

QGIS Application - Bug report #4454

multiline labels overlap in the labeling-ng engine

2011-10-27 08:24 PM - Mathieu Pellerin - nIRV

Status: Closed	
Priority: Normal	
Assignee: Martin Dobias	
Category: Map Canvas	
Affected QGIS version:	Regression?: No
Operating System:	Easy fix?: No
Pull Request or Patch applied: Yes	Resolution: fixed
Crashes QGIS or corrupts data:	Copied to github as #: 14384
Description	
<p>The recently added expression-based label feature exposed an issue with multiline support in the labeling-ng engine.</p> <p>The labeling-ng placement mechanism appears to only consider the width of a label's last line, resulting in major overlaps if the first line's length is greater than the last one. (see screenshot A map-preylang-labeloverlap.jpg)</p> <p>E.G. Line #1: Big Plantation Company Line #2: 500 Ha</p> <p>I think the above assessment must be pointing in the right direction. If I change the multiline label to have the longest string on the last line, the labeling engine doesn't render overlapping labels. (see screenshot B map-preylang-labelclean.jpg)</p> <p>This issue will have a greater impact on users when the next qgis version will be released with the expression-based labeling, hope this issue' description is helpful.</p>	

History

#1 - 2011-10-27 08:52 PM - Mathieu Pellerin - nIRV

I'm pretty sure I found the problem.

The multiline label's width is determined in the void QgsPalLayerSettings::calculateLabelSize() function. The relevant code is this:

```
QRectF labelRect = fm->boundingRect( text );
double w, h;
if ( !multiLineLabels )
{
    w = labelRect.width() / rasterCompressFactor;
    h = labelRect.height() / rasterCompressFactor;
}
else
{
    QStringList multiLineSplit = text.split( "\n" );
    h = fm->height() * multiLineSplit.size() / rasterCompressFactor;
    w = 0;
    for ( int i = 0; i < multiLineSplit.size(); ++i )
    {
        double width = fm->width( multiLineSplit.at( i ) );
```

```

if ( width > w )
{
    w = width;
}
w /= rasterCompressFactor;
}
}

```

The problem is in the for loop that compares each line's width to find out the longest one. The rasterCompressFactor division applied to the width should occur *after* the for loop has found the longest width, not within the loop. The current code breaks the if (width > w) condition as it's not comparing two widths but rather a width and a width / rasterCompressFactor.

So, the solution is to move w /= rasterCompressFactor; after the loop. Yay, a one line change fix! :)

#2 - 2011-10-27 09:06 PM - Mathieu Pellerin - nIRV

The code should be:

```

QRectF labelRect = fm->boundingRect( text );
double w, h;
if ( !multiLineLabels )
{
    w = labelRect.width() / rasterCompressFactor;
    h = labelRect.height() / rasterCompressFactor;
}
else
{
    QStringList multiLineSplit = text.split( "\n" );
    h = fm->height() * multiLineSplit.size() / rasterCompressFactor;
    w = 0;
    for ( int i = 0; i < multiLineSplit.size(); ++i )
    {
        double width = fm->width( multiLineSplit.at( i ) );
        if ( width > w )
        {
            w = width;
        }
    }
    w /= rasterCompressFactor;
}

```

I don't have the environment set up to come up with a proper patch, hope someone can do it on my behalf.

#3 - 2011-10-28 06:25 AM - Nathan Woodrow

- Pull Request or Patch supplied changed from No to Yes
- File 0001-Fix-multiline-overlap.patch added

Patch for fix.

#4 - 2011-10-29 07:27 AM - Mathieu Pellerin - nIRV

Hey Nathan, thanks, that was quick :)

It might be good to add this patch to your enable multiline per default pull request (<https://github.com/qgis/Quantum-GIS/pull/53>).

Cheers and thanks again.

#5 - 2011-10-29 06:14 PM - Nathan Woodrow

- *File deleted (0001-Fix-multiline-overlap.patch)*

#6 - 2011-10-29 06:15 PM - Nathan Woodrow

- *Assignee set to Martin Dobias*

Agreed. Now part of pull request.

#7 - 2011-10-31 06:05 AM - Martin Dobias

- *Resolution set to fixed*

- *Status changed from Open to Closed*

Pull request merged!

Files

map-preylang-labeloverlap.jpg	672 KB	2011-10-27	Mathieu Pellerin - nIRV
map-preylang-labelclean.jpg	667 KB	2011-10-27	Mathieu Pellerin - nIRV