QGIS Application - Feature request #11103
Support for retina displays (HiDPI)

2014-08-26 07:24 AM - Joshua Arnott

Status:	Closed			
Priority:	Normal			
Assignee:				
Category:	mac_os_specific			
Pull Request or Patch supplied:	No		**Resolution:**	fixed/implemented
Easy fix?:	No		**Copied to github as #:**	19434

Description

Currently QGIS does not support Retina displays (HiDPI), such as on the current MacBook Pro. The application loads, but is running in a low-resolution upscaled mode which makes everything look pixelated. See attached screenshot (qgis_lowdpi.png).

The Qt blog has some information on supporting retina displays in Qt applications:

http://blog.qt.digia.com/blog/2013/04/25/retina-display-support-for-mac-os-ios-and-x11/

The first step is to add the following to the Info.plist file:

    <key>NSPrincipalClass</key>
    <string>NSApplication</string>
    <key>NSHighResolutionCapable</key>
    <string>True</string>

This tells the application that it's capable of HiDPI rendering, which gets text and buttons to render correctly. See attached screenshot (qgis_hidpi.png).

However, the map canvas itself, and (most) of the icons are still pixelated. To "fix" the icons, they need hi resolution versions available. The blog post discusses this a little, but I've not had any success so far in getting QGIS to recognise larger versions of the icons. The other step will be to tell the canvas to renderer at a higher DPI - no idea how to get this working.

I've asked a question on stack overflow here:

http://stackoverflow.com/questions/25494230/adding-support-for-retina-displays-hidpi-to-an-existing-qt4-application

Myself (@snorfalorpagus) and Dale Kunce (@calimapnerd) have an interest getting this working:

https://twitter.com/calimapnerd/status/381016157920055297

Related issues:

Related to QGIS Application - Bug report # 11337: Attribute Table does not sh...	**Closed**	**2014-10-06**
Related to QGIS Application - Bug report # 12549: QGIS GUI scaling issues on ...	**Closed**	**2015-04-11**
Related to QGIS Application - Bug report # 12671: Cursor icon is too small on...	**Closed**	**2015-04-30**
Related to QGIS Application - Bug report # 13470: Fix font size in plugin man...	**Closed**	**2015-09-30**
Related to QGIS Application - Bug report # 13497: Fix font size on the News t...	**Closed**	**2015-10-03**
Related to QGIS Application - Bug report # 13469: Fix font size of recent pro...	**Closed**	**2015-09-30**
Related to QGIS Application - Bug report # 13498: Fix font size in Processing...	**Closed**	**2015-10-03**
Related to QGIS Application - Bug report # 14470: Pluses in Layer and Browser...	**Closed**	**2016-03-13**
Related to QGIS Application - Bug report # 14471: Only some icons in Style Ma...	**Closed**	**2016-03-13**
Related to QGIS Application - Bug report # 14472: Attribute table icons too s...	**Open**	**2016-03-13**

Related to QGIS Application - Bug report # 14473: Formview feature list does ...		**Closed**	**2016-03-13**
Related to QGIS Application - Bug report # 14474: Processing menu icons don't...		**Closed**	**2016-03-13**
Related to QGIS Application - Bug report # 16456: Model preview is too small ...		**Closed**	**2017-04-20**
Duplicated by QGIS Application - Feature request # 12469: Retina "support"		**Closed**	**2015-03-27**

History

#1 - 2014-08-26 01:42 PM - Pierre-Luc Auclair

I am also highly interested in this.

I might not be able to help with the coding (I'm a web programmer) but can help with testing and creating hi-def ui icons (graphic designer for ~10yrs).

#2 - 2014-08-27 05:05 PM - Joshua Arnott

It looks like the backport that adds support for the hidpi pixmaps (required for nice looking icons) hasn't made it into the release branch yet.
https://codereview.qt-project.org/#/c/54636/

On top of this, I can't get it to compile:

    Undefined symbols for architecture x86_64:
      "qt_mac_get_scalefactor()", referenced from:
        QPixmap::grabWindow(long, int, int, int, int) in qpixmap_mac.o
        QToolButton::sizeHint() const in qtoolbutton.o
    ld: symbol(s) not found for architecture x86_64
    clang: error: linker command failed with exit code 1 (use -v to see invocation)

#3 - 2014-11-19 09:50 AM - Joshua Arnott

There is a pull request to add Qt5 support to QGIS. This is hopefully a set in the right direction for the high DPI icons:
https://github.com/qgis/QGIS/pull/1676

I've been trying to get the map canvas to render at 2x DPI. It seems it should be possible, with some tweaks to qgsmapcanvas.cpp, qgsmapsettings.cpp and qgsmaptopixel.cpp. I managed to get the map to render "pretty" (i.e at the native DPI), but not in the right place. The scale, etc. becomes confused.

Perhaps someone with a better understanding of how the renderer works could weigh in (Martin or Jürgen?)?

#4 - 2014-12-08 04:08 AM - Giovanni Manghi
- *Status changed from Open to Closed*
- *Resolution set to duplicate*

duplicate of #11337

#5 - 2014-12-08 03:38 PM - Joshua Arnott

Please reopen this issue. It is not a duplicate. #11337 is one of several issues related to overall compatibility with high resolution displays. For this to be resolved there also needs to be:

- Fixes to the map canvas so that it renders at the correct resolution
- Updates to icons so that they don't look pixelated/terrible
- Changes to the Info.plist file (as mentioned in the original post) for OS X

#6 - 2015-01-23 04:13 PM - Michael Kirk

I'm concerned that this is still closed as it does not seem to be a duplicate of #11337.

Can you confirm Giovanni?

#7 - 2015-01-25 04:54 AM - Giovanni Manghi
- *Resolution deleted (duplicate)*
- *Status changed from Closed to Open*

#8 - 2015-01-28 02:24 PM - Michael Kirk

Joshua - when you made your first attempt at this, did you publish your changes anywhere? Is there a work in progress I could see?

#9 - 2015-08-20 12:50 PM - Anita Graser
- *File pluginmanager.png added*

The text area in the Plugin Manager which displays the plugin description doesn't scale with the rest of the UI, see attached screenshot.

#10 - 2015-09-21 09:14 AM - Anita Graser
- *Assignee set to Alessandro Pasotti*

#11 - 2015-11-02 02:29 PM - Michael Kirk
- *File Screen_Shot_2015-11-02_at_2.27.32_PM.png added*

@Anita Graser - Either I don't understand your comment about the plugin description not scaling, or I just cant reproduce it on Mac/master.

See my screenshot of the "unscaled" running alongside the scaled.

Granted the buttons/checkboxes are the wrong sizes, but the text seems good.

#12 - 2015-11-07 05:02 AM - Alessandro Pasotti
- *Status changed from Open to In Progress*

It might be fixed with 061bdde, can somebody please test and confirm that it works on other screen sizes/operating systems?

#13 - 2016-03-12 06:12 PM - Brendan Heberlein

Checking in to affirm interest & hopefully get some updates on the status of the project.

I hope you all are aware that the entire icon set for QGIS exists in SVG format already and there is no need to make new one for HDPI. You can find them here: https://github.com/qgis/QGIS/tree/master/images/themes/default

I am super interested in getting this going because I love my retina display but I hate the pixelated look QGIS now has. Now that I have switched to a higher resolution screen, QGIS effectively runs at a lower resolution(!) Go figure.

I am no code monkey but I'm learning python and happy to do anything I can to help. I don't want to wait for QGIS 3.0!

#14 - 2016-03-12 11:46 PM - Alessandro Pasotti

- Assignee deleted (Alessandro Pasotti)

It works fine for me (on Linux), I don't have a mac so I cannot help more, sorry.

#15 - 2016-03-13 04:53 AM - Anita Graser

Alessandro Pasotti wrote:

> *It might be fixed with 061bdde, can somebody please test and confirm that it works on other screen sizes/operating systems?*

Confirmed, the plugin description in the installer now displays fine.

#16 - 2016-10-01 06:18 AM - Anita Graser

Correction: The plugin description is ok on hidpi now but too big on regular screens.

#17 - 2016-12-16 08:51 AM - chris Mr

Upvoting, I think it's hard for people not on 4k monitors or retina screens to appreciate just how much nicer it is to have everything crisp, and now this is one of the new apps I use that doesn't support the high resolution yet-

#18 - 2016-12-16 10:38 AM - Nyall Dawson

Chris - this bug tracker doesn't work on votes. See http://nyalldawson.net/2016/08/how-to-effectively-get-things-changed-in-qgis/ for a description on how things get prioritised.

#19 - 2017-05-01 12:47 AM - Giovanni Manghi

- Easy fix? set to No

#20 - 2017-11-09 07:02 AM - Michal Jurewicz

- File QGIS2 Linux Mint.png added
- File QGIS3 MacOS 2.png added
- File QGIS3 MacOS.png added
- File QGIS2 Linux Mint 2.png added
- File QGIS3 MacOS 3.png added

I would like to report that the problem is still here on MacOS, even on new QGIS3 (master build made by homebrew formula). Text, icons and etc. is very nice. However output on canvas is still pixelated on OSX. However when I open QGIS 2.18.12 on Linux Mint virtualised on my iMac 5k, even old QGIS2 look great on Retina (however I had to change icon size on settings). I send you screenshots below.

It would be nice to had proper retina support for MacOS

#21 - 2018-09-13 02:30 PM - Denis Rouzaud

- Description updated

- Category changed from GUI to mac_os_specific

#22 - 2018-10-19 08:57 PM - Denis Rouzaud

- Status changed from In Progress to Closed

- Resolution set to fixed/implemented

fixed in master, to be released in 3.4

https://github.com/qgis/QGIS/pull/8242

Youhou!

Files

qgis_lowdpi.png	1.01 MB	2014-08-26	Joshua Arnott
qgis_hidpi.png	1.22 MB	2014-08-26	Joshua Arnott
pluginmanager.png	92.4 KB	2015-08-20	Anita Graser
Screen_Shot_2015-11-02_at_2.27.32_PM.png	387 KB	2015-11-02	Michael Kirk
QGIS3 MacOS.png	325 KB	2017-11-09	Michal Jurewicz
QGIS2 Linux Mint 2.png	34.9 KB	2017-11-09	Michal Jurewicz
QGIS3 MacOS 2.png	1.57 MB	2017-11-09	Michal Jurewicz
QGIS3 MacOS 3.png	18.2 KB	2017-11-09	Michal Jurewicz
QGIS2 Linux Mint.png	856 KB	2017-11-09	Michal Jurewicz