QGIS Application - Bug report #19709
Exporting a GeoPackage to Shapefile wrongly changes the field types

2018-08-27 03:51 PM - Jérôme Guélat

Status:	Closed			
Priority:	Normal			
Assignee:				
Category:	Data Provider/OGR			
Affected QGIS version:	3.2.2		**Regression?:**	No
Operating System:			**Easy fix?:**	No
Pull Request or Patch supplied:	No		**Resolution:**	wontfix
Crashes QGIS or corrupts data:	No		**Copied to github as #:**	27534

Description

Some steps to reproduce the bug:

1. Add the layer contained in the attached GeoPackage. It has 2 fields: the fid (type qlonglong) and another one (type: int)
2. Export the layer as a Shapefile (right-click on the layer -> Export -> Save Features As...)
3. The field types were changed: the fid is now a real (instead of qlonglong), and the other field is now a qlonglong (instead of int)

History

#1 - 2018-08-30 01:08 AM - Giovanni Manghi

- Crashes QGIS or corrupts data changed from Yes to No

- Operating System deleted (Windows 7)

- Status changed from Open to Feedback

In straight conversion with ogr2ogr the "att" field of your attachment results in an "int" field as expected.

What about 2.18, worked as expected?

#2 - 2018-08-30 09:07 AM - Jérôme Guélat

- Status changed from Feedback to Open

Indeed, a conversion with ogr2ogr works as expected... This is a QGIS problem.

The bug also occurs with QGIS 2.18.

#3 - 2018-09-21 06:58 PM - Even Rouault

- Resolution set to wontfix

Closing as wontfix.

The fundamental problem is that GeoPackage uses binary encoding (int32, int64, float64) whereas Shapefile/DBF uses text encoding. OGR and QGIS have slightly different ways of mapping to DBF field types. For example OGR will map a Int as a Decimal(9) and QGIS as a Decimal(10), and OGR will map a Int64 as a Decimal(18) and QGIS as a Decimal(20).

On reading if a Decimal field has:

=10 and <=18 characters, OGR will interpret it as a Int64

=19 characters, OGR will interpret it as a Double

QGIS choice of using Decimal(10) for Int and Decimal(20) for Int64 is actually more correct than ogr/ogr2ogr choice since number likes -1234567890 fit on a Int32 but requires 10 characters.

Perfect round-tripping is impossible given the mismatching between formats

#4 - 2018-10-05 06:33 PM - Even Rouault

- Status changed from Open to Closed

Files

testgeom.gpkg	116 KB	2018-08-27	Jérôme Guélat