Goblin XNA Installation Guide v3.3

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Note: If you have any difficulty with these installation steps, please contact the developer, Ohan Oda (ohan@cs.columbia.edu)

Step 1: Download and install either (a) Microsoft Visual Studio 2008 Professional Edition [preferred] or (b) Microsoft Visual C# & C++ 2008 Express Edition. Do either step a or step b.
(a) Download Microsoft Visual Studio 2008 Professional Edition. Once you have installed it, *please be sure to get Service Pack 1 from the Microsoft webpage*.
OR
(b) Alternatively, if you do not have access to Visual Studio 2008 Professional Edition, you can use Microsoft Visual C# 2008 Express Edition, which is free. Download Microsoft Visual Studio 2008 C# Express Edition at no charge from http://www.microsoft.com/eXPress/download/#webInstall and install it. You will have to register the product in order to use it for more than 30 days. (Registration is free, but you will need a free Microsoft .NET Passport account to register the product.) If you use ALVAR, then you will also need Microsoft Visual C++ 2008 Express Edition to compile the sample projects provided in the ALVAR distribution package and the wrapper we provide.

Step 2: Download and Install XNA Game Studio 3.1.
Download XNA Game Studio 3.1 from http://www.microsoft.com/downloads/details.aspx?FamilyID=80782277-d584-42d2-8024-893fcd9d3e82&displaylang=en and install it.

Step 3: Download all necessary packages needed to compile Goblin XNA. (These are not included with Goblin XNA because the package owners require that they be downloaded from their sites.)

- Download "Newton Dynamics SDK 1.53" for Win32 from http://www.newtondynamics.com/downloads.html . After unzipping the file, run "setup.exe" to install the SDK. Once it has been installed, copy Newton.dll from *NewtonSDK/sdk/dll* (the directory where you installed the Newton SDK) to the *GoblinXNA/bin* directory.
- Download the Lidgren-network library from http://code.google.com/p/lidgren-network/ . Unzip it, then compile the Lidgren.Network project and copy the Lidgren.Network.dll from the *lidgren-network/Lidgren.Network/bin/Release* directory to the *GoblinXNA/bin* directory. (Make sure to build the project in the "Release" configuration instead of the default "Debug" configuration.)
- Download the DirectShow.NET package from http://www.codeproject.com/cs/media/DirXVidStrm.asp?df=100&forumid=73014&

exp=0&select=1780522. (You will need to log in to the codeproject website to get this package. The registration is free if you do not have an account with codeproject yet.) Unzip it and open CaptureTest.sln with Visual Studio 2008. Build the projects with "Release" mode (instead of the default "Debug" mode). The DirectShow.NET project has a reference issue, which you should fix by following these steps:

1. Right-click on the "DShowNET" project in the solution explorer and select "Build". Make sure the "Build succeeded" message appears on the status bar.
2. Expand the "Reference" section under the "DirectX.Capture" project. You will see "DShowNET" with an exclamation mark, which indicates the reference can not be found.
3. Right-click on this "DShowNET" reference and select "Remove" to remove it.
4. Right-click on the "Reference" section and select "Add reference…". You will see a pop-up window. The default selected tab should be the "Browse" tab, but if it is not selected, select the "Browse" tab in the pop-up window.
5. Locate the DShowNET.dll file under the *DShowNET/bin/Release* directory.
6. Select the DShowNET.dll and press the "OK" button. Now you should see the "DShowNET" reference added back under the "Reference" section.
7. Finally, right-click on the "DirectX.Capture" project and select "Build". Make sure that the "Build succeeded" message appears on the status bar.

Now, copy DirectX.Capture.dll and DShowNET.dll from the DirectX.Capture/bin/Release directory to the *GoblinXNA/bin* directory.

- Download TaoFramework (version 2.1.0) from http://www.taoframework.com/Home. Unzip it and copy Tao.OpenGL.dll and Tao.FreeGlut.dll from */bin*, and freeglut.dll from */lib* to the *GoblinXNA/bin* directory.
- Download one of the two tracking libraries supported by Goblin XNA: (a) ALVAR [preferred] or (b) ARTag. Do either step a or step b:

(a) Obtain the ALVAR tracking library (basic version) from the VTT website: http://virtual.vtt.fi/virtual/proj2/multimedia/alvar.html. This library is free for trial and non-commercial use. (A professional version of the library, with additional features, is available for commercial use.) First, install ALVAR, as well as OpenCV 1.0, which is required for running ALVAR. Then, open ALVARWrapper.sln under *GoblinXNA/wrappers/ALVARWrapper* directory. Compile this project and copy the generated ALVARWrapper.dll from the *GoblinXNA/wrappers/ALVARWrapper/Release* directory to the *GoblinXNA/bin* directory. When you compile, make sure that the "Additional Include Directories" under Configurations Properties → C/C++ → General and the "Additional Library Directories" under Configurations Properties → Linker → General in the project settings have the correct path for the ALVAR and OpenCV installations.

OR

(b) Download the ARTag marker-based tracking library from http://www.artag.net/sdk_download/artag_sdk_download.php if you intend to use ARTag for marker tracking. (You will need to purchase a copy of Mark

Fiala's book to get the library.) Unzip it and, then unzip the CSharp_ARTagWrapper.zip in */lib*. Copy the ARTagWrapper.dll to the *GoblinXNA/bin/* directory.

Now, you are ready to compile the Goblin XNA library. Open the GoblinXNA.sln file under *src* and build the solution. If you have all of the necessary files, it should build successfully, and the GoblinXNA.dll will be generated under the *GoblinXNA/bin* directory.