QGIS Application - Feature request #3586
use authid instead of proj.4 strings

2011-03-09 12:57 PM - Jürgen Fischer

Status:	Closed		
Priority:	Low		
Assignee:	Jürgen Fischer		
Category:	Projection Support		
Pull Request or Patch supplied:		**Resolution:**	fixed
Easy fix?:	No	**Copied to github as #:**	13646

Description

Currently we try to use the proj.4 strings to store references to coordinate
systems (eg. for the default project crs). Unfortunately the proj.4
string isn't unique in our database:

```
sqlite> select count(*),parameters from tbl_srs group by parameters order by count(*) desc limit 10;
54|+proj=longlat +ellps=intl +no_defs
27|+proj=longlat +ellps=GRS80 +towgs84=0,0,0,0,0,0,0 +no_defs
21|+proj=longlat +ellps=clrk80 +no_defs
17|+proj=longlat +ellps=bessel +no_defs
15|+proj=longlat +ellps=clrk66 +no_defs
13|+proj=longlat +a=6378249.2 +b=6356515 +no_defs
11|+proj=longlat +ellps=WGS84 +towgs84=0,0,0,0,0,0,0 +no_defs
9|+proj=longlat +ellps=GRS80 +no_defs
9|+proj=longlat +ellps=krass +no_defs
9|+proj=tmerc +lat_0=0 +lon_0=105 +k=1 +x_0=500000 +y_0=0 +ellps=krass +units=m +no_defs
sqlite> select auth_name,auth_id,description,parameters from tbl_srs where parameters='+proj=longlat +ellps=WGS84
+towgs84=0,0,0,0,0,0,0 +no_defs' limit 1;
EPSG|4148|Hartebeesthoek94|+proj=longlat +ellps=WGS84 +towgs84=0,0,0,0,0,0,0 +no_defs
```

So selecting 'EPSG:4326' as default CRS results in 'EPSG:4148 - Hartebeesthoek94' - which obviously is irritating.

The attached patch switches to the use of authid instead of proj.4 strings. Any objections to commit it for 1.7?

History

#1 - 2011-03-09 11:56 PM - Marco Hugentobler

Looks good to me. +1 for commit.

Marco

#2 - 2011-03-10 01:46 AM - Borys Jurgiel

I've slightly modified your patch:

1. Also save the authid to QSettings, not only read ;-) (qgsoptions.cpp 642 and 646)

2. Use *layerDefaultCrs* Qsettings key instead of misleading *defaultCrs*. As the patch breaks this setting anyway, I take a opportunity to clean up a bit.
(qgsoptions.cpp 191 and 642; qgisapp.cpp 361)

By the way. Seems it works not only with epsg ids. Is the note in api doc out of date?

http://doc.qgis.org/head/classQgsCoordinateReferenceSystem.html#5789a11684af1415ffc74d7ce9ab91f0

#3 - 2011-03-10 02:08 AM - Jürgen Fischer

Replying to [comment:2 borysiasty]:

> *1. Also save the authid to QSettings, not only read ;-) (qgsoptions.cpp 642 and 646)*

if you insist ;)

> *By the way. Seems it works not only with epsg ids. Is the note in api doc out of date?*
> *http://doc.qgis.org/head/classQgsCoordinateReferenceSystem.html#5789a11684af1415ffc74d7ce9ab91f0*

Oh, yes. That note was probably already there, when we added the auth_name column to tbl_srs...

#4 - 2011-03-10 11:48 AM - Jürgen Fischer
- Resolution set to fixed
- Status changed from Open to Closed

applied in commit:4c7b539c (SVN r15420).

#5 - 2011-03-10 03:16 PM - Borys Jurgiel
- Status changed from Closed to Feedback
- Resolution deleted (fixed)

But what with project files? Both authid and proj string are saved.

JEF, could you please confirm that authid is higher prriority and hopefully close the ticket again?

#6 - 2011-03-10 03:34 PM - Jürgen Fischer
- Status changed from Feedback to Closed
- Resolution set to fixed

Replying to [comment:5 borysiasty]:

> *But what with project files? Both authid and proj string are saved.*
>
> *JEF, could you please confirm that authid is higher prriority and hopefully close the ticket again?*

looks like it. order is authid, epsg, proj.4 and as last resort a CRS initialized with all the values from the node.   Otherwise we should have hit the 'Hartebeesthoek94' problem earlier...

Files

| crs.diff | 13.3 KB | 2011-03-09 | Jürgen Fischer |
| crs-borys.diff | 14 KB | 2011-03-10 | Borys Jurgiel |