

How to Compile the Particle Universe Plugin for Mogre

With the MParticleUniverse C# Wrapper

<http://sourceforge.net/projects/mpu/>

By: Tyler Grusendorf

Here are the step by step instructions on how to compile the Particle Universe Plugin for Mogre. This assumes you have knowledge of installing programs and some Microsoft IDE Experience. I glaze over the install of Visual C++, Mogre, and Ogre. They are pretty easy and already have large communities if you need help with them.

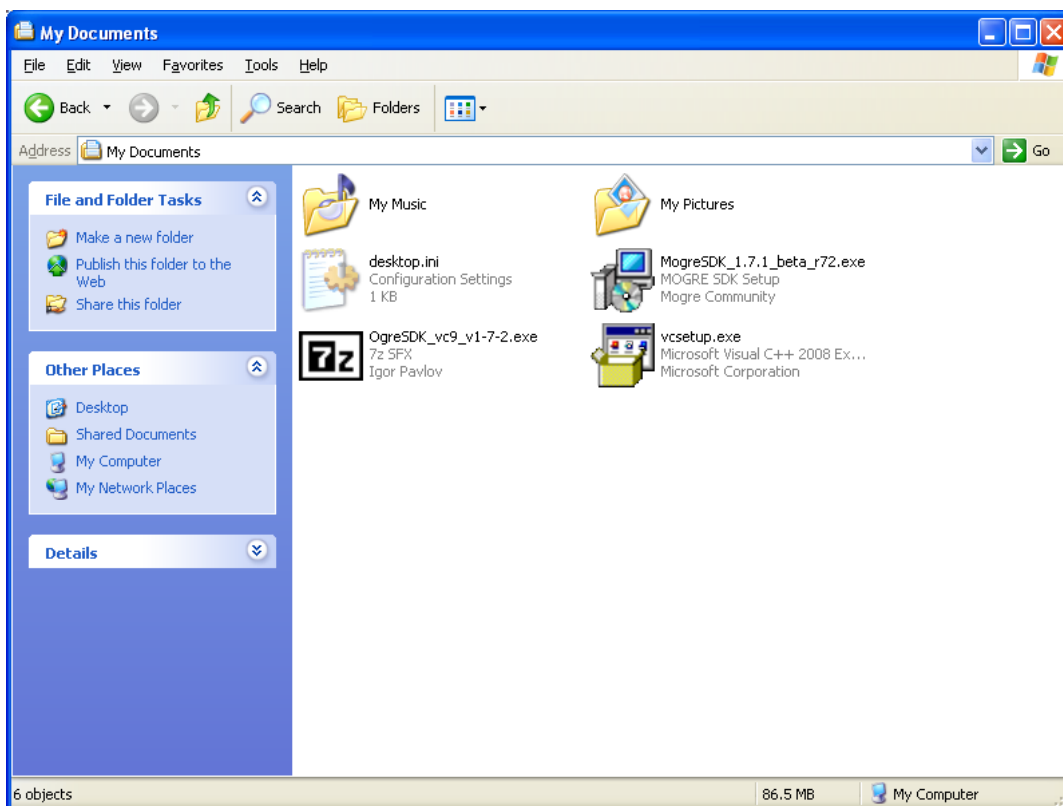
1. Download:
 - a. MS Visual C++ 2008 (Make Sure to Use 2008 as 2010 doesn't work!)
 - b. Mogre SDK (1.7.1 r72 is what I'm using)
 - c. And the Ogre SDK (vc9 v1.7.2)
 - d. You may also need DirectX 9, Visual Studio 2008 Runtimes and the .Net Framework. But the Mogre SDK Installer will let you know and links to the appropriate downloads.

If you already have any of these installed you don't need to do it again. This may work with other versions of Mogre and Ogre but I haven't tried them.

<http://www.microsoft.com/visualstudio/en-us/products/2008-editions/express>

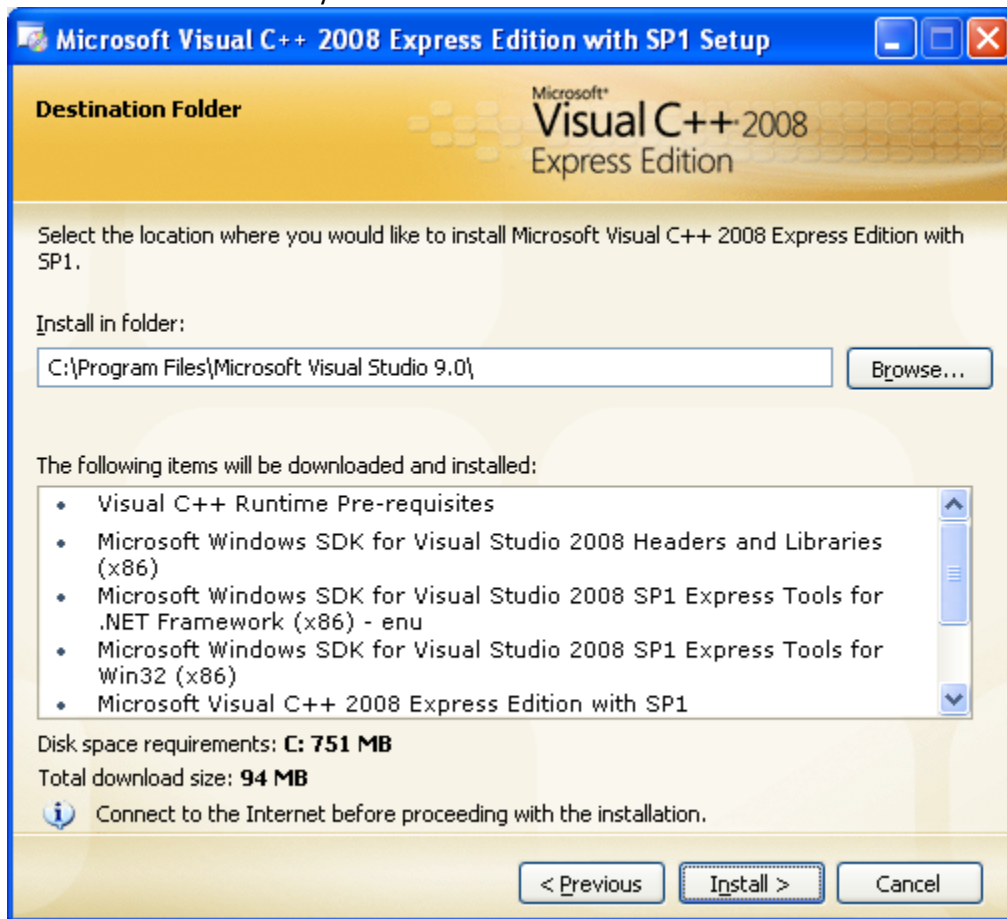
<http://www.ogre3d.org/tikiwiki/MOGRE>

<http://www.ogre3d.org/download/sdk>

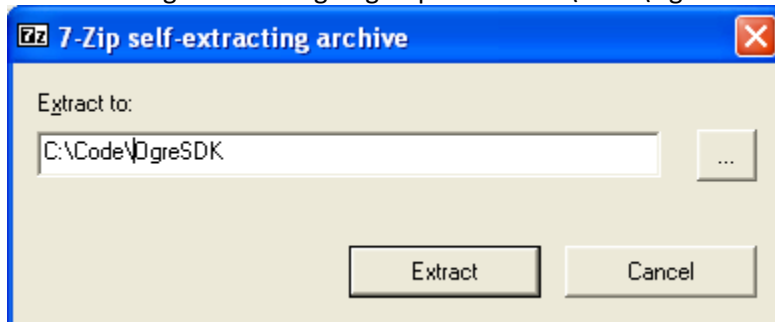


2. Get the Particle Universe Plugin from <http://www.fxpression.com>. I'm using version 1.4.

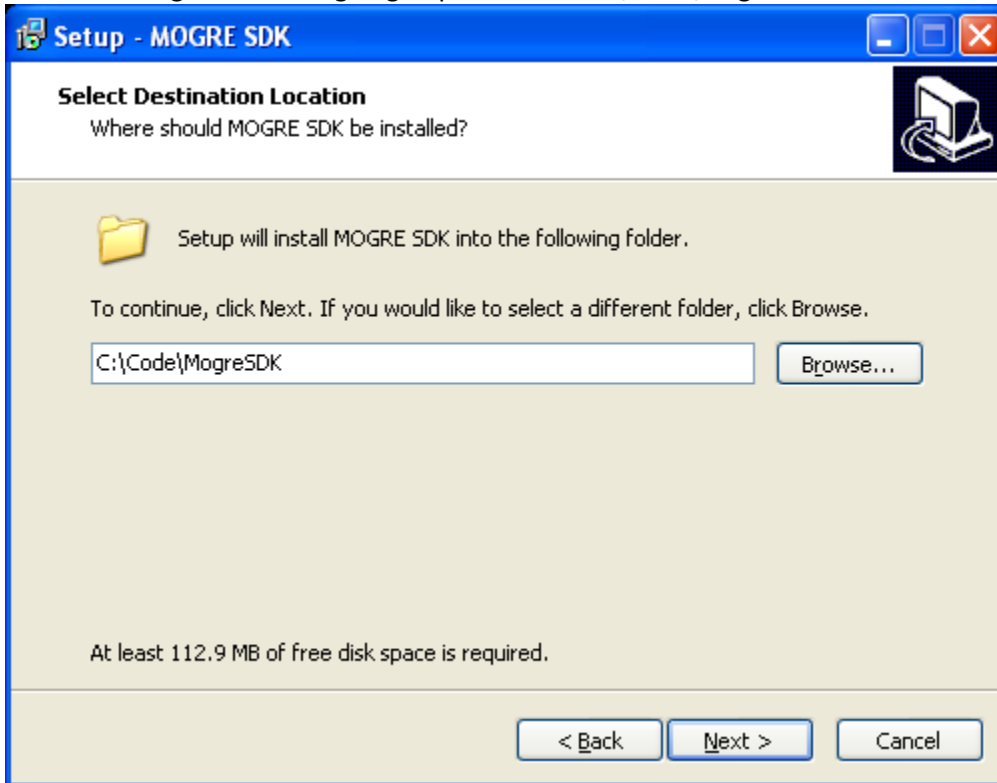
3. Install VC++ 2008. I am using the Basic install with no SQL and the default path for this but you can customize it however you want.



4. Extract the Ogre SDK. I'm going to put it into C:\Code\OgreSDK to make things easier.



5. Install the Mogre SDK. I am going to put this into C:\Code\MogreSDK as well.

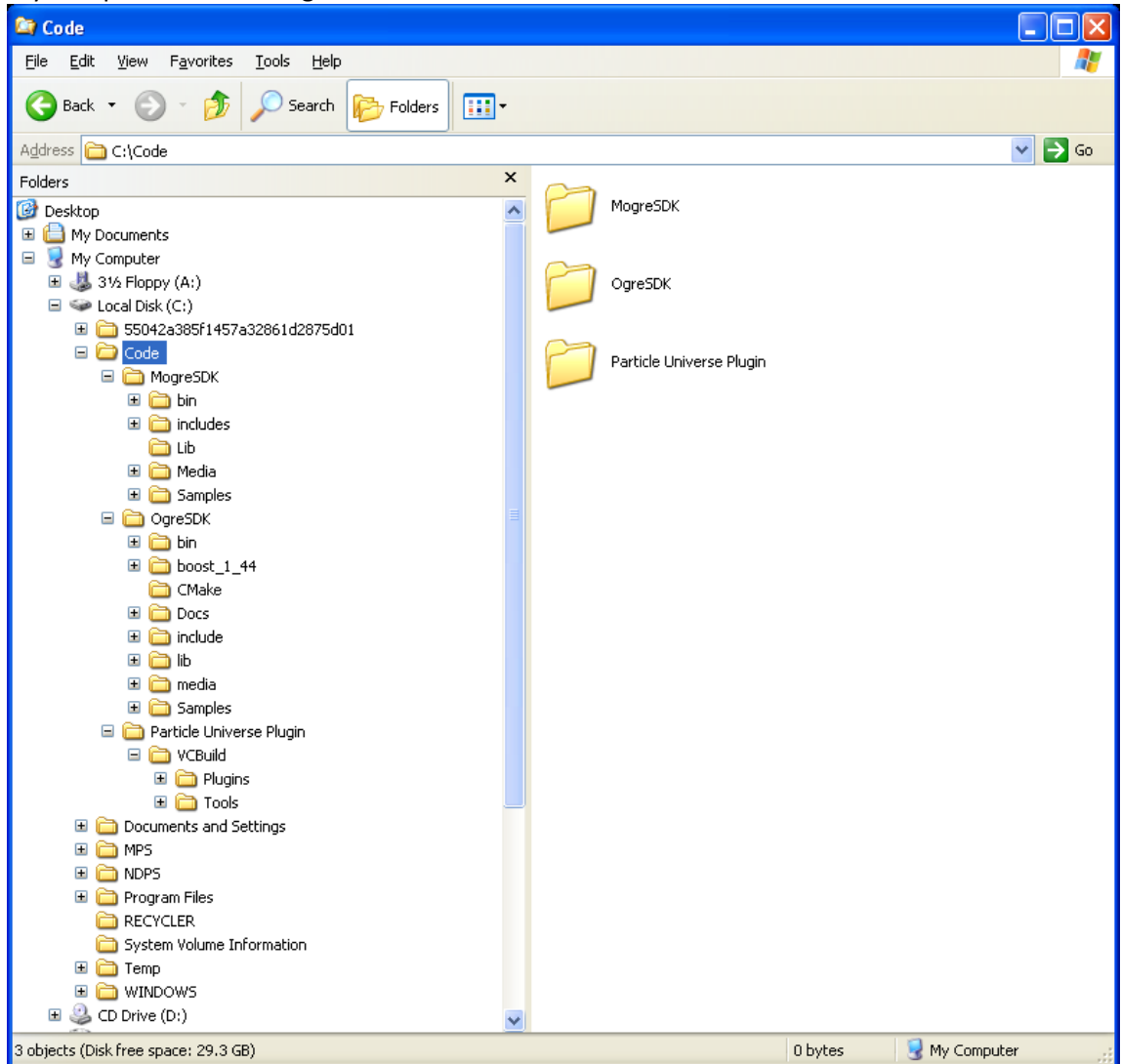


This may require some additional dependencies like DirectX 9 and the Visual C++ 2008 Runtimes. If you need them install them. (Make sure to read the installers I know DirectX tries to install the Bing Bar if you aren't paying attention.)

You should be able to run the Mogre Example Program before moving on.

6. Install the Particle Universe Plugin.
7. Copy the Folder "Particle Universe Plugin" From the Particle Universe Install, by default, "C:\Program Files\Particle Universe\" to somewhere else. I'm putting it at "C:\Code\Particle Universe Plugin". This solves two issues. 1. You have an original just in case you need it. And two in Windows 7 it will complain about elevated rights if you try to edit it from within Program Files.

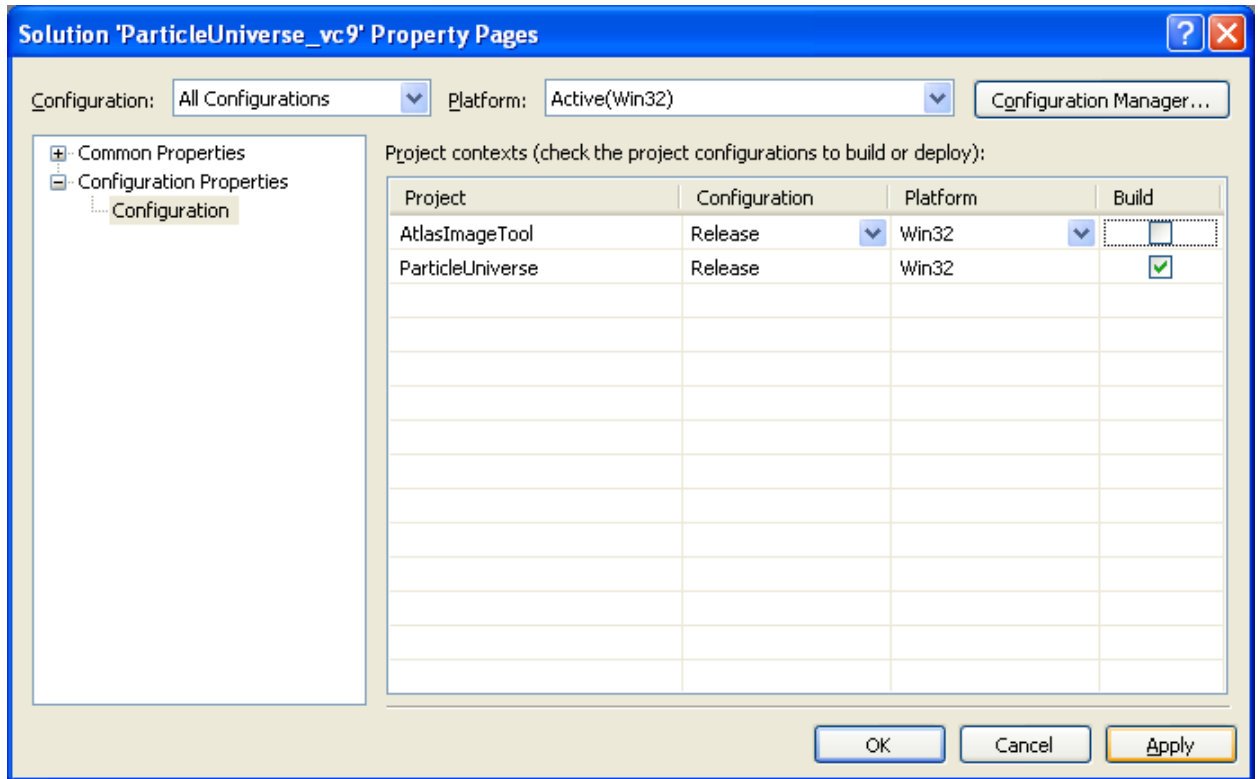
8. My Setup looks something like this:



9. From Visual Studio C++ 2008 open the "ParticleUniverse_vc9.sln" found in VCBuild.

10. Right Click on the solution and go to properties.

11. Under configuration properties un-check Build on the AtlasImageTool Line. (We don't need it).
Click OK.



12. Right Click on the ParticleUniverse Project and select Properties.

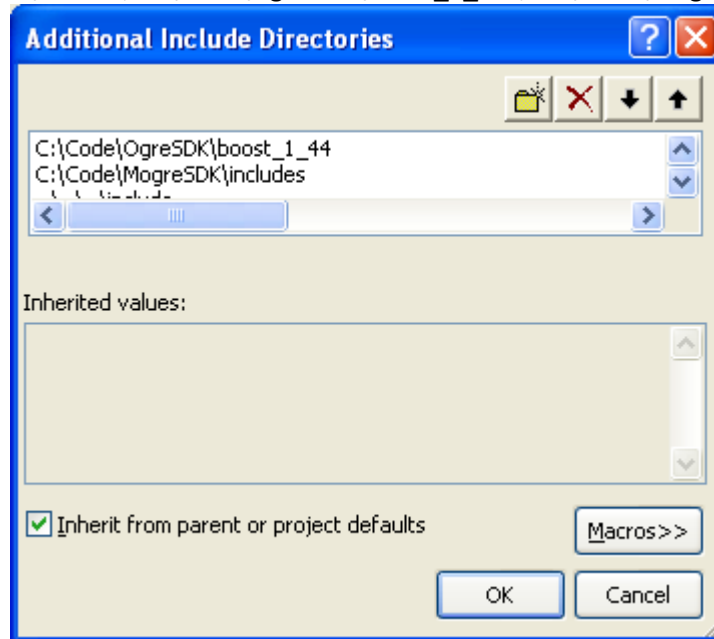
13. Under Configuration Properties:

- a. C/C++ --> Additional Include Directories --> Change this to point to the Mogre SDK and Ogre Boost. Get rid of the reference to OgreSDK (..\..\..\OgreMain\include)

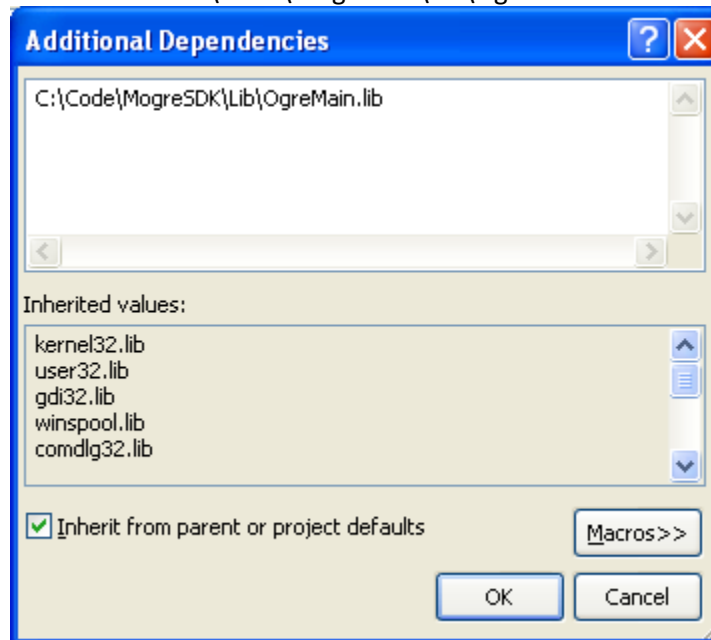
The Boost version might be different that's ok.

Mine looks like this:

..\include;"C:\Code\OgreSDK\boost_1_44";"D:\Code\MogreSDK\includes";..\..\include



- b. Linker --> Additional Dependencies --> Add The OgreMain.lib file from your Mogre SDK
Mine has this: C:\Code\MogreSDK\Lib\OgreMain.lib

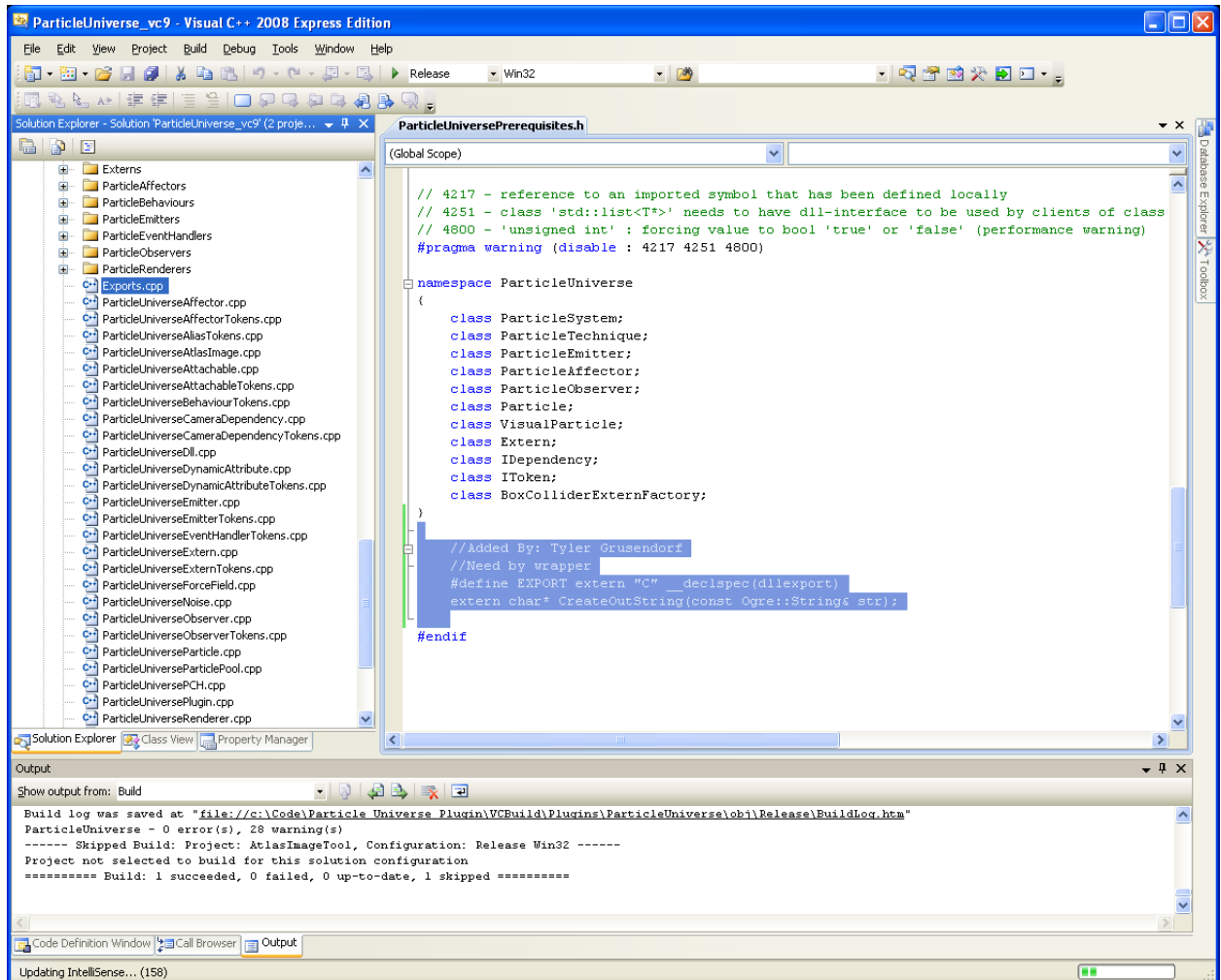


14. At this point you should be able to compile the Particle Universe DLL. Be sure to compile using Active 32Bit Configuration as we have set this up in the properties (see pics above)!

15. You should get a Build: 1 Succeeded and 1 skipped!

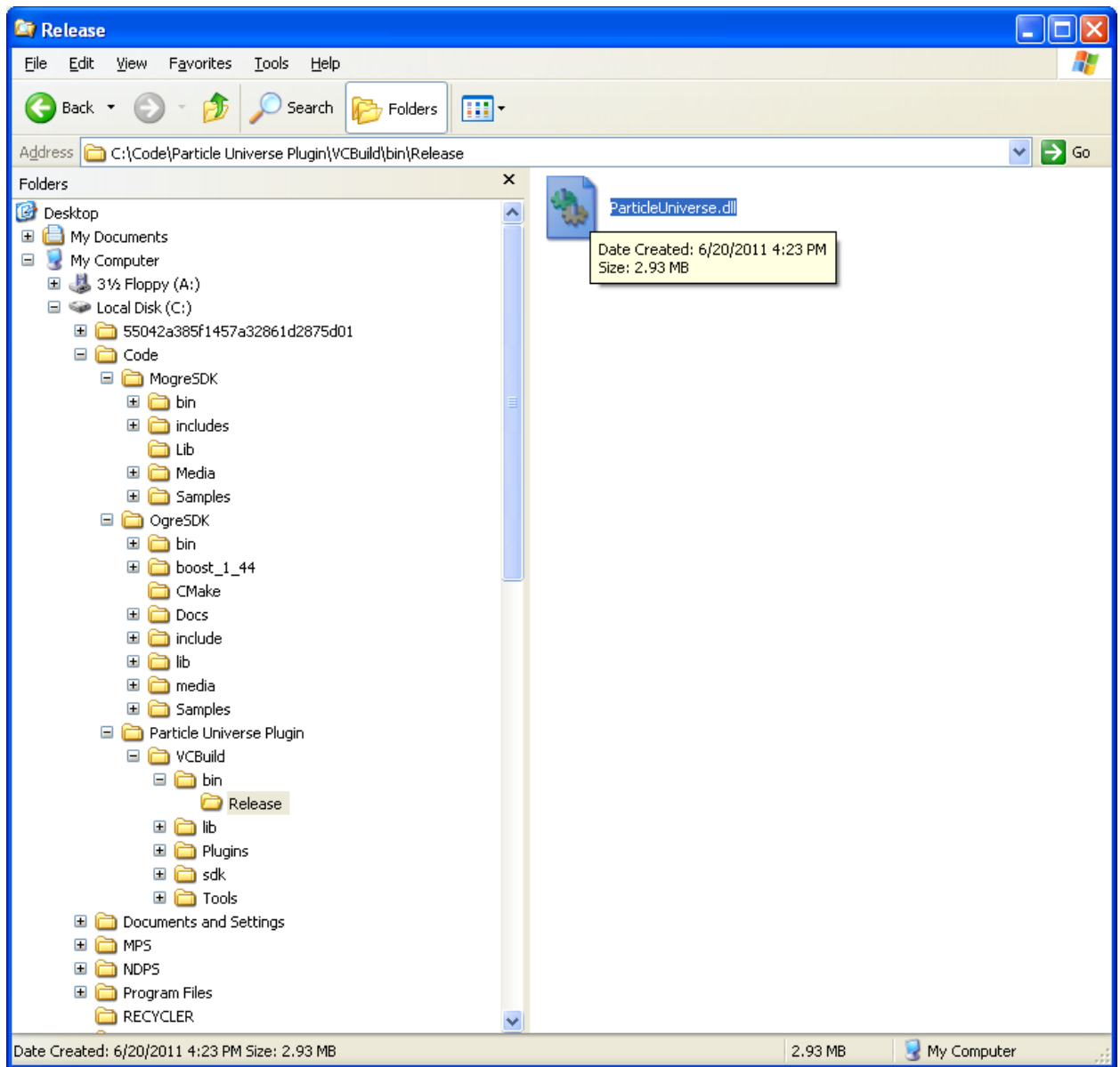
16. Add the Exports.cpp file to the project. (the one you downloaded from my project)
Add the following code to ParticleUniversePrerequisites.h right before the last #endif statement (S/B the last line in the file):

```
//Added By: Tyler Grusendorf  
//Need by wrapper  
#define EXPORT extern "C" __declspec(dllexport)  
extern char* CreateOutString(const Ogre::String& str);
```



17. And Compile!
18. You should find the newly Mogrefied DLL in C:\Code\Particle Universe Plugin\VCBuild\bin\Release\ (or wherever you are working from).

19. Add to your project with the MParticleUniverse.dll (This is the C# part) and add enjoy!



By,
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June – 20 – 2011