

Installing WiiLAB Library

The installation of WiiLAB consists of registering the assembly as a COM interop on your computer. This is to allow Matlab gain access to and use the library. There are two ways to register WiiLAB. The first is by compiling the source in Visual Studio. The second is simply running the batch file I have provided (or entering the commands in command prompt yourself).

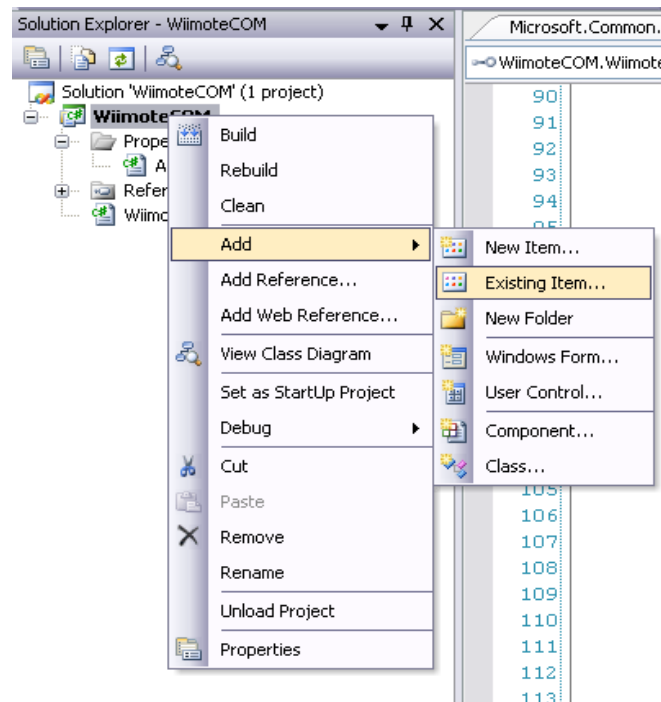
Method 1: Install the libraries from Visual Studio

1. Download the WiiLAB folders from the SVN repository.
2. Each folder contains the source code along with the required Visual Studio 2005 solution files.
 - a) If you have an older version then you may need to create a new project and add all the .cs files as existing items.
 - b) If you have Visual Studio 2005 or newer then you can simply open the solution file.
3. If you did not have to make a new project then steps 4 and 5 have already been done. (Although it is a good idea to go through the steps to make sure that they were.)
4. Assign a strong name to the assembly.
 - a) In the WiiLAB folder navigate to “WiiLAB/references/SN_key”. There is a batch file called create_WiiLAB_snKey.bat
 1. This is a batch file that creates the strong name file “WiiLAB_snKey.snk”
 2. The command the batch file is running is below. It is assuming the default install options for Visual Studio 2005 for the directory path of SDK.

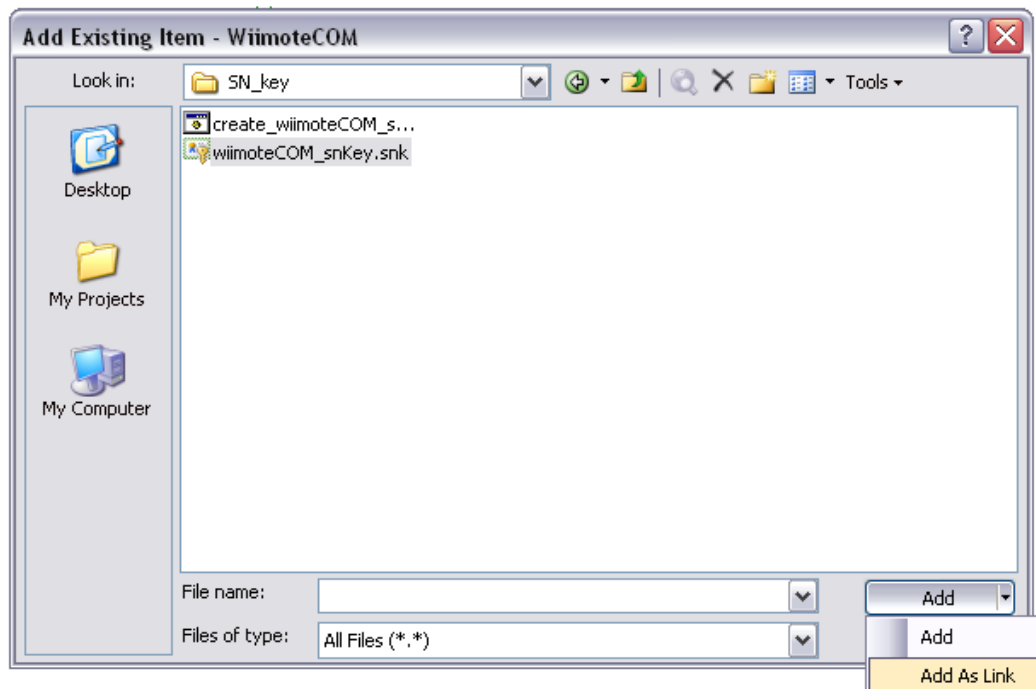
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C:\\"Program Files\"\\\"Microsoft Visual Studio 8\"\\SDK\\v2.0\\Bin\\sn -k  
WiiLAB_snKey.snk
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- b) Run this batch file. It should create the WiiLAB_snKey.snk file.
 - c) Open the WiiLAB Project.

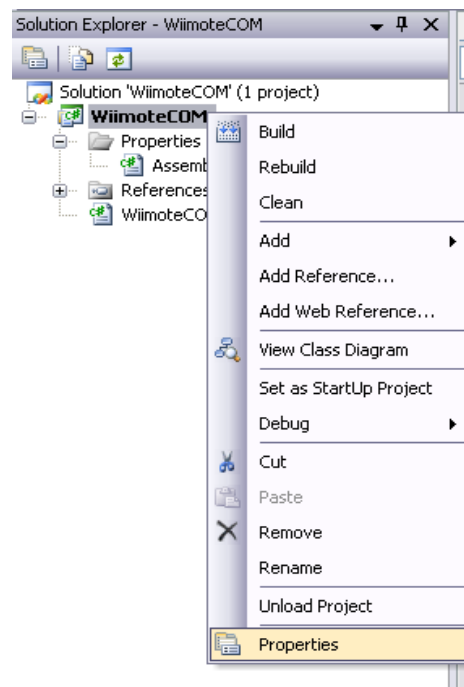
- d) Right click the WiiLAB project file.
1. Choose “Add > Existing Item”



2. Set the “Files of type:” drop down to “All Files”
3. Navigate to the WiiLAB_snKey.snk file and select it.
4. Click the arrow on the right side of the “Add” button and select “Add as Link”



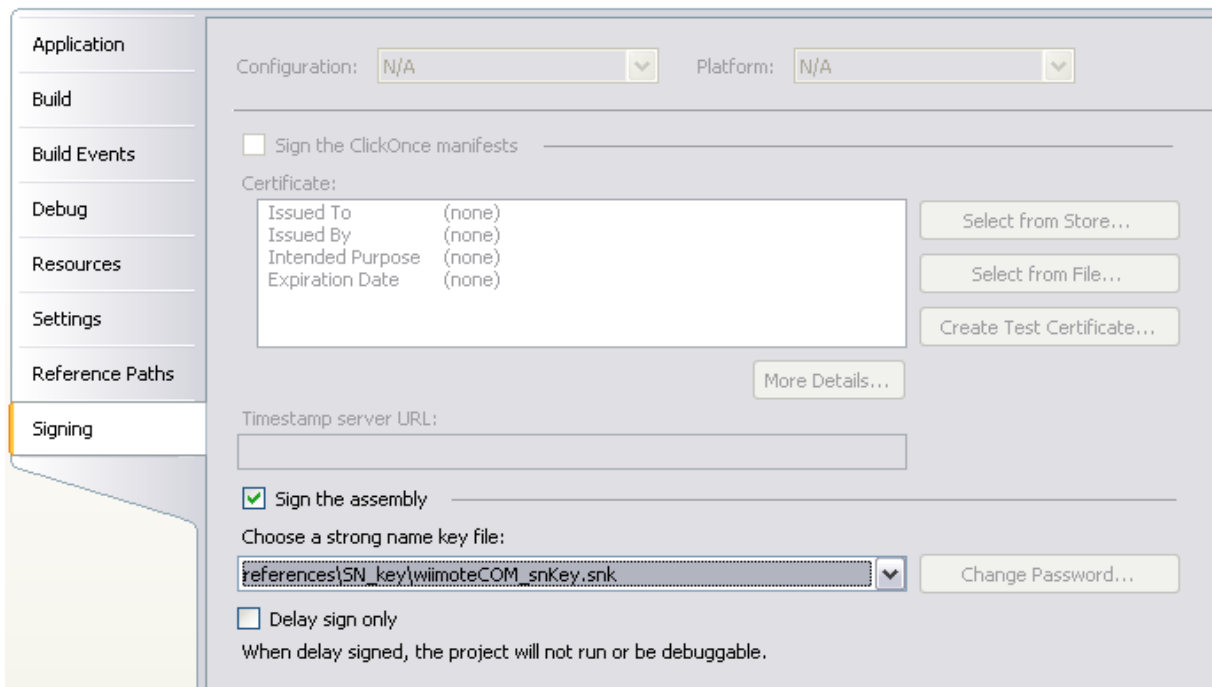
e) Right Click on the WiiLAB project file. Choose “Properties”



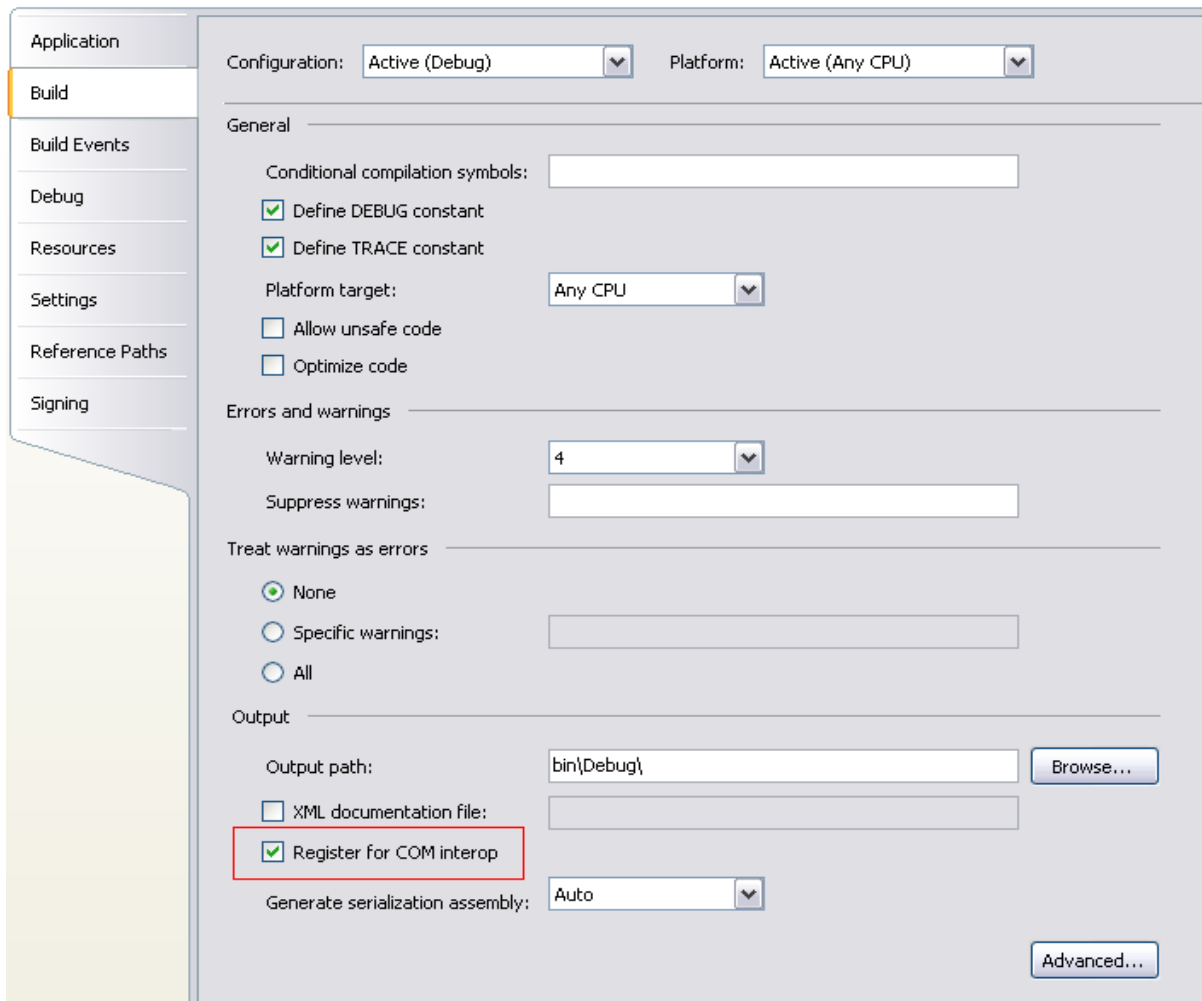
f) Select the “Signing” tab.

g) Check the “Sign the Assembly” option.

1. This will enable the drop down menu immediately below it.
2. From the drop down menu select “<browse>” and navigate to the WiiLAB_snKey.snk file.

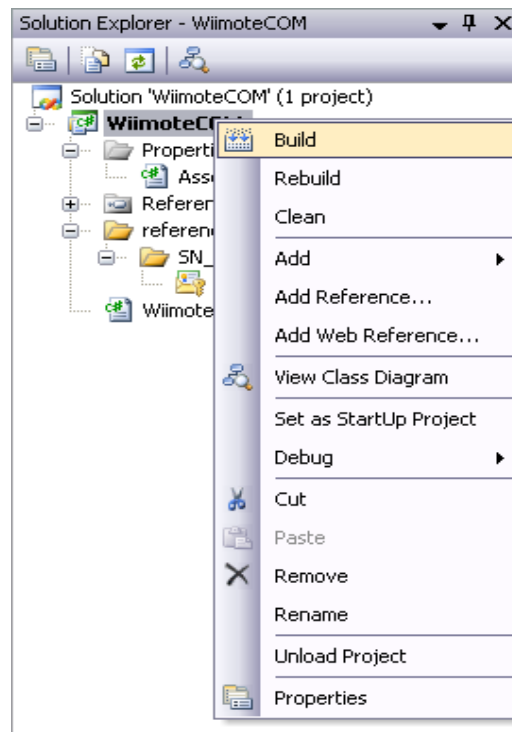


5. Set the assembly as COM visible.
 - a) Open the WiiLAB Project.
 - b) Under the “Properties” folder there is a file called AssemblyInfo.cs. Open that file.
 1. Find the line that reads “[assembly: ComVisible(false)]” and change “false” to “true”.
 2. Save the file.
 - c) Set the Register as COM interop option.
 1. Open the WiiLAB Project.
 2. Right Click on the WiiLAB project file. Choose “Properties”.
 3. Select the “Build” tab.
 4. Check the “Register for COM interop” option.



5. Save the file.

6. Compile the project.
 - a) Right click the WiiLAB project and select “Build”



7. WiiLAB is not installed and ready for use.

Method 2: Install the libraries from Command Prompt

1. There are two provided methods for completing this.
 - a) The first is to install the entire WiiLAB package onto your computer (WiiLAB COM, Wiimote Class, Matlab Functions, Demo Apps, etc)
 - b) The second is to only register the WiiLAB COM on your computer. This only requires the WiiLAB.dll and WiimoteLib.dll files
2. To install the entire package.
 - a) Download the WiiLAB.zip compressed file from the SVN repository or the wiki.
 - b) Unzip the files.
 1. Open the WiiLAB folder. There will be a batch file named InstallWiiLAB.bat
 2. Running this file will complete all the necessary tasks in order to use WiiLAB on your computer.
 - c) This will install all the necessary files into your “Program Files” directory in folder named WiiLAB
 1. It will create three sub folders
 - i. WiimoteLib
 - This folder will contain the WiimoteLib.dll and WiiLAB.dll files along with a WiiLAB.tlb file that is created when the library is registered. You do not have to touch these files after the initial installation
 - ii. WiiLAB_Matlab
 1. WiimoteFunctions
 - This folder will contain the Matlab class for the Wiimote and global function set. There will also be a number of utility functions for graphing and a few demos included here.
 2. DemoPrograms
 - This folder will contain the main Matlab files of the Demos we have created. Including Pong, Bouncing Ball, Spinning Disk, etc.
 3. EG111-H
 - This folder will contain the standard set of Matlab functions provided to every Computer Science student at the University of Notre Dame.
 - The functions are used for drawing basic graphics and text in Matlab and are used in our Demo programs.
 - iii. WiiLABTest
 1. This folder will contain the WiiLABTest executable. WiiLABTest is a simple C# program that allows the user to test the Wiimote’s connection to the computer and Matlab’s ability to communicate with the WiimoteLib with just a mouse click.

3. To install only the WiimoteLib and WiiLAB

- a) Download the WiiLAB_COMonly.zip compressed file from the SVN repository or the wiki.
- b) Unzip the folder into the directory where you want to keep the files
 - 1. The directory you choose will make no difference in how you access or use WiiLAB so it is entirely up to you so long as all the files reside in the same folder.
- c) There is a batch file contained in the folder called RegisterWiiLAB.bat
 - 1. Run this batch file.
 - 2. This will register the WiiLAB assembly and create a WiiLAB.tlb file in your directory.
- d) WiiLAB is now installed and ready for use.