

QGIS Application - Bug report #19149

QgsGeometry class can't distinguish between an empty geometry and a null geometry

2018-06-08 11:00 AM - Philip Whitten

Status: Closed	
Priority: Normal	
Assignee: Philip Whitten	
Category: Geometry	
Affected QGIS version: 3.0.3	Regression?: No
Operating System:	Easy fix?: No
Pull Request or Patch supplied:	Resolution: worksforme
Crashes QGIS or corrupts data:	Copied to github as #: 26979

Description

In the QgsGeometry class, the current test for an empty geometry, that is a valid geometry with no vertices is;

```
@bool QgsGeometry::isEmpty() const
{
    if ( !d->geometry )
    {
        return true;
    }
    return d->geometry->isEmpty();
}
@
```

Whilst the test for a null geometry, that is, a geometry where the vertices are unknown and maybe empty is:

```
@ bool QgsGeometry::isNull() const {
    return !d->geometry;
}@
```

Hence, by the logic of the tests, there is no distinction between an empty geometry and a null geometry.

History

#1 - 2018-06-08 11:59 AM - Matthias Kuhn

- Resolution set to worksforme
- Status changed from Open to Closed

This is well defined and working from what I can see. If you think there is something wrong, please post a snippet with obtained and expected results.

```
QgsGeometry().isEmpty()
```

```
| True
```

```
QgsGeometry().isNull()
```

```
| True
```

```
QgsGeometry.fromWkt('LineString()').isEmpty()
```

```
|
```

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| *True*

QgsGeometry.fromWkt('LineString()').isNull()

| *False*

#2 - 2018-06-12 02:15 PM - Philip Whitten

- *Status changed from Closed to Reopened*

Why doesn't it work for an empty point geometry? For example:

QgsGeometry.fromWkt('Point()').isEmpty()

True

QgsGeometry.fromWkt('Point()').isNull()

True

#3 - 2018-06-12 02:36 PM - Philip Whitten

Furthermore, is it possible to create a null geometry that isn't also an empty geometry? That is give the result of True to isNull(), but, false to isEmpty()?

#4 - 2018-06-14 05:27 AM - Philip Whitten

- *Status changed from Reopened to Closed*

A new issue has been created that more accurately describes the problem.