**Tutorial – how to use Kinect v1 with Unity**

**Requirements:**

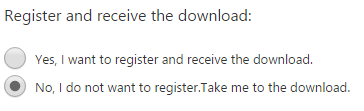
1. Make sure, that you have installed the Unity Kinect Wrapper. (download [here](http://wiki.etc.cmu.edu/unity3d/index.php/Microsoft_Kinect_-_Microsoft_SDK))
2. Use the Kinect for Windows Runtime v1.8. (download [here](http://www.microsoft.com/en-us/download/confirmation.aspx?id=40277))
3. Use also the Kinect for Windows SDK v1.8
   1. download [here](https://www.microsoft.com/en-us/download/details.aspx?id=40278)
   2. Click “continue”
   3. You don’t need to register (figure 1)

figure register for download

**How to use Kinect v1 with Unity**

1. Prepare project
2. Open unity
3. Click “new project”
4. Choose a name and click “create project”
5. Import the Unity Package of wrapper in Unity
   1. Assets > import package > custom package
   2. File 🡪 Kinect1.7UnityPackage.unitypackage
   3. For the beginning, check all checkboxes (figure 2)
   4. Click “import” (figure 2)

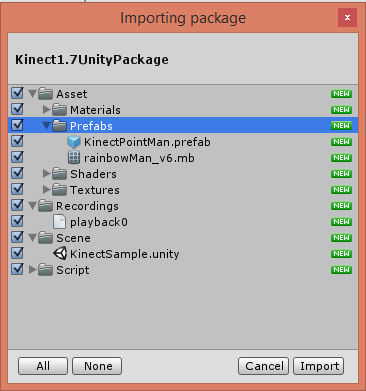
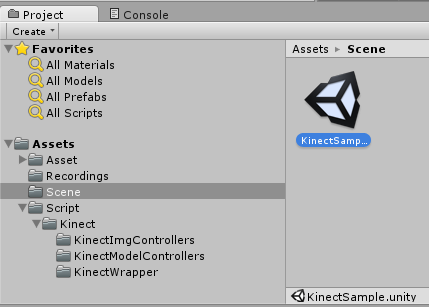
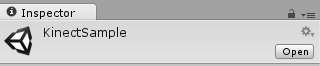


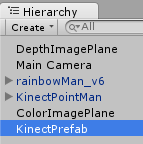
figure import package

1. How to use a real Kinect v1:
2. Run a scene
   1. Select the scene (figure 3) – KinectSample   
      is imported with the wrapper
   2. Open the scene by clicking ‘open’ (figure 4)



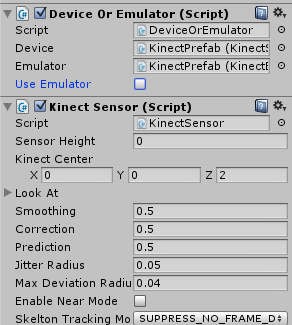
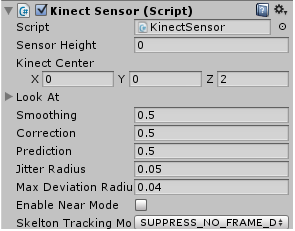
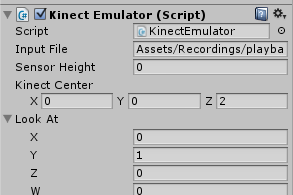
*figure 4 open scene*

*figure 3 select scene*

1. Select KinectPrefab (figure 5)
2. Check if ‘Device or Emulator (Script)’ is checked (figure 6)
3. Check if ‘Use Emulator’ is unchecked in Kinect Preftab (circle at figure 6)
4. Check if Kinect Sensor Script is checked (figure 7)
5. Set the sensor-values (The Sensor Height in figure 7 is the height of the physical Kinect above the ground)

*figure 5 select KinectPrefab*

1. How to use the emulator without a real Kinect
2. Run a scene
   1. Select the scene (figure 3) – KinectSample is imported with the wrapper
   2. Open the scene by clicking ‘open’ (figure 4)
3. Select KinectPrefab (figure 5)
4. Check if ‘use the emulator’ is checked (figure 6)
5. Select a recording-File (if you don’t have a recording file, go to ‘4. How to create a recording’
   1. Fill in the Input File (figure 8) – the default file is ‘Assets/Recordings/playback0’, it’s a sample of the imported wrapper file. The path won’t change – just change the file if there are more than one
   2. Input File … Filepath to the recording

**

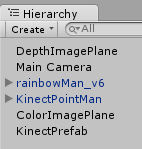
*figure 8 emulator settings*

*figure 7 sensor settings*

figure 6 device/emulator settings

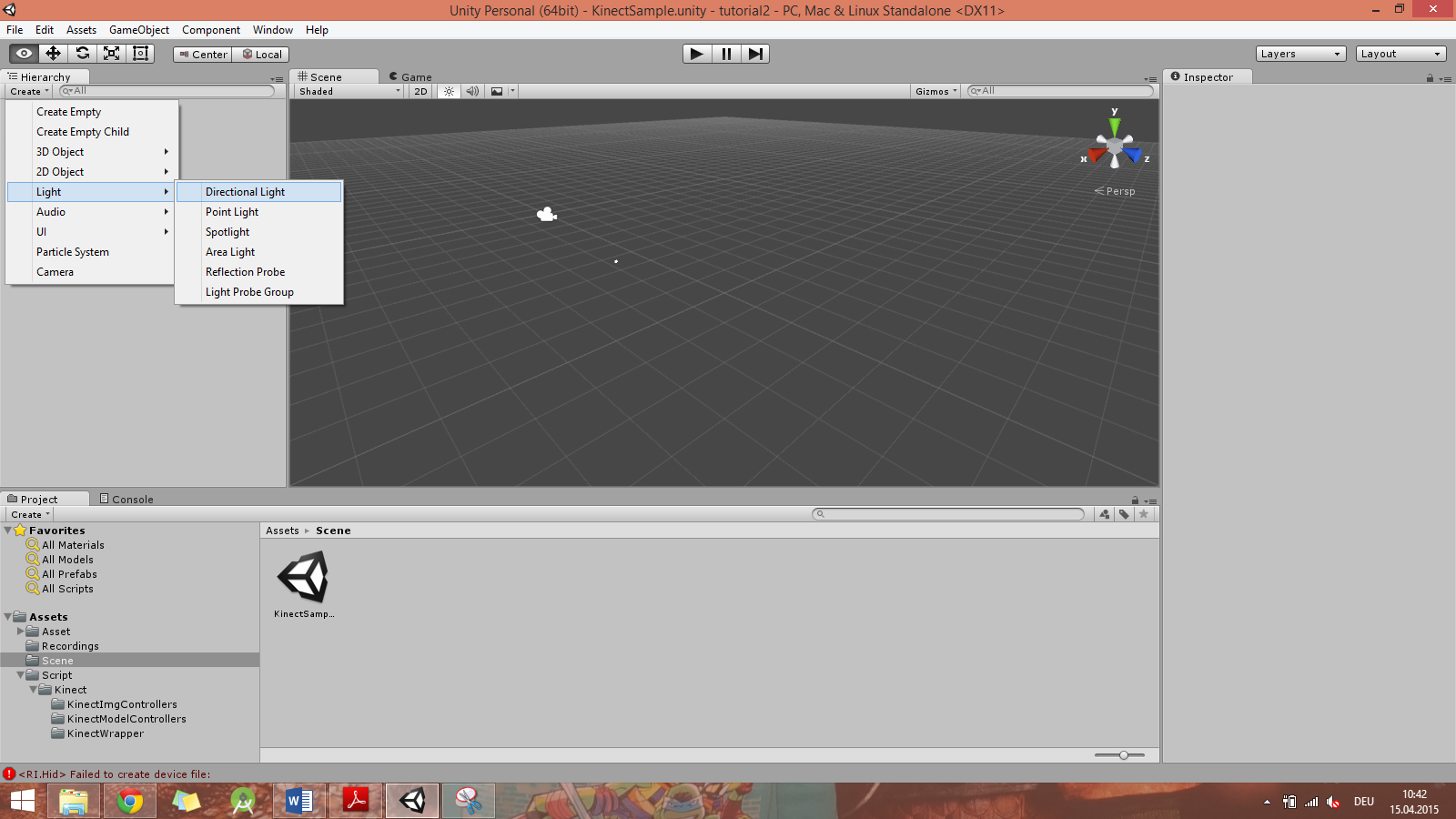
1. How to create a recording (with real Kinect v1 sensor)
2. Select KinectPrefab (figure 5)
3. Activate the recorder script by checking the checkbox ‘Kinect Recorder’ (figure 9)
4. Connect the Kinect with your Computer
5. Your scene should include KinectPreftab, Kinect Point Main, Main Camera, and a Light (figure 10)

*figure 9 recorder settings*

* 1. The sample scene includes more than the required, you can delete the other points
  2. The sample scene did not include a light
     1. Click create > Light > Directional Light (figure 11)

1. Now you should see a skeleton with joints
   * 1. Press F10 to start recording and F10 again to stop it

*figure 10 hierarchy*

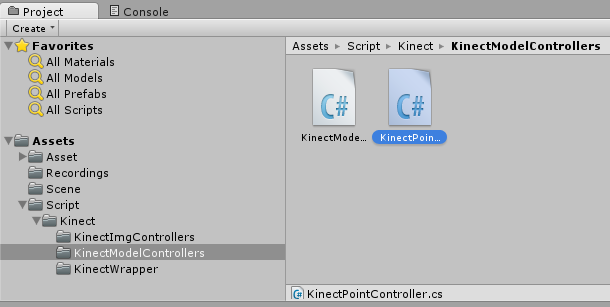
* 1. In the status you now see that a recording file is stored, you can now use this in the emulator (Topic 3)

*figure 11 create light*

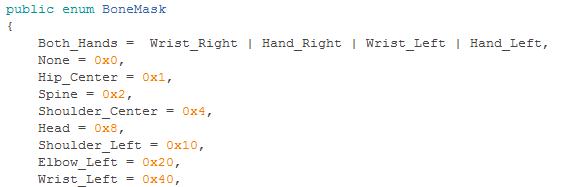
1. Add a specific mask (optional)

If you need a special mask for just showing some defined points, add a mask (for example for both hands)

1. Go to Assets > Script > Kinect > KinectModelControllers
2. open KinectPointController.cs
3. add your mask in ‘public enum BoneMask’
   1. e.g. for both hands: Both\_Hands = Left\_Hand | Right\_Hand | Wrist\_Left | Wrist\_Right

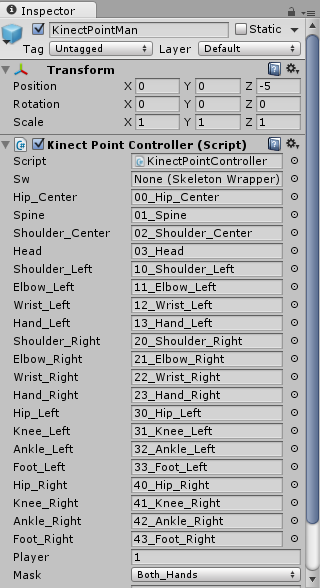
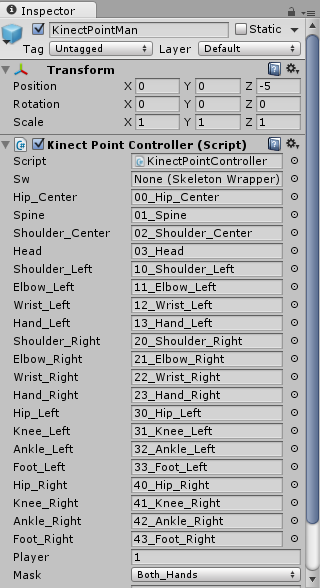


*figure 12 open KinectPointController.cs*



*figure 13 add your mask*

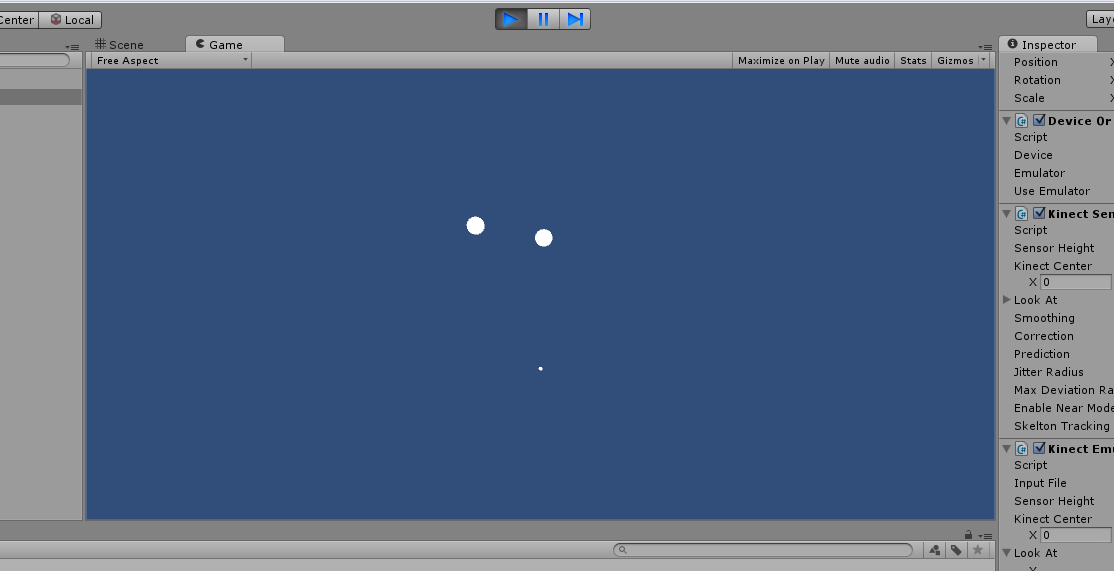
1. Start the recording



1. select a mask
   1. choose your mask (figure 14) – you can also choose ‘all’ or a default value, e.g. Right\_Hand
2. Press play (red circle in figure 15)
3. Now you should see just the selected Points, in this case booth hands (the big white points in figure 15)

**…**

**…**



*figure 15 result*

*figure 14 add a mask*

**Caveats and Stuff**

* Sometimes there are problems with the real Kinect. This will result in a the following failure:
  + NuiInitialize Failed. UnityEngine.Debug:Log(Object)KinectSensor:Awake() (at Assets/Script/Kinect/KinectWrapper/KinectSensor.cs:147)
  + (Also show in the status bar: NuiInitialize failed, Left bottom corner of unity)
  + If this occurs just reopen unity. Most of the times we get this error when a other app is connecting with the Kinect.
* If the playback of the recording didn’t work – check the input file path of the emulator script