

TUTORIAL



Installation and Configuration of Coin3D with Microsoft Visual Studio 2010

Written by :

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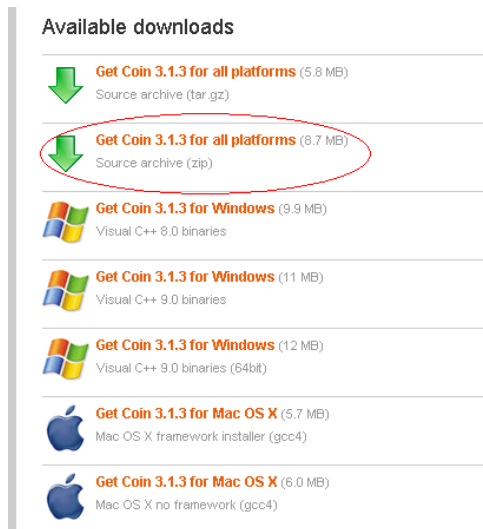


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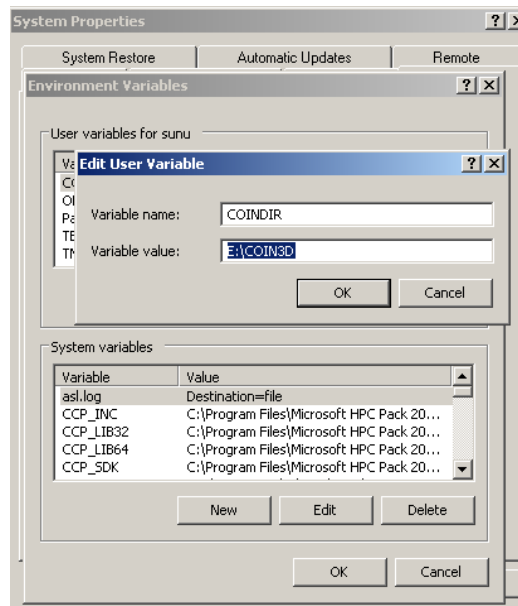


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1. First, download Coin3D for Microsoft Windows. In this tutorial, Windows XP Service Pack 2 is used. Coin3D 3.1.3 is used for writing purpose. To download Coin3D library, proceed to link below: <http://www.coin3d.org/lib/coin/releases/3.1.3> .



2. Extract the source file. Next, create a folder to locate a build result of Coin3D source code. The folder must not contain space character. In my case, I created "COIN3D" folder. A path E:\COIN3D should be working.
3. Next, we must configure a variable path in Windows XP. To do so, open My Computer → Properties → Advanced → Environment Variables. See picture below. Restart your computer.



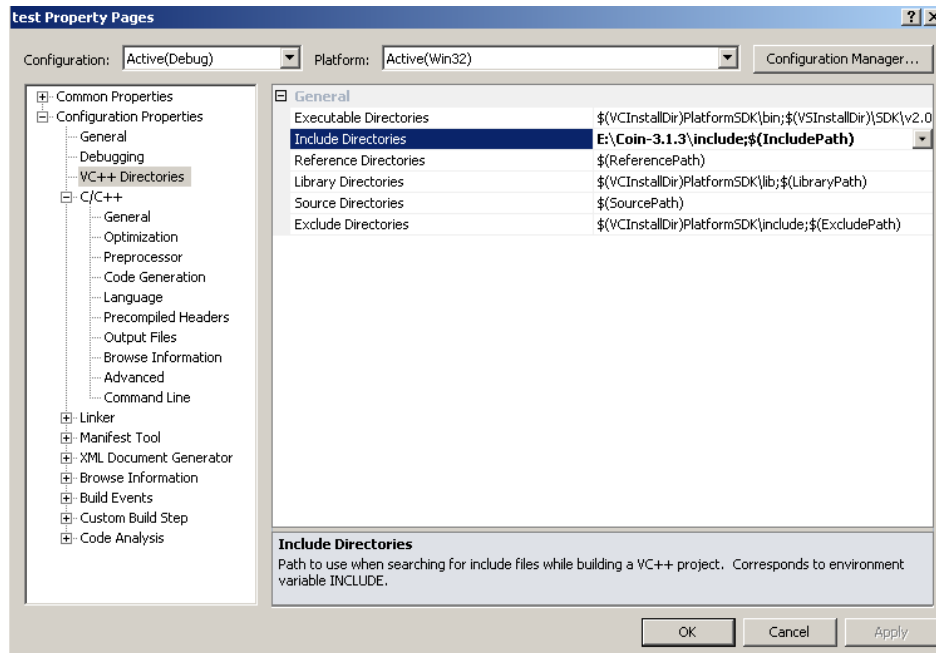
- Next, open a file named `ScXMLStateMachine.cpp` inside your source file. In my case, I found it inside `E:\Coin-3.1.3\src\scxml`. Find a line :

```
transitions.push_back(PImpl::StateTransition(NULL, PRIVATE  
(this)->initializer.get()));
```

Change to :

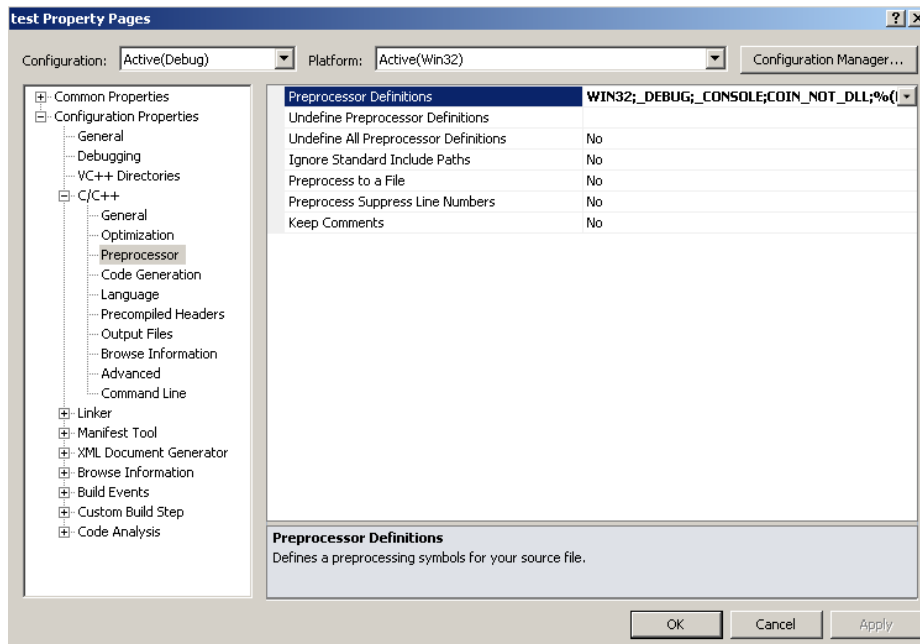
```
transitions.push_back(PImpl::StateTransition((ScXMLObject*)NULL,  
PRIVATE(this)->initializer.get()));
```

- Open file `Coin3.sln` inside `E:\Coin-3.1.3\build\msvc9`. Open it with your Visual Studio 2010 and convert the solution to VS2010 solution. Then build it. To check your build result, open your `COIN3D` folder. In my case, inside my `COIN3D` folder, I found four folders:
 - bin* folder : contains `coin3d.dll`
 - data* folder: contains some `.iv`, `xml`, and other data files
 - include* folder : contains some headers files
 - lib* folder: contains `coin3d.lib`.
- Open your source file and open `E:\Coin-3.1.3\build\msvc9\include\Inventor`. You will find two folders : `C` and `system`. Copy all `*.cpp` and `*.h` files from both folders to its corresponding folder in `E:\Coin-3.1.3\include\Inventor`
- Download a sample file and data from :
<http://te.ugm.ac.id/~wibirama/tutorial/coin3d/test.7z>
This project has been tested and includes all needed file. However, you should re-configure the properties in order to be useful for testing your installation
- To create a new project, you should do several configurations:
 - Copy `coin3d.lib` file to the same folder as your `*.vcxproj` file. In my case, I put this file into a folder containing all `*.cpp` and `*.h` files
 - Copy `coin3d.dll` file to the same folder as your executable file (`*.exe` file). In my case, I created a "Debug" folder and put this file inside it.
 - Configure include path of your project properties :
open Project → Properties → VC++ Directories → Include Directories
Add : `E:\Coin-3.1.3\include` (path to include folder inside the source folder)
See picture below:

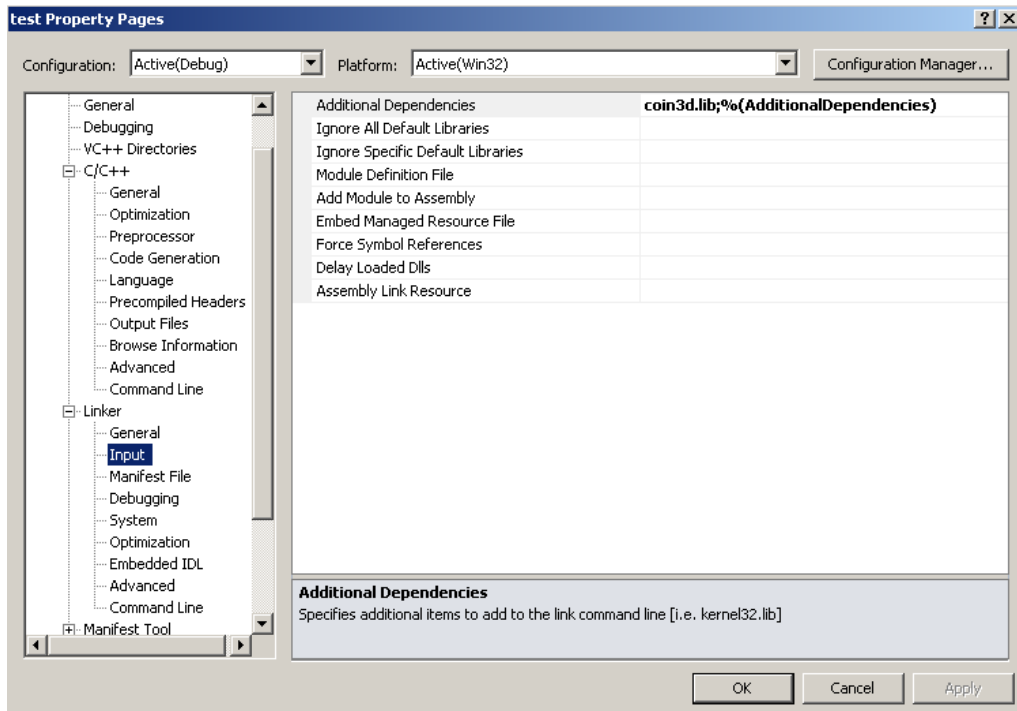


- d. On the same property window, open C/C++ → Preprocessor → Preprocessor Definitions → Preprocessor Definitions.

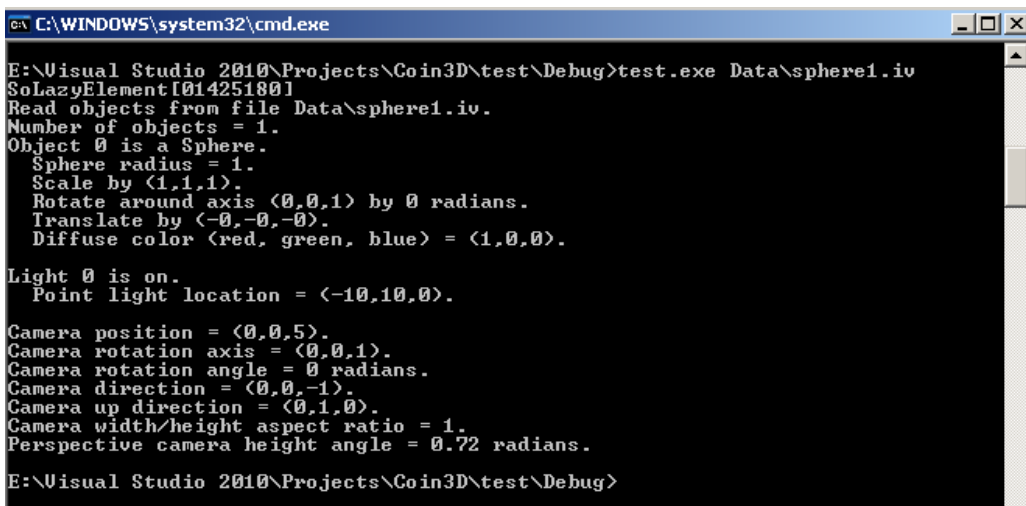
Add : **COIN_NOT_DLL**



- e. On the same property window, open Linker → Input → Additional Dependencies. Add : coin3d.lib



Now it's time to test your installation. Build "test" solution (from the example code) and run it. The executable file will read an iv file as seen in the picture below:



Reference :

- [1] http://www.cse.ohio-state.edu/~hwshen/681/Site/lab_help_files/windows_help.pdf
- [2] http://www.cse.ohio-state.edu/~hwshen/681/Site/Open_Inventor_Help.html
- [3] <http://www.cse.ohio-state.edu/~hwshen/681/Site/Main.html>
- [4] <http://www.coin3d.org/doc/windows/building>
- [5] <http://mailman.coin3d.org/pipermail/coin-discuss/2011-July/018332.html>