QGIS Application - Bug report #14082
area calculation in Field Calculator is depending on Output field type

2016-01-10 10:44 AM - Richard Duivenvoorde

Status:	Closed		
Priority:	Normal		
Assignee:			
Category:	Vectors		
Affected QGIS version:	master	**Regression?:**	No
Operating System:		**Easy fix?:**	No
Pull Request or Patch supplied:	No	**Resolution:**	end of life
Crashes QGIS or corrupts data:	No	**Copied to github as #:**	22092

Description

Not sure how much this is related to #13209

But when I use the Field calculator to create a virtual field with the area of some polygons, my first try resulted in 80% NULL values.
On further testing the results seem ok. Only difference I did was changing the Output field type from Whole number (integer) to Decimal number (real)

To test, (see screendump for output with both options)

- open attached shp file with the 12 provinces of The Netherlands
- set project crs to epsg:28992 + OTF, and data crs is also epsg:28992 (Amersfoort)
- now open the Field calculator and create a new field / create virtual field and call it 'area'
- as Expression use $area
- click OK: as you can see only 3 polygons have an area value, rest has NULL
- now open the Field calculator again and create a new field / create virtual field and call it 'area2'
- BUT change the default output fieldtype to Decimal !!
- as Expression use $area
- click OK: now all provinces have an area value!

?? what goes wrong here. Or at least how should a normal user find out this behaviour?

Maybe after fixing, also change the default value of output to Real/Float?

Related issues:

Related to QGIS Application - Bug report # 13209: area not calculated correct...	**Closed**	**2015-08-11**
Related to QGIS Application - Bug report # 12622: In virtual fields $area fun...	**Closed**	**2015-04-21**

History

#1 - 2016-01-11 07:18 AM - Richard Duivenvoorde

Update: I found out that it is apparently a integer overflow problem. That is, only the 3 smallest provinces have a value...

And if I change the expression to $area/(1000*1000) (so from meters to square km), all give a valid result EVEN when I set the output type to integers. Off course because then the values are smaller.

But I also checked the error messages, but did not see anything.

Proposal:
- give a clear/descent error message when a integer overflow takes place during calculation (popup?)
- make floats the default when you create an expression (or text), so this problem does not occur for innocent users like me :-)

#2 - 2016-01-12 11:24 AM - Giovanni Manghi

- Status changed from Open to Feedback

Hi Richard,
related also to #12622 ?

#3 - 2016-05-23 09:05 AM - Giovanni Manghi

- Status changed from Feedback to Open
- Category changed from Virtual Fields to Vectors

It is still true on the latest master and from what I see is not only related to virtual fields.

#4 - 2017-05-01 01:06 AM - Giovanni Manghi

- Easy fix? set to No
- Regression? set to No

#5 - 2019-03-09 04:09 PM - Giovanni Manghi

- Resolution set to end of life
- Status changed from Open to Closed

End of life notice: QGIS 2.18 LTR

Source:
http://blog.qgis.org/2019/03/09/end-of-life-notice-qgis-2-18-ltr/

Files

area_calculations.png	208 KB	2016-01-10	Richard Duivenvoorde
qgisprov.zip	63.6 KB	2016-01-10	Richard Duivenvoorde