

# QGIS Application - Feature request #16418

## Geometry validity inconsistency between tools

2017-04-06 11:52 PM - Giovanni Allegri

<b>Status:</b> Closed	
<b>Priority:</b> High	
<b>Assignee:</b>	
<b>Category:</b> Geometry	
<b>Pull Request or Patch supplied:</b>	<b>Resolution:</b>
<b>Easy fix?:</b> No	<b>Copied to github as #:</b> 24327
<b>Description</b>	
<p>The Topology Validation tool and Check Validity algorithm return different results for self-touching polygons which define a (false) hole. The difference is happening because Check Validity uses QgsGeometryValidator <a href="#">which calls GEOSisValidDetail_r</a> with the GEOS GEOSVALID_ALLOW_SELFTOUCHING_RING_FORMING_HOLE flag.</p> <p>This kind of geometries are invalid for OGC, but they're ok for others (e.g. for Esri). I think QGIS should adhere to OGC strict rules to be consistent with other OGC compliant sw like Spatialite, PostGIS, etc.</p> <p>The following polygon is an example where Topology Validator, Spatialite and PostGIS agree to be invalid, while it's ok for QgsGeometryValidator:</p> <pre>POLYGON ((200 400, 400 400, 400 200, 300 200, 350 250, 250 250, 300 200, 200 200, 200 400))</pre> <p>QgsGeometryValidator should not set the flag by default and leave it as an option to relax validation.</p>	

### Associated revisions

#### Revision 4e04d022 - 2019-02-26 09:05 PM - Nyal Dawson

By default, validity check should treat ring self intersections as invalid

We use the OGC definition of validity to ensure consistent results with PostGIS, GDAL, etc

Fixes #16418, fixes #21336

#### Revision 49742c30 - 2019-02-26 09:05 PM - Nyal Dawson

[needs-docs][processing] Add option to check validity alg to ignore self-intersection causing rings errors

By default the algorithm now uses the strict OGC definition of polygon validity, where a polygon is marked as invalid if a self-intersecting ring causes an interior hole.

If the "Ignore ring self intersections" option is checked, then this rule will be ignored and a more lenient validity check will be performed.

Refs #16418, refs #21336

#### Revision 25a42a9f - 2019-03-05 02:08 AM - Nyal Dawson

By default, validity check should treat ring self intersections as invalid

We use the OGC definition of validity to ensure consistent results with PostGIS, GDAL, etc

Fixes #16418, fixes #21336

(cherry picked from commit 4e04d02293637923e065afba3f3b962249a9ca78)

#### **Revision 850905e7 - 2019-03-05 02:08 AM - Nyall Dawson**

[needs-docs][processing] Add option to check validity alg to ignore self-intersection causing rings errors

By default the algorithm now uses the strict OGC definition of polygon validity, where a polygon is marked as invalid if a self-intersecting ring causes an interior hole. If the "Ignore ring self intersections" option is checked, then this rule will be ignored and a more lenient validity check will be performed.

Refs #16418, refs #21336

(cherry picked from commit 49742c302afb97e6272ce8b6b3a806014cdbdb5b)

#### **Revision 49798918 - 2019-03-07 03:02 AM - Nyall Dawson**

By default, validity check should treat ring self intersections as invalid

We use the OGC definition of validity to ensure consistent results with PostGIS, GDAL, etc

Fixes #16418, fixes #21336

(cherry picked from commit 4e04d02293637923e065afba3f3b962249a9ca78)

#### **Revision 4cd9c110 - 2019-03-07 03:02 AM - Nyall Dawson**

[needs-docs][processing] Add option to check validity alg to ignore self-intersection causing rings errors

By default the algorithm now uses the strict OGC definition of polygon validity, where a polygon is marked as invalid if a self-intersecting ring causes an interior hole. If the "Ignore ring self intersections" option is checked, then this rule will be ignored and a more lenient validity check will be performed.

Refs #16418, refs #21336

(cherry picked from commit 49742c302afb97e6272ce8b6b3a806014cdbdb5b)

(cherry picked from commit 66cd7e93024f432a9ebd98258dee74ac49834d1f)

## **History**

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**#1 - 2017-05-01 12:44 AM - Giovanni Manghi**

- *Easy fix? set to No*

**#2 - 2019-02-26 09:04 PM - Nyal Dawson**

- *% Done changed from 0 to 100*

- *Status changed from Open to Closed*

Applied in changeset commit:qgis|4e04d02293637923e065afba3f3b962249a9ca78.