Application: gvSIG desktop - gvSIG bugs #2849
Several SEXTANTE geoprocesses don't work fine due to the GEOMETRY field

10/03/2014 05:10 AM - Antonio Falciano

Status:	Closed	**% Done:**	100%
Priority:	High	**Spent time:**	0.00 hour
Assignee:	Francisco Díaz Carsí		
Category:	Geoprocess		
Target version:	2.1.0-2254-testing		
Severity:	Critical	**Add-on version:**	
gvSIG version:	2.1.0	**Add-on build:**	
gvSIG build:		**Add-on resolve version:**	
Operative System:		**Add-on resolve build:**	
Keywords:	geometry, geoprocess, sextante	**Proyecto:**	
Has patch:	Yes	**Hito:**	
Add-on name:	Unknown		

Description

Several SEXTANTE geoprocesses, such as those based on the overlay concept or that manage the fields in the attribute table, don't work fine as they did in the past due to the GEOMETRY field introduced in gvSIG 2.1.0.
Inspecting the code, I see that **gvSIG geoprocesses** use a new *AbstractSextanteGeoProcess* that extends the native abstract class *GeoAlgorithm* to skip the GEOMETRY field, among the other things. Instead, the **SEXTANTE geoprocesses** continue to use the old *GeoAlgorithm* class.

Because updating all the SEXTANTE geoalgorithms would be a huge work and, above all, would break definitively the continuity with the official SEXTANTE project, a suitable solution could be to skip the GEOMETRY field at an higher level. Why the GEOMETRY field was introduced? Is it possible to use it only where it's necessary?

This is a severe issue, because it affects not only the geoalgorithms themselves, but all the existing works based on them (e.g. SEXTANTE models or scripts). So if an organization or a GIS professional uses such models or scripts and wants to continue to use them in the future, gvSIG 2.1.0 should ensure the full compatibility, otherwise it/he will be obliged to continue to use an older version of gvSIG (where is the innovation?) or port their work elsewhere... Furthermore, I'd avoid to break the links and the continuity with the official SEXTANTE project, because if someone develops a new SEXTANTE geoalgorithm, all its different implementations could benefit from this! ;)

Related issues:

Related to Application: gvSIG desktop - gvSIG bugs # 2800: Geoprocesos ignora...	**Closed**	**09/02/2014**
Related to Application: gvSIG desktop - gvSIG bugs # 2528: Poligonar líneas d...	**Closed**	**05/19/2014**
Related to Application: gvSIG desktop - gvSIG bugs # 2582: SEXTANTE Merge geo...	**Closed**	**06/19/2014**
Related to Application: gvSIG desktop - gvSIG bugs # 2851: RuntimeException: ...	**Closed**	**10/03/2014**

Associated revisions

Revision 98 - 10/23/2014 03:10 AM - Francisco Díaz Carsí

refs #2849 Fixed an i18n string in IntersectionAlgorithm.

Revision 99 - 10/23/2014 03:11 AM - Francisco Díaz Carsí

refs #2849 Adjusted the default value management in VectorAddFieldAlgorithm

History

#1 - 10/03/2014 06:20 AM - Antonio Falciano

Here's a partial list of SEXTANTE vector geoprocesses that don't work due to this issue and the exception that usually occurs (see the sextante.log):

- "Merge", "In-polygon spatial join", "Polygonize", "Add field", "Rename field", "Delete field" --> java.lang.ArrayIndexOutOfBoundsException
- "Union" --> java.lang.RuntimeException: Name descriptor GEOMETRY duplicated. (File not found) --> see also #2851

#2 - 10/06/2014 12:18 PM - Álvaro Anguix

- Related to gvSIG bugs #2800: Geoprocesos ignoran la selección added

#3 - 10/06/2014 12:43 PM - Álvaro Anguix

- Related to gvSIG bugs #2528: Poligonar líneas da error added

#4 - 10/12/2014 04:32 AM - Antonio Falciano

Related to #2582 and #2851.

#5 - 10/13/2014 07:14 AM - Álvaro Anguix

- Related to gvSIG bugs #2582: SEXTANTE Merge geoprocess returns always an empty layer added

#6 - 10/13/2014 07:14 AM - Álvaro Anguix

- Related to gvSIG bugs #2851: RuntimeException: Name descriptor duplicated executing SEXTANTE vector geoprocesses added

#7 - 10/13/2014 08:26 AM - Álvaro Anguix

- Target version set to 2.1.0-2259-rc3

#8 - 10/14/2014 12:50 PM - Álvaro Anguix

- Assignee set to Francisco Díaz Carsí

#9 - 10/16/2014 06:46 AM - Álvaro Anguix

- Status changed from New to Invalid

Parece que los errores mencionados no están relacionados con lo que se comenta y el arreglo/s parece que es/son otro/s.
En principio pasamos a invalid este ticket y vamos solucionando los tickets de geoprocesos mencionados.

#10 - 10/16/2014 07:08 AM - Antonio Falciano

Álvaro Anguix wrote:

> *Parece que los errores mencionados no están relacionados con lo que se comenta y el arreglo/s parece que es/son otro/s.*
> *En principio pasamos a invalid este ticket y vamos solucionando los tickets de geoprocesos mencionados.*

No problem, Alvaro. The important thing is to fix them one by one.
Although, this one is very self-explicative:
"Union" --> java.lang.RuntimeException: Name descriptor GEOMETRY duplicated. (File not found) --> see also #2851

#11 - 10/16/2014 07:24 AM - Joaquín del Cerro Murciano

- Target version changed from 2.1.0-2259-rc3 to 2.1.0-2251-testing

#12 - 10/16/2014 08:21 AM - Joaquín del Cerro Murciano

- Status changed from Invalid to In progress

Al final lo que hemos hecho es que los geoprocesos de sextante solo generan tablas con un unico campo de salida que se llama GEOMTRY.

#13 - 10/16/2014 08:53 AM - Francisco Díaz Carsí

- % Done changed from 0 to 100

- Target version changed from 2.1.0-2251-testing to 2.1.0-2259-rc3

- Status changed from In progress to Fixed

gvsig-geoprocess:r570

Se ha arreglado para que cuando el geoproceso crea la capa temporal no tenga en cuenta las columnas de tipo GEOMETRY de las capas de origen y cree él una única columna de este tipo.

#14 - 10/16/2014 09:28 AM - Joaquín del Cerro Murciano

- Target version changed from 2.1.0-2259-rc3 to 2.1.0-2251-testing

#15 - 10/17/2014 05:29 AM - Álvaro Anguix

- Status changed from Fixed to Closed

#16 - 10/17/2014 05:49 AM - Antonio Falciano

- Status changed from Closed to Invalid

Hi Alvaro,
I think that it's better to set it as Invalid (as you did yesterday) and to open & fix tickets about single geoprocesses, because it's not closed at all: if we consider #2849#note-1, only Polygonize works fine at the moment.
For instance, if you try to use the "Delete field" tool, it reads the GEOMETRY field yet.
IMHO, this is the starting point:

Antonio Falciano wrote:

> *Inspecting the code, I see that **gvSIG geoprocesses** use a new AbstractSextanteGeoProcess* that extends the native abstract class *GeoAlgorithm* to skip the GEOMETRY field, among the other things. Instead, the **SEXTANTE geoprocesses** continue to use the old *GeoAlgorithm* class.

#17 - 10/19/2014 02:59 PM - Antonio Falciano

- Target version changed from 2.1.0-2251-testing to 2.1.0-2259-rc3

- Status changed from Invalid to New

- File skip_geometry_field_etc.patch added

Has patch: Yes
Finally I'm very near to the solution. The SEXTANTE and gvSIG geoprocesses follow two different approaches, so they have their specific dataObjects. This is the reason why gvsig-geoprocess:r570 doesn't fix SEXTANTE geoprocesses (because it's only relative to the gvSIG ones and maybe can break some of them). The right place where we can try to skip the GEOMETRY field is the AbstractVectorLayer class of SEXTANTE (gvsig-toolbox project). I attach a patch that:

- skips the GEOMETRY field from getFieldNames, getFieldIndexByName and getFieldTypes methods;
- skips the GEOMETRY field from count in MergeAlgorithm;
- adjusts the default value management in VectorAddFieldAlgorithm;
- fixes an i18n string in IntersectionAlgorithm.

Result: the most part of SEXTANTE basic vector geoprocesses is fully working (no evident trace of GEOMETRY field, no errors), with the exceptions of Union and Merge, that have the same issue (*Value null not allowed for the attribute...*) due to DefaultFeature management in DAL.

#18 - 10/19/2014 06:17 PM - Álvaro Anguix

- Has patch set to Yes

#19 - 10/23/2014 04:32 AM - Francisco Díaz Carsí

- Status changed from New to Fixed

#20 - 10/24/2014 08:08 AM - Joaquín del Cerro Murciano

- Target version changed from 2.1.0-2259-rc3 to 2.1.0-2254-testing

#21 - 10/27/2014 04:32 AM - Antonio Falciano

- Target version changed from 2.1.0-2254-testing to 2.1.0-2259-rc3

- Status changed from Fixed to New

Same issue of RC2 in build 2254. It seems that the org.gvsig.geoprocess add-on build version is 2087 (the same of RC2) instead of 2090.

#22 - 10/27/2014 05:07 AM - Álvaro Anguix

- Status changed from New to Fixed

Hi Antonio, the bug is fixed but we don't test in build 2254. I change to fixed.

#23 - 10/27/2014 12:15 PM - Joaquín del Cerro Murciano

- Target version changed from 2.1.0-2259-rc3 to 2.1.0-2254-testing

#24 - 10/27/2014 01:04 PM - Antonio Falciano

- Status changed from Fixed to Closed

Hi Francisco, thank you for the fix. It seems to work fine in the most cases. Only "Add field" gives me soma problem. In detail, a java.lang.NumberFormatException: empty String occurs, but this depends by the geoalgorithm itself (my fault).
Finally, I close the ticket. Nice job!

Files

skip_geometry_field_etc.patch	6.25 KB	10/19/2014	Antonio Falciano