Windows Open Source QT & PyQt Installation

July 2007

Legal Notice

Autodesk® Maya® 2008

© 2007 Autodesk, Inc. All rights reserved. Except as otherwise permitted by Autodesk, Inc., this publication, or parts thereof, may not be reproduced in any form, by any method, for any purpose.

Certain materials included in this publication are reprinted with the permission of the copyright holder.

Graph Layout Toolkit © Copyright 1992-2003 Tom Sawyer Software, Berkeley, California. All rights reserved.

Mozilla Open Source Project © Copyright 1998-2004 by Contributors to the Mozilla codebase under the Mozilla Public License. Source code may be found at http://www.mozilla.org/source.html. The Mozilla software is distributed under the Mozilla Public License on an "AS IS" basis, WITHOUT WARRANTY OF ANY KIND. The Mozilla Public License may be found at www.mozilla.org/MPL/. All rights reserved.

Portions relating to JPEG © Copyright 1991-1998 Thomas G. Lane. All rights reserved. This software is based in part on the work of the Independent JPEG Group.

Portions of the subdivision surface implementation technology are protected by U.S. patents 6,037,949, 6,222,553, 6,300,960, and 6,489,960 and used under license from Pixar.

Trademarks

The following are registered trademarks or trademarks of Autodesk, Inc., in the USA and other countries: 3DEC (design/logo), 3December, 3December.com, 3ds Max, ActiveShapes, Actrix, ADI, Alias, Alias (swirl design/logo), AliasStudio, Alias|Wavefront (design/logo), ATC, AUGI, AutoCAD, AutoCAD Learning Assistance, AutoCAD LT, AutoCAD Simulator, AutoCAD SQL Extension, AutoCAD SQL Interface, Autodesk, Autodesk Envision, Autodesk Insight, Autodesk Intent, Autodesk Inventor, Autodesk Map, Autodesk MapGuide, Autodesk Streamline, AutoLISP, AutoSnap, AutoSketch, AutoTrack, Backdraft, Built with ObjectARX (logo), Burn, Buzzsaw, CAiCE, Can You Imagine, Character Studio, Cinestream, Civil 3D, Cleaner, Cleaner Central, ClearScale, Colour Warper, Combustion, Communication Specification, Constructware, Content Explorer, Create>what's>Next> (design/logo), Dancing Baby (image), DesignCenter, Design Doctor, Designer's Toolkit, DesignKids, DesignProf, DesignServer, DesignStudio, Design|Studio (design/logo), Design Your World, Design Your World (design/logo), DWF, DWG, DWG (logo), DWG TrueConvert, DWG TrueView, DXF, EditDV, Education by Design, Extending the Design Team, FBX, Filmbox, FMDesktop, Freewheel, GDX Driver, Gmax, Heads-up Design, Heidi, HOOPS, HumanlK, i-drop, iMOUT, Incinerator, IntroDV, Inventor, Inventor LT, Kaydara, Kaydara (design/logo), LocationLogic, Lustre, Maya, Mechanical Desktop, MotionBuilder, ObjectARX, ObjectDBX, Open Reality, PolarSnap, PortfolioWall, Powered with Autodesk Technology, Productstream, ProjectPoint, Reactor, RealDWG, Real-time Roto, Render Queue, Revit, Showcase, SketchBook, StudioTools, Topobase, Toxik, Visual Bridge, Visual Construction, Visual LiSP, Voice Reality, Volo, and Wiretap.

The following are registered trademarks or trademarks of Autodesk Canada Co. in the USA and/or Canada and other countries: Backburner, Discreet, Fire, Flame, Flint, Frost, Inferno, Multi-Master Editing, River, Smoke, Sparks, Stone, Wire.

mental ray is a registered trademark of mental images GmbH licensed for use by Autodesk, Inc. Adobe, Illustrator and Photoshop are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries. The Ravix logo is a trademark of Electric Rain, Inc. "Python" and the Python logo are trademarks or registered trademarks of the Python Software Foundation. All other brand names, product names or trademarks belong to their respective holders.

Disclaimer

THIS PUBLICATION AND THE INFORMATION CONTAINED HEREIN IS MADE AVAILABLE BY AUTODESK, INC. "AS IS." AUTODESK, INC., DISCLAIMS ALL WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE REGARDING THESE MATERIALS.

Published by:

Autodesk, Inc. 111 McInnis Parkway San Rafael, CA 94903, USA

- 1. **Install Python2.5.1.** Download <u>Python 2.5.1</u> from <u>http://www.python.org/download/</u> and install it in its default location.
- 2. **Install Qt.** Qt is a C++ GUI library.
 - <u>Download Qt "mingw.exe" version 4.2.3</u> of Qt from either http or ftp links at the bottom of the page under the Download header, here: http://www.trolltech.com/developer/downloads/qt/windows
 - PyQt4 version 4.2.3 is built for Qt version 4.2.3, it is recommended that you use this older version of Qt instead of the Qt4.3.0 current version.
 - ftp://ftp.trolltech.com/qt/source/
 - Install Qt. (Ignore error messages about the missing header.)

3. Set some environment variables:

- Qt provides this script; however, it might not work: double-click qtvars.bat in C:\Ot\4.2.3\bin
- It should set up the following for you, but please check that it was successful.
- Right click on MyComputer, choose Properties, choose the Advanced Tab, click on Environment Variables.
- QTDIR = $C:\Qt\4.2.3$
- QTMAKESPEC = win32-g++
- Add the following to PATH:
 - \circ C:\Qt\4.2.3\bin
- 4. **Install PyQt.** PyQt is a set of Python bindings for Qt.
 - Download <u>PyQt-gpl-4.2-Py2.5-Qt4.2.3.exe</u> windows binary from here http://www.riverbankcomputing.co.uk/pyqt/download.php
 - Install by double clicking on the executable windows installer.
 - Install in the default directory, it should find C:/Python25/ by itself.

5. Test PyQt.

- You should now be able to run the examples that come with pyQt using the Python 2.5.1 that you have on your system.
- From the Start Menu, Start >Programs > PyQt-win-gpl-4.1.1 > Examples and Demos
- If it opens up and you can navigate around it and look at the demos, then you are installed correctly thus far.

6. Copy SIP and PyQt4 site-packages into Maya cut.

- Copy the SIP and PyQt stuff from the site-packages of Python 2.5.1 into the site-packages of your Maya cut.
- C:\Python25\Lib\site-packages
- C:\Program Files\Autodesk\Maya2008\Python\lib\site-packages
- PyQt4 does not switch back and forth from 32 to 64 bit. This is built in 32 bit Python; therefore, you can use it in 32 bit mayapy, but not in 64 bit mayapy.
- In order to use this in 64bit Maya, you will have to build it in 64bit Python.

7. Use PyQt4 from Maya.

```
import sys
import PyQt4 as qt
```

If this is not working, you may need to edit the Qt.py file in your ...\maya2008\Python\lib\site-packages\PyQt4\ directory, so that it comments out the last line.

#from PyQt4.QtDesigner import *

We instantiate a QApplication passing the arguments of the script to it:

```
app = qt.QApplication(sys.argv)
```

Add a basic widget to this application:

The first argument is the text we want this QWidget to show, the second # one is the parent widget. Since Our "hello" is the only widget we use ,the # so-called "MainWidget", it does not have a parent.

```
hello = qt.QLabel("Hello world!", None)
```

... and that it should be shown.

```
hello.show()
```

• If the Hello world! widget opens up, then you are installed correctly.