**PathBubbles Installation Guide**

**5/25/2014**

We provide both the source code and executable of PathBubbles (both currently run on Windows system). The pathway data come along with the source code and executable package. After unzipping the packages, please leave the data folder as it is inside the unzipped file folders.

**Section 1. Run Pathbubbles executable**

To run the PathBubbles executable directly, download and unzip the “PathBubbles Executable” package in your windows system and double-click "winQt\_Test.exe" to in the unzipped folder.

**Section 2. Use source code**

To run the PathBubbles source code, download and unzip the “PathBubbles Source Code” package. The PathBubbles source code currently run on Visual Studio in Windows. If you only want to test PathBubbles, skip this section and go section 2 for how to use its functions. We have tested the code in VS 2008 and VS 2010 on Windows 7.

In order to run the source code, you need to have QT compiled with Visual Studio. Please follow the steps below to setup QT with Visual studio.

**1. Install Visual Studio 2008, 2010, or later version in Window 2007 or above.**

**2. Install CMake:**

Get the latest version from <http://www.cmake.org/cmake/resources/software.html>. e.g. cmake-2.8.9-win32-x86.exe. Run it to install CMake.

**2 Install Qt:**

Get the latest library of Qt from <http://qt-project.org/downloads>. For example, we downloaded qt-win-opensource-4.8.3-vs2010.exe. Run it to install. **Note: make sure you download the “open source” one.**

Set the “Environment Variables” by adding: c:\Qt\4.8.3\bin to the PATH variable in Windows “Environmental Variables” dialog.

**3 Configure Qt for Visual Studio with command lines**

Take VS 2010 as example. Launch command prompt: Windows ‘Start’ menu -> All Programs -> VS 2010 ->Visual Studio Tools -> Visual Studio Command Prompt (2010). **Note: do not use command prompt under Qt.**

Type in commands as below:

*cd C:\Qt\4.8.3*

*configure -platform win32-msvc2010 –opensource*

Optionally, you can add *‘-debug-and-release*’ at the end of above command to enable ‘release’ build

Type '*y*' to accept the license agreement. Configuring may take around 20 minutes. Then, type '*nmake*' to build. This may take 3-5 hours.

Add “C:\Qt\4.8.3\bin;” to environment variable “Path”

Add variable QTDIR and set it to “C:\Qt\4.8.3”

Go to Qt/4.8.3/examples, test a Visual Studio project

**4. Include Boost library.**

Download boost 1.5.2 (or later version) and include its path to Project -> winQt\_Test properties->C/C++ ->general -> Additional Include Directories".

**5. Additional steps for missing files**

You may still miss certain header (\*.h), library (\*.lib), or (\*.dll) files. You will found about this when you open the PathBubbles project and try to build it.

(1) Glut related header and library files: you may need to get glut and freeglut. <http://web.eecs.umich.edu/~sugih/courses/eecs487/glut-howto/#win> provides a nice introduction about how to manually put them in order.

(2) Add paths for a project:

Open a VS project: winQt\_Test.sln. Highlight the project in Solution Explorer, go “Project -> winQt\_Test properties”

a. Go “C/C++ ->general -> Additional Include Directories" and add paths for header files (\*.h) of Qt

C:\Qt\4.8.3\include\Qt

C:\Qt\4.8.3\include

b. Go “Linker->General-> Additional Library Directories” and add paths for library files (\*.lib) of Qt

C:\Qt\4.8.3\lib.

**6. Compile and run the PathBubbles in Visual Studio.**