

Tour de FOSS4G

Libraries, Desktop Apps, Databases, Servers, Web Clients, Catalogues, Distributed Computing

Felix Kunde

Libraries



GDAL / OGR



- Latest release 2.3.2 (September 2018)
- New GDAL drivers: PDS4, RDA
- New OGR drivers: MVT, ESRIJson, TopoJSON, WFS 3
- Improved drivers: MBtiles, DXF, GRIB, WCS, GMLAS, GeoPackage

PROJ

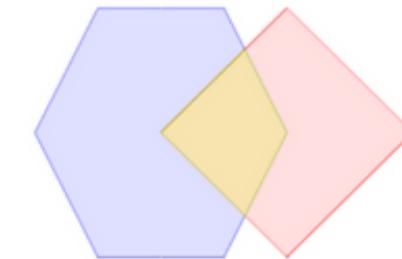
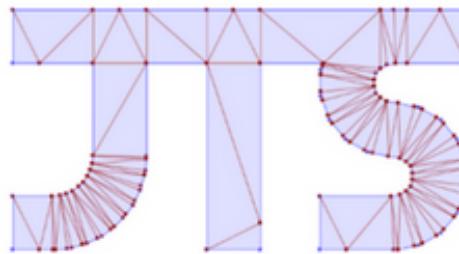
PROJ.4



- Latest release 5.2.0 (September 2018)
- New internal API and better alignment with standards
- New CLI, called *cct*
- Pipelining transformation
- Higher accuracy for geodetic transformations



JTS Topology Suite



- Latest release 1.16 (September 2018)
- Support for M values
- Improved Quadtree and STRtree queries
- Derivatives: JSTS, GEOS > R-GEOS, rgeo, Shapely



GeoTools



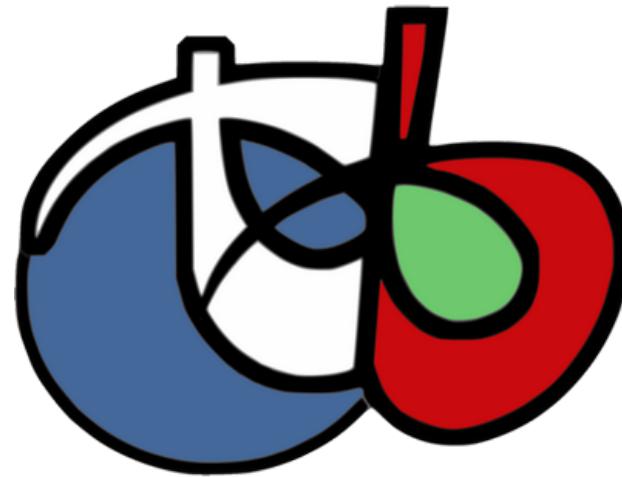
GeoTools



- Latest release 20.0 (September 2018)
- Map algebra via Jiffle
- Support for PostGIS arrays and M values
- Improvements on image mosaic
- Enhanced filtering in app-schema module

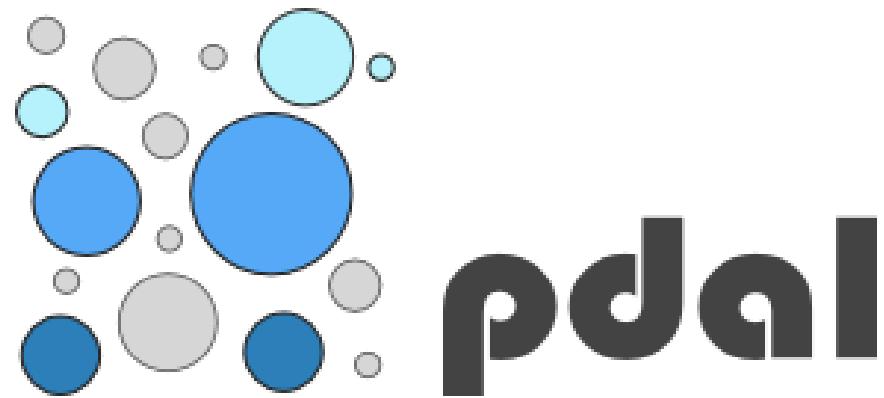


Orfeo Toolbox (OTB)



- Latest release 6.6.0 (June 2018)
- Data augmentation with generated samples
- Dimensionality reduction: Encoder, PCA, SOM

PDAL



- Latest release 1.7.2 (May 2018)
- Read Numpy data directly
- Streaming options for *pipeline* and *translate*



consortium



sf



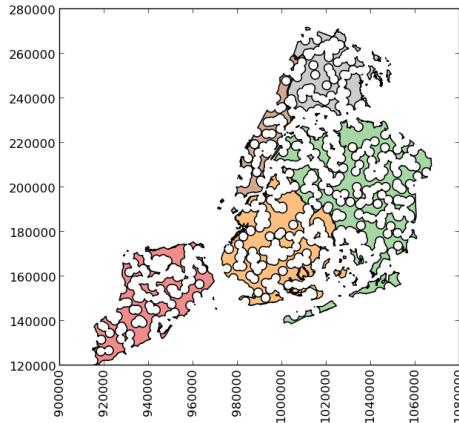
stars



- Latest release 0.7 (October 2018)
- Better GEOS integration
- New buffering styles
- `read_sf` creates tibbles directly

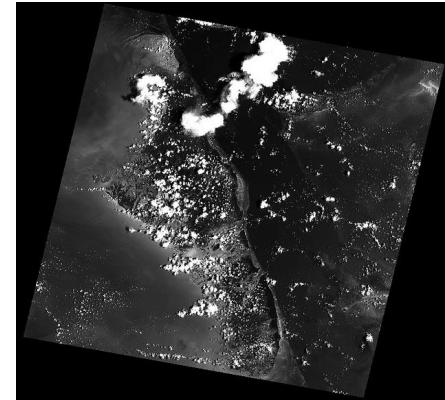
- Latest release 0.2.0 (u.d.)
- Spatialtemporal tidy arrays

GeoPandas



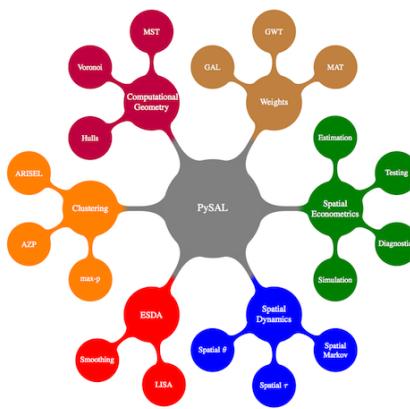
- 0.4.0 (July 2018)
- Improved overlay
- Explode data frames
- `read_file` rasters

Rasterio



- 1.0.8 (October 2018)
- Window operations
- Georeferencing
- In-Memory datasets

pySAL



- 2.0rc2 (July 2018)
- Multi-scale GWR
- Bayes on Gibbs samples
- Categorical Spatial Markov

Mapnik



mapnik

- Latest release 3.0.21 (October 2018)
- Mostly bugfixing of components
- Improved SVG parsing
- New improved `interior` placement algorithm

Leaflet



- Latest release 1.3.4 (August 2018)
- AutoPan when dragging markers at map edges
- Enable options for LayerGroup
- Tolerance option on rendering



OpenLayers



OpenLayers

- Latest release 5.2 (August 2018)
- More convenient select and sketch layer management
- Add 'rendercomplete' event
- Extended ImageStatic API



Cesium



- Latest release 1.50 (October 2018)
- Initial support for clamping to 3D Tiles
- Added ground atmosphere lighting

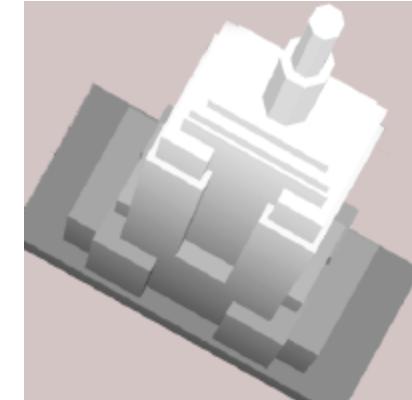


OSM Buildings



- Latest release 4.0 (August 2018)
- Highlighting / Hiding multiple objects
- Picking always returns object
- Improved overall performance

Tangram



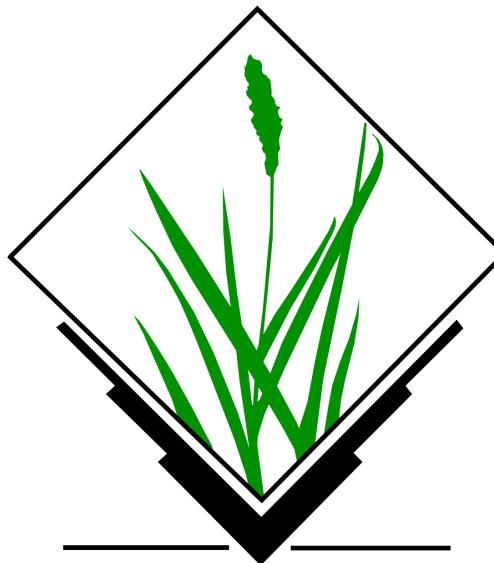
- Latest release ES 0.9.6 (July 2018)
- Latest release JS 0.15.4 (Sep 2018)
- ES: Textures for Draw Rules
- ES/JS: Improved point feature
- JS: Data preprocess options

Desktop

Apps



GRASS GIS



- Latest release 4.7.1 (June 2018)
- Better Data Catalog usability
- Better data compression
- New geomorphons module
- Spatial topological operators



QGIS



- Latest release 3.2.3 (September 2018)
- Better filter expression editor
- Geometry smoothing and simplification
- Project mgmt: gzip or PostgreSQL, metadata
- <https://qgis.org/en/site/forusers/visualchangelog32/>
- QGIS Server, QGIS WebClient

gvSIG



Open Jump



- Latest release 2.4 (February 2018)
- Direct OSM downloads
- Improved 3D/4D support
- Geocoding

- Latest release 1.13 (May 2018)
- CRS transformation part of core
- Many new plugins



SAGA GIS



- Latest release 6.4 (June 2018)
- Grid collection computation

GeoDa



- Latest release 1.10 (June 2017)
- Local Geary Cluster Map
- Multivariate Local Geary Cluster Map
- Clustering: PCA, KMeans, Hierarchical Clustering





hale



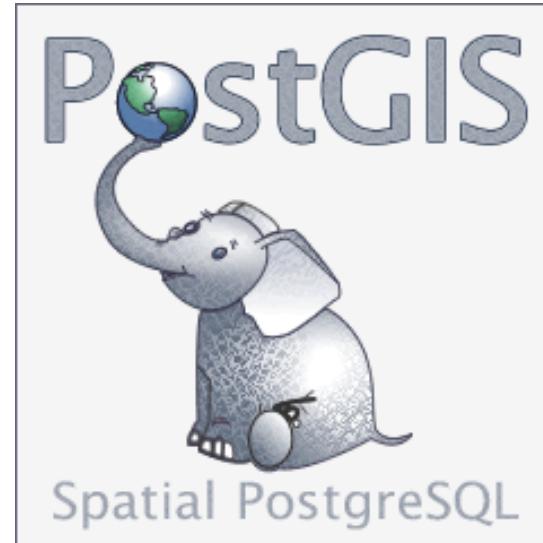
- Latest Release 3.4.1 (September 2018)
- Isolated workspaces for GeoServer
- Merge alignments via CLI
- Split GML output by feature type
- XtraServer plugin

Databases

Indexes



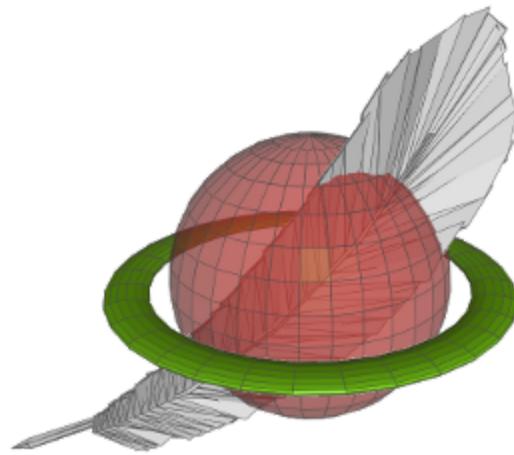
PostGIS



- Latest Release 2.5 (September 2018)
- Improved parallelism
- nD spGIST indexing (Kd trees)
- Hashable geometry in CTEs



SpatiaLite



- Latest Release 5.0beta (August 2018)
- New Topology support
- Stored Procedures support
- New VirtualRouting module
- New BLOB TinyPoint format



GeoPackage



- Latest Release 1.2.1 (June 2018)
- Allow using non-spatial data
- Removing geometry type extensions





Rasdaman

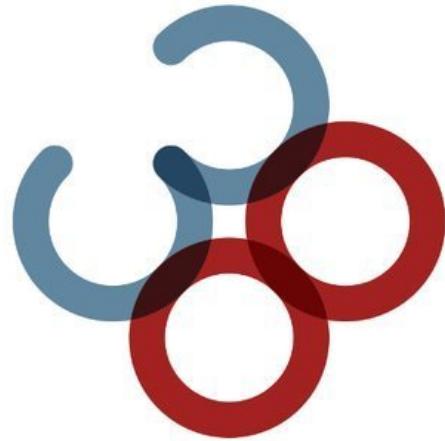
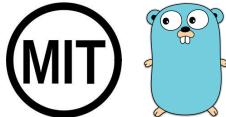


rasdaman
raster data management



- Latest Release 9.7 (June 2018)
- WMS now supports 3D+ coverages
- Polygon clipping support in WCS and WCPS
- Allow expressions in WCPS subsets on grid axes

Tile38

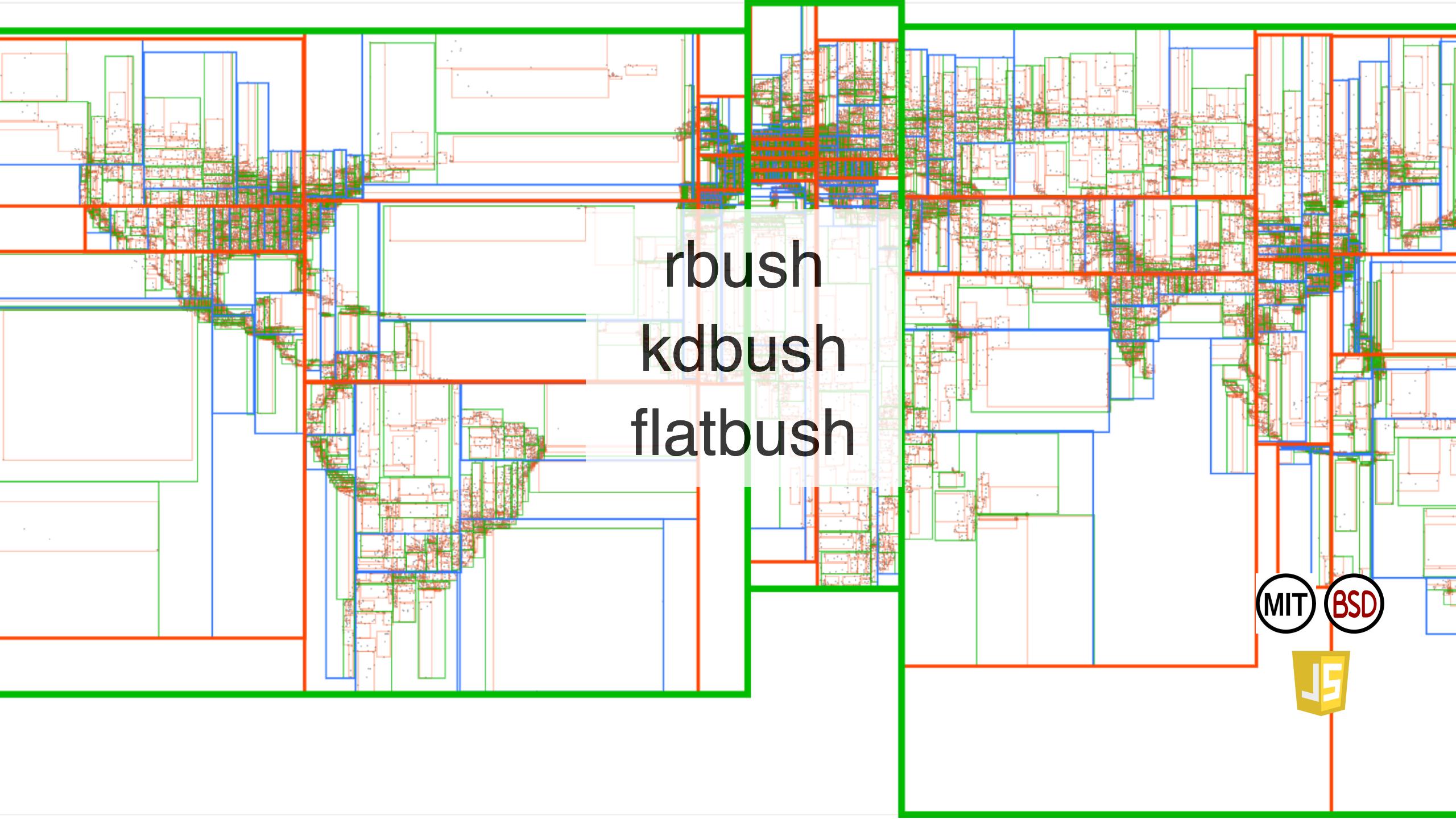


- Latest Release 1.13 (August 2018)
- pub/sub notifications
- MQTT tls/cert options

GeoRocket



- Latest Release 1.3.0 (September 2018)
- Many performance improvements
- POST compressed files (GZIP)
- Multiple Elasticsearch hosts



rbush
kdbush
flatbush

MIT

BSD





entwine



Free as in Freedom



<https://github.com/PDAL/PDAL/issues/2218#issuecomment-427833756>

Servers



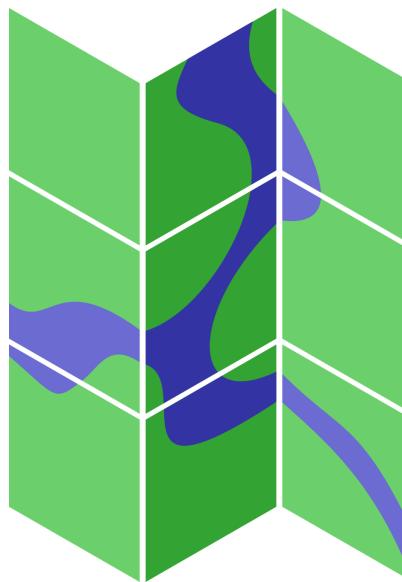
GeoServer



GeoServer

- Latest release 2.14 (September 2018)
- See GeoTools improvements
- Improved style editor
- WMS “nearest match” supporting time
- New modules: OAuth2, WFS 3

Mapserver



- Latest release 7.2.1 (October 2018)
- Mapbox Vector Tiles support
- Vendor-Specific OGC FILTER parameter (WMS)
- WCS 2.0 support
- Enable Python 3 for Mapscript



deegree



degree

- Latest release 3.4.3 (August 2018)
- Fully compliant to OGC OWS standards
- GML Temporal support
- Better INSPIRE support
- Pageable WFS
- New CLI tool to import complex GML

ZOO Project



- 1.6 (February 2017)

pyWPS



- 4.0 (December 2016)

52n WPS



- 4.0beta6 (August 2018)

istSOS



- v3.0 under development

52n SOS



- Latest release 4.4.3 (June 2018)
- Timeout support
- Improved result filtering
- Static reference values



GeoWebCache



- Latest release 1.14 (August 2018)
- Improved S3 storage support
- REST configuration management

MapProxy



- Latest release 1.11 (November 2017)
- Improve reprojection performance
- Updated ArcGIS compact cache
- Support for S3, Redis, GeoPackage

OpenMapTiles



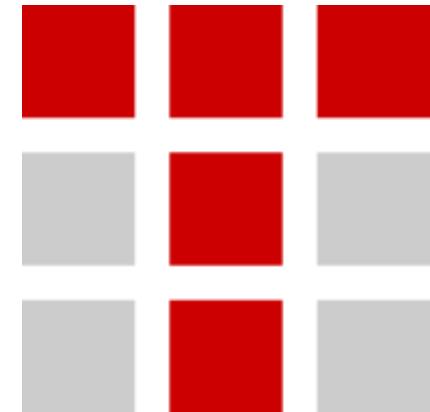
- 3.8.1 (June 2018)

Tegola



- 0.7.0 (August 2018)

t-rex



- 0.9 (July 2018)

Web

Clients



Mapbender

Mapbender

- Latest release 3.0.7.5 (September 2018)
- New coordinate tool
- Search-router with mouse-over
- Many GUI improvements

Oskari



- Latest release 1.47 (May 2018)
- Improved filtering in statistical maps
- Timeseries in embedded maps
- Moving to OpenLayers 4



GeoNode



- Latest release 2.8 (April 2018)
- SLD Upload for Layers
- Vectorial Layers Download Filter
- Improved Metadata Editor Wizard
- Monitoring Plugin for Administrators

GeoExt



- Latest release 3.1.0 (September 2017)
- Updates to new OL and ExtJS versions

GeoMoose



- Latest release 3.4 (June 2018)
- Queryable JSON layers
- Multi field searchable layers
- Update build system



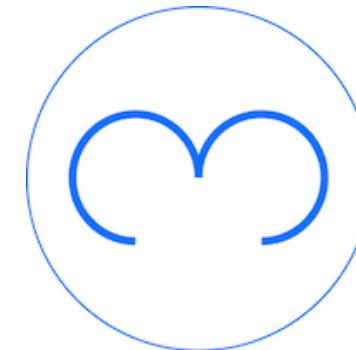


iTowns



- Latest release 2.3.0 (February 2018)
- Wireframe support for 3DTiles layer
- Object orientation = tile orientation
- Improved debugging functionalities
- Update THREE.js

VTS



- Latest release 2.16 (October 2018)
- Advanced measuring tools
- New search features
- C++ backend, HTTP Proxy, Unity plugin



Mago3D



- Latest release 1.0.7 (May 2018)
- Better queuing and RAM management
- Quantized mesh tiles

BIM Surfer



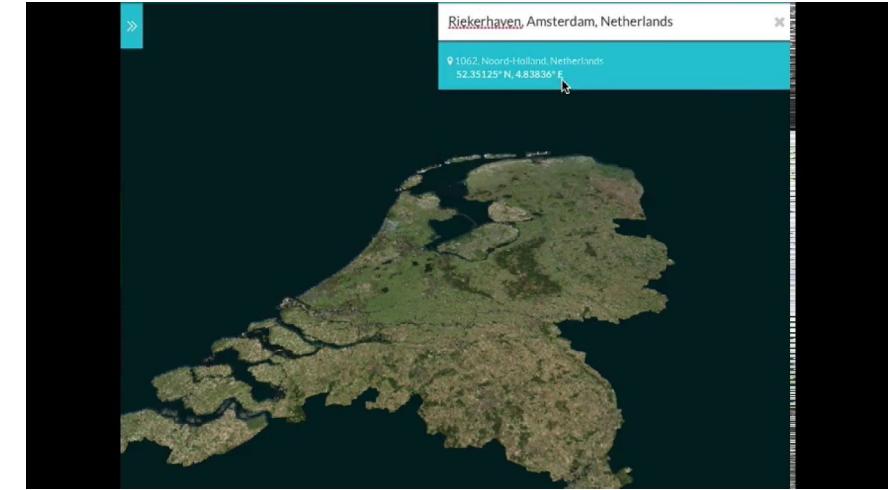
- Latest release 0.0.45 (October 2018)
- Improved glTF loading
- Update to latest BIMServer release

potree



- Latest release 1.6 (March 2018)
- Las -> Potree converter
- Desktop/Portable version

Plas.io UI



- Latest release 0.4.1 (January 2018)
- Mostly fixes
- Greyhound server -> Plasio.js

Catalogues



GeoNetwork



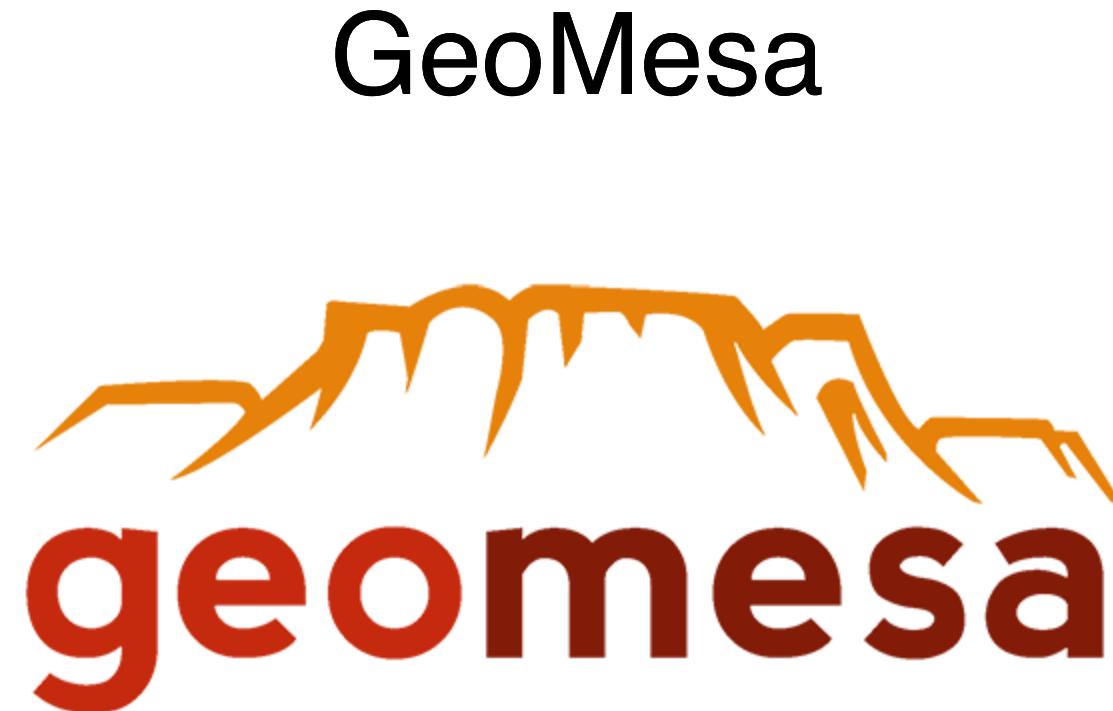
- Latest release 3.4.3 (July 2018)
- WPS harvesting
- Load INSPIRE codelists from registry
- WFS feature indexing using Elasticsearch

pyCSW



- Latest release 2.2.0 (March 2018)
- WMS, WPS harvesting
- Python plugin enhancements
- CQL to Filter transform
- CQL WKT ENVELOPE support

Distributed Computing



- Latest release 2.1 (August 2018)
- Easier auto ingestion of data
- Apache Kudu data store implementation
- FileSystem data store support for non-point geometries



GeoWave



GeoWave

- Latest release 0.9.8 (September 2018)
- Upcoming support for Cassandra
- Allow other CRSes in indexes
- Support more GeoTools data stores



- Latest release 2.0.0 (October 2018)
- Native support for Cloud Optimized GeoTIFFs (COG)
- Partitioner option for many operations
- New *Pyramid* class for rasters
- Binary Kryo serialization of geometry

Thanks.

Please tell, if I forgot a project

<https://slides.com/fxku/foss4g>



See
you
in



- FOSS4G Asia - Moratuwa (Dec 18)
- FOSS4G Oceania - Melbourne (Nov 18)
- FOSSGIS - Dresden (March 19)
- FOSS4G-NA - San Diego (April 19)
- FOSS4G - Bucharest (August 19)
- and many more ...