

## QGIS Application - Bug report #16722

### Wrong result for curveToLine with max angle 70 on a semicircle

2017-06-19 01:35 PM - Sandro Santilli

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| <b>Status:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Closed          |                                     |
| <b>Priority:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Normal          |                                     |
| <b>Assignee:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Sandro Santilli |                                     |
| <b>Category:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Geometry        |                                     |
| <b>Affected QGIS version:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | master          | <b>Regression?:</b> No              |
| <b>Operating System:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Windows         | <b>Easy fix?:</b> No                |
| <b>Pull Request or Patch applied:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No              | <b>Resolution:</b>                  |
| <b>Crashes QGIS or corrupts data:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No              | <b>Copied to github as #:</b> 24621 |
| <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |                                     |
| <p>This code snippet shows how a MaxAngle:70-degrees linearization of a curve gives a wrong result:</p> <pre>wkt = QStringLiteral( "CIRCULARSTRING(0 0,100 100,200 0)" ); circularString.reset( dynamic_cast&lt;QgsCircularString *&gt;( QgsGeometryFactory::geomFromWkt( wkt ) ) ); QVERIFY( circularString.get() ); lineString.reset( circularString-&gt;curveToLine( 70 * M_PI / 180.0 ) ); QVERIFY( lineString.get() ); //lineString-&gt;asWkt(); std::cout &lt;&lt; "XXX --- " &lt;&lt; lineString-&gt;asWkt().toString() &lt;&lt; std::endl;</pre> <p>You can see the resulting line here:<br/><a href="http://strk.kbt.io/tmp/qgis-maxangle-70.png">http://strk.kbt.io/tmp/qgis-maxangle-70.png</a></p> <p>Expected resulting line (obtained via PostGIS ongoing work <a href="https://gitlab.com/postgis/postgis/merge_requests/3">https://gitlab.com/postgis/postgis/merge_requests/3</a>) is this:<br/><a href="http://strk.kbt.io/tmp/pgis-maxangle-70.png">http://strk.kbt.io/tmp/pgis-maxangle-70.png</a></p> |                 |                                     |
| <b>Related issues:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |                                     |
| Related to QGIS Application - Bug report # 16717: curveToLine introduces dupl...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 | Closed 2017-06-17                   |

#### Associated revisions

Revision 48c95399 - 2017-08-25 11:06 PM - Sandro Santilli

Refactor curveToLine to emit equidistant segments and fix some issues

Fixes #16717

Fixes #16722

Include tests

#### History

#1 - 2017-06-19 01:35 PM - Sandro Santilli

- Related to Bug report #16717: curveToLine introduces duplicated points added

#2 - 2017-07-21 12:03 PM - Sandro Santilli

- Assignee set to Sandro Santilli

- Status changed from Open to In Progress

**#3 - 2017-07-21 10:37 PM - Sandro Santilli**

Test for this added to <https://github.com/qgis/QGIS/pull/4746>

**#4 - 2017-08-11 06:28 PM - Sandro Santilli**

- *Pull Request or Patch supplied changed from No to Yes*

The PR now also contains a fix for this bug

**#5 - 2017-08-25 11:06 PM - Sandro Santilli**

- *% Done changed from 0 to 100*

- *Status changed from In Progress to Closed*

Applied in changeset commit:qgis|48c953991e15b56e9e9300ec8007d44ce1c64966.