

QGIS Application - Bug report #19615

Concave hull fails for some input data

2018-08-13 10:10 PM - Rudi von Staden

Status: Open	
Priority: Normal	
Assignee:	
Category: Processing/QGIS	
Affected QGIS version: 3.3(master)	Regression?: No
Operating System: Windows 10	Easy fix?: No
Pull Request or Patch supplied:	Resolution:
Crashes QGIS or corrupts data:	Copied to github as #: 27442

Description

Concave hull fails for certain input data. It seems that when there are a limited number of points and two of them are on or close to a straight line, the algorithm fails when threshold is not 1. The attached image shows the pink hull as the output for threshold = 1, and the brown hull when threshold is between 0.96 and 0.99. For anything less than 0.96 it fails with the message below. I have attached a project with sample data demonstrating the issue.

```
Processing algorithm...
Algorithm 'Concave hull' starting...
Input parameters:{ 'ALPHA' : 0.3, 'HOLES' : True, 'INPUT' : 'C:/Users/rudi/Dropbox/GIS/shared/concave_hull_test/input.shp',
'NO_MULTIGEOMETRY' : False, 'OUTPUT' : 'memory:' }

Creating Delaunay triangles...
Results: {'OUTPUT': 'output_d516bb08_2edb_46c0_9204_cfa079c0462d'}
Computing edges max length...
Removing features...
Dissolving Delaunay triangles...
Feature could not be written to output_40dd6fbb_5c35_42aa_9c35_436e07335e57
Results: {'OUTPUT': 'output_40dd6fbb_5c35_42aa_9c35_436e07335e57'}
Saving data...
Execution completed in 0.08 seconds
Results: {'OUTPUT': 'output_6fcbb10c_d7fe_48e2_b01e_0f93f29f3b64'}

Loading resulting layers
Algorithm 'Concave hull' finished
```

QGIS 2.18 also had the same behaviour, although it did include the following exception information:

```
Uncaught error while executing algorithm
Traceback (most recent call last):
File "C:/OSGeo4W64/apps/qgis-ltr/.python/plugins\processing\core\GeoAlgorithm.py", line 203, in execute
self.processAlgorithm(progress)
File "C:/OSGeo4W64/apps/qgis-ltr/.python/plugins\processing\algs\qgis\Dissolve.py", line 125, in processAlgorithm
outFeat.setAttributes(attrs)
UnboundLocalError: local variable 'attrs' referenced before assignment
```

Files

concave_hull_bug.PNG	18.5 KB	2018-08-13	Rudi von Staden
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