

Goblin XNA v3.4 Installation Guide

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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 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 1.3.0. Then, open ALVARWrapper1.3.sln under the *GoblinXNA/wrappers/ALVARWrapper1.3* directory (You will need either Visual Studio 2008 Professional Edition or Visual C++ 2008 Express Edition to open this solution file as well as ALVAR project files). Compile this project and copy the generated **ALVARWrapper.dll** from the *GoblinXNA/wrappers/ALVARWrapper1.3/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 1.3.0 and OpenCV 1.0 installations. Finally, copy the **alvar130.dll** and **alvarplatform130.dll** from *Alvar1.3.0/bin/msvc90* directory to *GoblinXNA/bin* directory, and **cv100.dll**, **cvaux100.dll**, **cvcam100.dll**, **cxcore100.dll**, and **highgui100.dll** from *OpenCV/bin* directory to *GoblinXNA/bin* directory.

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. 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.

Now, you are ready to compile the Goblin XNA library. Open the *GoblinXNA.sln* file under *src* and build the solution. If you downloaded ARTag instead of ALVAR, then before you build the solution, add the following files in your solution explorer:

1. *Tao.FreeGlut.dll* and *Tao.OpenGL.dll* under *Reference*
2. *ARTagTracker.cs* and *ARTagDllBridge.cs* under *Device/Vision/Marker* folder

If you have all of the necessary files, it should build successfully, and the *GoblinXNA.dll* will be generated under the *GoblinXNA/bin* directory.