GeoTools Software Project Annual Report

Key Accomplishments

The GeoTools Project had four (4) stable releases and six developer releases of the software project in 2010. A lot of new features were included in the new releases of the project. These include the following:

Georeferencing

- Support for Mollweide, EckertIV, Winkel Tripel, Policonic projections.

- Better generation of ESRI PRJ files.

- Integration of EPSG database updates.

- Concurrent execution improvements.

Rendering

- Symbology encoding 1.1 data structure now supported.

- Dash array support for graphic strokes and stability improvements over simple lines.

- Fast polygon clipping.

- Transforming data on the fly during rendering.

- Injecting environment variables in style sheets.

- New options and assorted improvements for the labeling engine.

- Light multithreading in rendering and a set of other rendering speed improvements.

Datastore

- Support for SQL driven views.

- Support for terradata store, SpatiaLite store, and updates to support recent versions of PostGIS.

Raster Rendering

- Mosaic improvements to support heterogeneous mosaics.

- Time and elevation support.

- Raster reprojection speed improvements.

- External overviews for GeoTIFF data.

- Performance improvements.

- Added the ability to extract very large portions of a mosaic at native resolution without memory penalties.

Application Schema

- Complex features graduated to supported status along with a number of fixes and improvements in both functionality and performance.

Documentation

-A large effort was made in 2010 on improving documentation and introductory tutorials.

Areas for Improvement

There are a number of opportunities to improve the documentation for

GeoTools. The use of the CodeHaus wiki for user docs has tapered off due to restrictive controls designed to combat spam. This has left the project in a no-mans-land where current documentation is not available.

The project has also done a poor job of involving "downstream" projects dependent on GeoTools. Noticeable is the delay in 52N upgrading to a modern version of the library, and in the balance of active developers drawing from early adopters.

Events

The project had a great showing at FOSS4G with many presentations based on GeoTools powered software and a "Geospatial for Java" workshop.

Opportunities to Help

The GeoTools community would like to thank contributors that provided patches, our users for their feedback and the companies providing sponsorship to fix bugs and add new features. Thanks to our development team for making this a great year. If you would like to join any of the above activities, send a message to our email list. You are welcome to take part.

- Does your project use GeoTools? Please get involved, we would like to get your voice involved in the future direction of the library.

- This year we are looking for editors, sensible questions and ideas for the GeoTools user guide.

- As always patches make open source great, please contribute in code!

Outlook for 2011

GeoTools is shaping up for an excellent year in 2011, you can get a sneak peak by viewing the change proposals already underway.

- The GeoTools 2.7 release mentioned above has now been released.

- Thanks to AuScope, the app-schema work is scheduled to be completed.

- The project has a couple of great ideas scheduled to land this year.

- The project is "re-versioning" so the next major release of GeoTools will be 8.0 (and based on Java 6).

- The project also has a lot of work going into Web Feature Service 2.0 support with all the new capabilities

that implies for Filter, Data Access, Joins, Temporal support and more!

- Access to the latest GDAL (without patches) thanks to ImageIO-Ext progress.

- The big news is the porting of our user guide to Sphinx. The user guide is weighing in at over 100,000 words with diagrams and "live" code examples.