# 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 supplied:** | Yes | **Resolution:** | fixed |
| **Crashes QGIS or corrupts data:** | | **Copied to github as #:** | 14384 |

**Description**

The recently added expression-based label feature exposed an issue with multiline support in the labeling-ng engine.

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)

E.G.
Line #1: Big Plantation Company
Line #2: 500 Ha

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)

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.

## 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( "\
" );
  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, no within the loop. The current code break the if (width > w) condition as it's not comparing two width 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( "\
" );
  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 |