform\Win32\Driver.
- Run **dpinst-x86.exe** (if you have a 32-bit processor) or **dpinst-amd64.exe** (if you have a 64-bit processor).

Drivers are now installed in your PC.

Step 2

Download and install the latest stable or unstable [OpenNI Binaries](#) from OpenNI website.

Step 3

Download and install the latest stable or unstable [OpenNI Compliant Middleware Binaries](#) (NITE) from OpenNI website.

During installation, provide the following (free) PrimeSense key:

0KOIk2JeIBYCIpWVnMoRKn5cdY4=

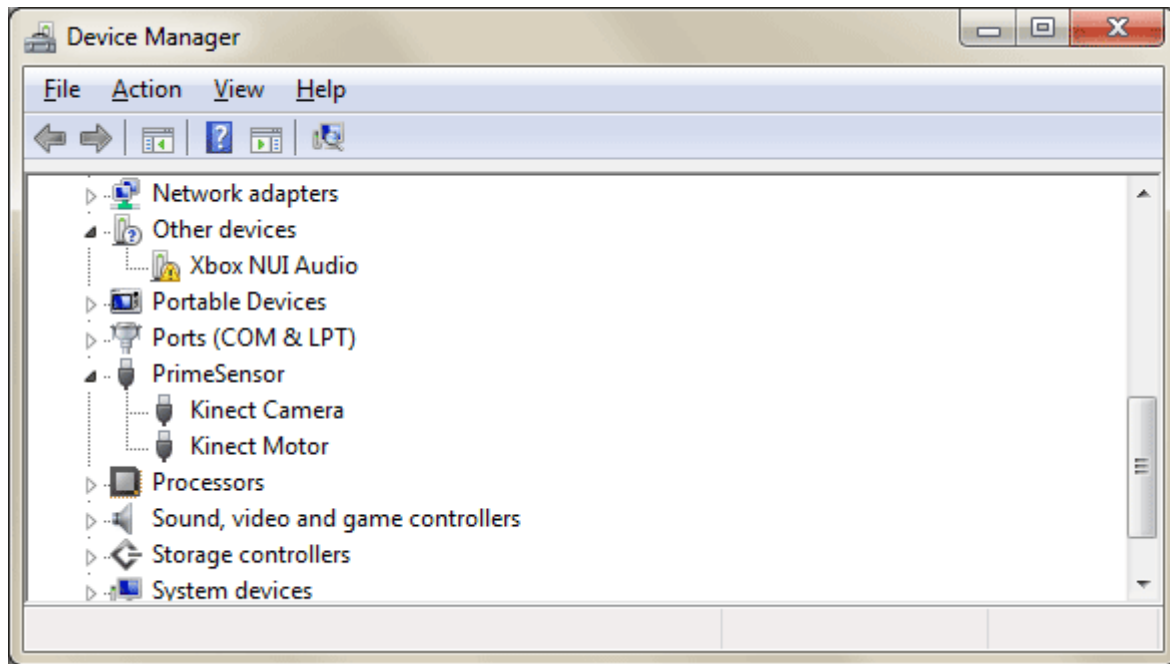
Step 4

Download and install the latest stable or unstable [OpenNI Compliant Hardware Binaries](#) from OpenNI website.

Both stable and unstable releases have worked for me. If you have trouble installing the unstable releases, just try the stable ones.

Step 5

- Plug in your Kinect device and connect its USB port with your PC.
- Wait until the driver software is found and applied.
- Navigate to the **Device Manager** (Control Panel). You should see something like the following:



Step 6

- Download the [KinectXMLs file](#) and unzip. The extracted folders contain totally four XML files which are going to replace the ones OpenNI installed (the XMLs I provide simply contain the license key and the correct Kinect camera resolution).
- Navigate to **KinectXMLs\OpenNI** folder and copy the SampleConfig.xml file. Navigate to **C:\Program Files\OpenNI\Data** (if you have a 32-bit processor) or **C:\Program Files (x86)\OpenNI\Data** (if you have a 64-bit processor) and replace SampleConfig.xml with the one you copied.
- Navigate to **KinectXMLs\NITE** folder and copy the Sample-Scene.xml, Sample-Tracking.xml and Sample-User.xml files. Navigate to **C:\Program Files\Prime Sense\NITE\Data** (if you have a 32-bit processor) or **C:\Program Files (x86)\Prime Sense\NITE\Data** (if you have a 64-bit processor) and replace Sample-Scene.xml, Sample-Tracking.xml and Sample-User.xml with the ones you copied.

Step 7

Navigate to **C:\Program Files\OpenNI\Samples\Bin\Release** (or **C:\Program Files (x86)\OpenNI\Samples\Bin\Release**) and try out the existing demo applications. Try the demos found in **C:\Program Files\Prime Sense\NITE\Samples\Bin\Release** (or **C:\Program Files**

(x86)\Prime Sense\NITE\Samples\Bin\Release), too. If they work properly, then you are done! Congratulations!

If they do not work, make sure that you have replaced the XML files I mentioned in step 5 with the ones I provided you. If the demos still do not work, try installing the stable version of OpenNI, middleware and hardware binaries. Personally, I have successfully installed OpenNI and NITE (both stable and unstable releases) in a 32-bit desktop and a 64-bit laptop following the methodology I described.

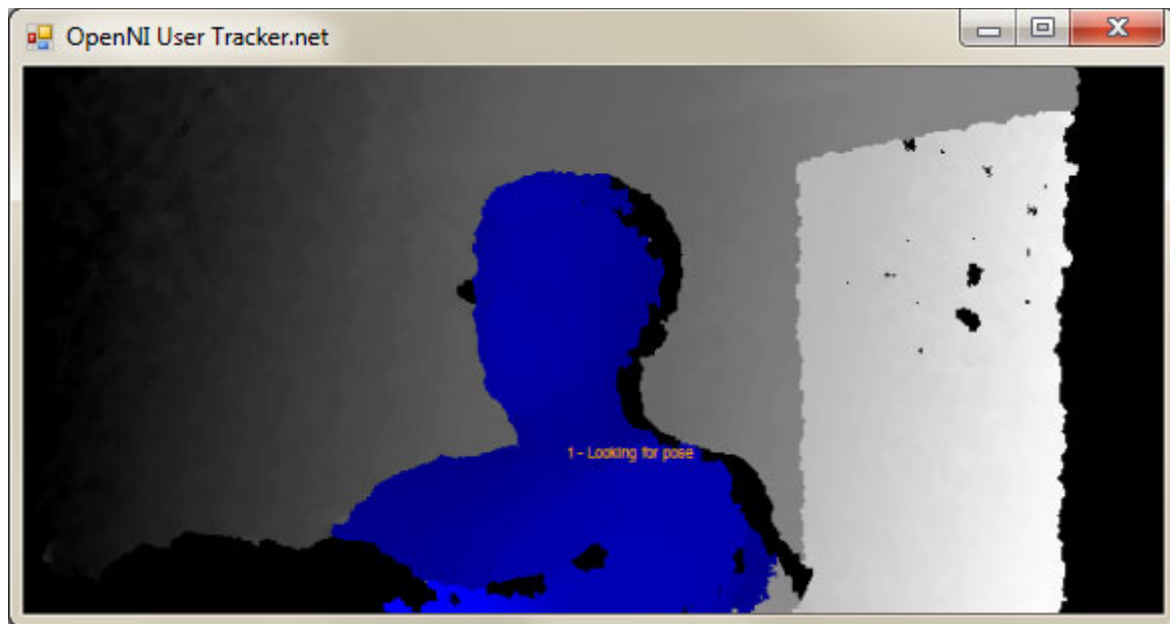
Step 8

You have successfully installed Kinect in your Windows PC! Read the documentation and familiarize yourself with the OpenNI and NITE API. You'll find the proper assemblies in:

- **C:\Program Files\OpenNI\Bin** (or C:\Program Files (x86)\OpenNI\Bin) and
- **C:\Program Files\Prime Sense\NITE\Bin** (or C:\Program Files (x86)\Prime Sense\NITE\Bin)

OpenNI is the primary assembly you'll need when developing Natural User Interfaces applications.

C# tutorials on using the managed OpenNI.net libraries coming soon! Stay tuned in this blog ;-).



Update 2/2/2010: Troubleshooting

If you have followed the above guide and still have trouble viewing the demos, then try out the following:

- Omit step 1.

- Follow steps 2, 3 and 4.
- Download [Kinect Drivers](#), unzip and navigate to Bin folder. Run SensorKinect-Win32-5.0.0.exe.
- Follow steps 5, 6, 7 and 8.
- Done!

Installing multiple drivers

Thanks to my friend [George Karakatsiotis](#) (@[erevodifwntas](#)), you can now have various Kinect drivers installed concurrently. Here's how to achieve this:

- Open Device Manager.
- Right click Kinect Camera under PrimeSensor.
- Select "Update driver software"
- Select "Browse my computer for driver software" and "Let me pick from a list of device drivers on my computer".
- Select the driver of your preference (eg [CLNU!](#)).
- You are done!