geo-shell

Jared Erickson

Version 0.7-SNAPSHOT

Table of Contents

Introduction

geo-shell is an interactive shell for geospatial analysis.

geo-shell has modules for dealing with **vectors**, **rasters**, **tiles**, **maps**, and **styles**.

For **vector** layers, you can use **workspace** commands access layers of spatial data in datasets like shapefiles, geopackages, or postgis databases. With **layer** commands you can perform geoprocessing functions like calculating centroids or buffer features.

For **raster** layers, you can use **format** commands access individual rasters from geotifs or world images. With **raster** commands you can perform mosaic, raster algebra, or crop functions.

The **tile** commands let you create tile layers, get tiles, and get rasters from tiles.

The **style** commands let you create styles for vector layers and raster.

The **map** commands allow you to visualize vector, raster, and tile layers.

Workspace

Workspaces hold vector layers. A Workspace can be a GeoPackage database, a directory of Shapefiles, or a PostGIS database.

Basics

You can open, close, and list Workspaces. The eariest Workspace to open is an in memory Workspace.

Table 1. Open a Workspace

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Workspace name	true		
params	The connection parameters	true		

geo-shell> **workspace open** --name mem --params memory
Workspace mem opened!

You can open a Workspace with --params or connection parameters. You can give it a name with --name flag.

List open Workspaces

geo-shell> **workspace list**
mem = Memory

Listing open Workspaces give you the name and the type Workspace.

Table 2. Close a Workspace

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Workspace name	true		

geo-shell> **workspace close** --name mem
Workspace mem closed!

Once you close a Workspace by name it will no longer appear with the list command.

Layers

In this example, we will open a GeoPackage database filled with data from Natural Earth.

Open a Workspace

geo-shell> **workspace open** --name naturalearth --params src/test/resources/naturalearth.gpkg
Workspace naturalearth opened!

List open Workspaces

geo-shell> **workspace layers** --name naturalearth
countries
ocean
places
states

Close a Workspace

geo-shell> **workspace close** --name naturalearth
Workspace naturalearth closed!

Layer

Basics

Open

Open a Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default
workspace	The Workspace name	true		
layer	The Layer name	true		
name	The name	false		

Close

Close a Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Layer name	true		

List

List open Layers.

Geoprocessing

Random Points

Create a Layer with a number of randomly located points

geo-shell> **layer random** --output-workspace layers --output-name points --geometry -180,-90,180,90 --number 100 --projection EPSG:4326

Name	Description	Mandatory	Specified Default	Unspecified Default
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		
number	The number of points	true		
geometry	The geometry or bounds in which to create the points	true		
projection	The projection	true		
id-field	The id field name	false	id	id
geometry-field	The geometry field name	false	the_geom	the_geom
grid	Whether to create points in a grid	false	false	false
constrained-to-circle	Whether points should be constrained to a circle	false	false	false
gutter-fraction	The size of gutter between cells	false	0	0

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **layer random** --output-workspace layers --output-name points --geometry -180,-90,180,90 --number 100 --projection EPSG:4326
Done!

geo-shell> **style vector default** --layer points --color #1E90FF --file examples/points.sld
Default Vector Style for points written to /home/travis/build/jericks/geo-shell/examples/points.sld!

geo-shell> **layer style set** --name points --style examples/points.sld
Style /home/travis/build/jericks/geo-shell/examples/points.sld set on points

geo-shell> **workspace open** --name naturalearth --params examples/naturalearth.gpkg
Workspace naturalearth opened!

geo-shell> **layer open** --workspace naturalearth --layer countries --name countries
Opened Workspace naturalearth Layer countries as countries

geo-shell> **layer style set** --name countries --style examples/countries.sld
Style /home/travis/build/jericks/geo-shell/examples/countries.sld set on countries

geo-shell> **layer open** --workspace naturalearth --layer ocean --name ocean
Opened Workspace naturalearth Layer ocean as ocean

geo-shell> **layer style set** --name ocean --style examples/ocean.sld
Style /home/travis/build/jericks/geo-shell/examples/ocean.sld set on ocean

geo-shell> **map open** --name randomMap
Map randomMap opened!

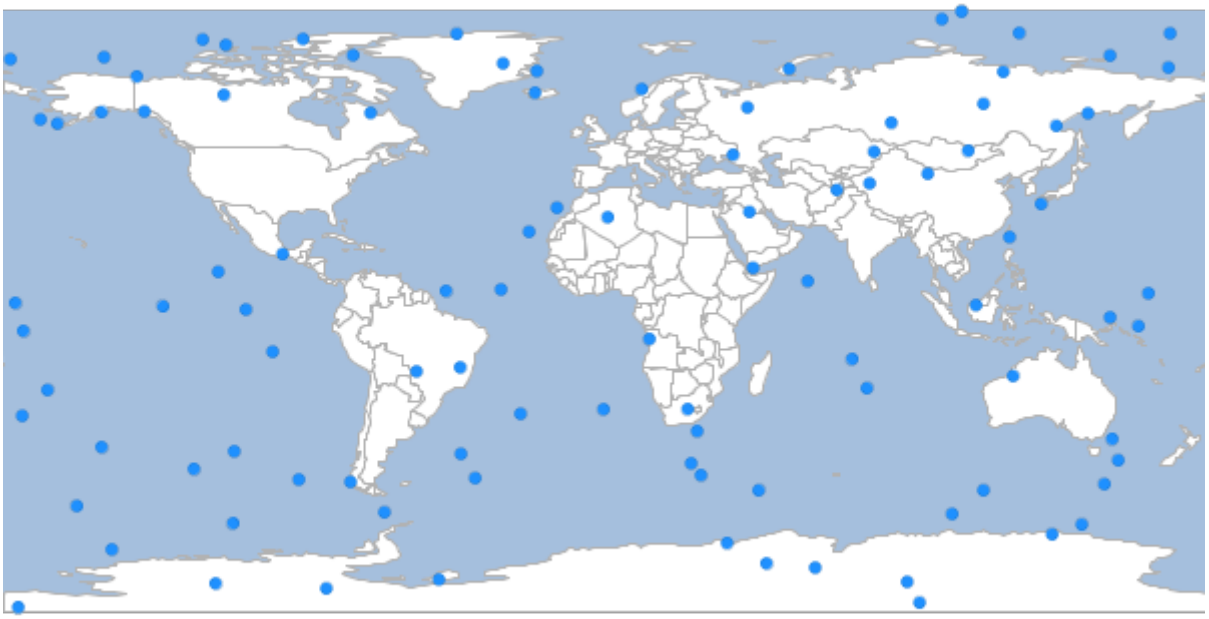
geo-shell> **map add layer** --name randomMap --layer ocean
Added ocean layer to map randomMap

geo-shell> **map add layer** --name randomMap --layer countries
Added countries layer to map randomMap

geo-shell> **map add layer** --name randomMap --layer points
Added points layer to map randomMap

geo-shell> **map draw** --name randomMap --file examples/random_points.png
Done drawing /home/travis/build/jericks/geo-shell/examples/random_points.png!

geo-shell> **map close** --name randomMap
Map randomMap closed!



Buffer

Buffer the input Layer to the output Layer.

geo-shell> **layer buffer** --input-name points --output-workspace layers --output-name buffers --distance 10

Name	Description	Mandatory	Specified Default	Unspecified Default
input-name	The Layer name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		
distance	The buffer distance	true		

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **layer random** --output-workspace layers --output-name points --geometry -180,-90,180,90 --number 100 --projection EPSG:4326
Done!

geo-shell> **layer buffer** --input-name points --output-workspace layers --output-name buffers --distance 10
Done!

geo-shell> **style vector default** --layer points --color #1E90FF --file examples/points.sld
Default Vector Style for points written to /home/travis/build/jericks/geo-shell/examples/points.sld!

geo-shell> **style vector default** --layer buffers --color #1E90FF --opacity 0.25 --file examples/buffers.sld
Default Vector Style for buffers written to /home/travis/build/jericks/geo-shell/examples/buffers.sld!

geo-shell> **layer style set** --name points --style examples/points.sld
Style /home/travis/build/jericks/geo-shell/examples/points.sld set on points

geo-shell> **layer style set** --name buffers --style examples/buffers.sld
Style /home/travis/build/jericks/geo-shell/examples/buffers.sld set on buffers

geo-shell> **workspace open** --name naturalearth --params examples/naturalearth.gpkg
Workspace naturalearth opened!

geo-shell> **layer open** --workspace naturalearth --layer countries --name countries
Opened Workspace naturalearth Layer countries as countries

geo-shell> **layer style set** --name countries --style examples/countries.sld
Style /home/travis/build/jericks/geo-shell/examples/countries.sld set on countries

geo-shell> **layer open** --workspace naturalearth --layer ocean --name ocean
Opened Workspace naturalearth Layer ocean as ocean

geo-shell> **layer style set** --name ocean --style examples/ocean.sld
Style /home/travis/build/jericks/geo-shell/examples/ocean.sld set on ocean

geo-shell> **map open** --name map
Map map opened!

geo-shell> **map add layer** --name map --layer ocean
Added ocean layer to map map

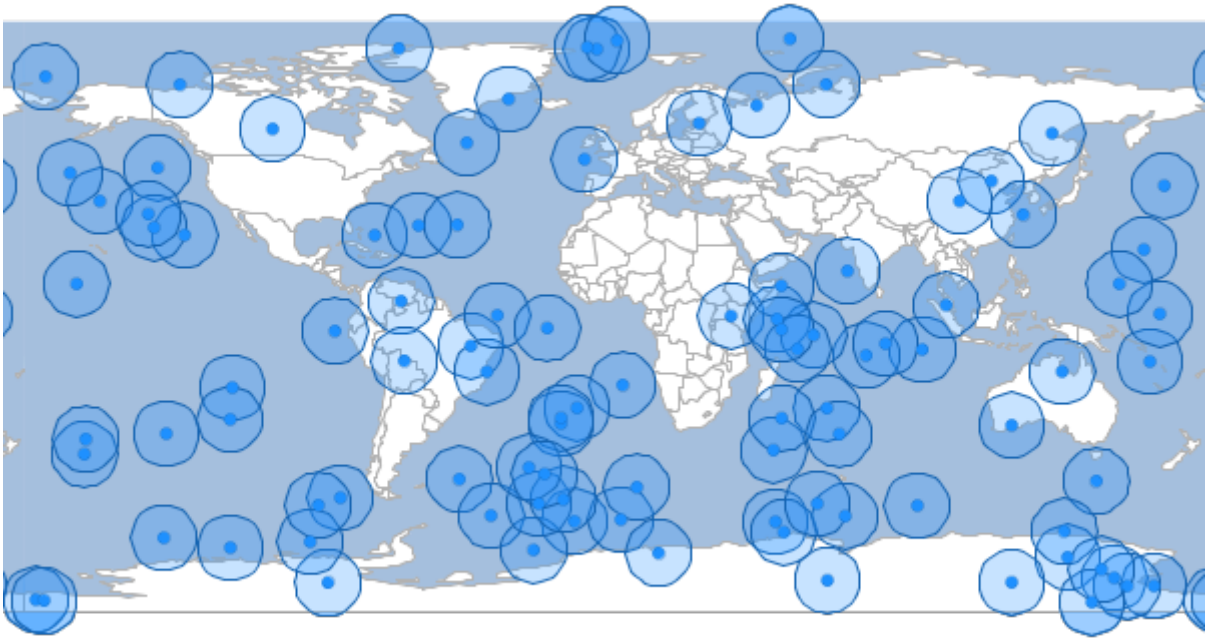
geo-shell> **map add layer** --name map --layer countries
Added countries layer to map map

geo-shell> **map add layer** --name map --layer buffers
Added buffers layer to map map

geo-shell> **map add layer** --name map --layer points
Added points layer to map map

geo-shell> **map draw** --name map --file examples/layer_buffer.png
Done drawing /home/travis/build/jericks/geo-shell/examples/layer_buffer.png!

geo-shell> **map close** --name map
Map map closed!



Centroid

Calculate the centroids of the input Layer to the output Layer.

geo-shell> **layer centroid** --input-name countries --output-name centroids --output-workspace layers

Name	Description	Mandatory	Specified Default	Unspecified Default
input-name	The Layer name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **workspace open** --name naturalearth --params examples/naturalearth.gpkg
Workspace naturalearth opened!

geo-shell> **layer open** --workspace naturalearth --layer countries --name countries
Opened Workspace naturalearth Layer countries as countries

geo-shell> **layer style set** --name countries --style examples/countries.sld
Style /home/travis/build/jericks/geo-shell/examples/countries.sld set on countries

geo-shell> **layer centroid** --input-name countries --output-name centroids --output-workspace layers

Done!

geo-shell> **style vector default** --layer centroids --color #1E90FF --file examples/centroids.sld
Default Vector Style for centroids written to /home/travis/build/jericks/geo-shell/examples/centroids.sld!

geo-shell> **layer style set** --name centroids --style examples/centroids.sld
Style /home/travis/build/jericks/geo-shell/examples/centroids.sld set on centroids

geo-shell> **layer open** --workspace naturalearth --layer ocean --name ocean
Opened Workspace naturalearth Layer ocean as ocean

geo-shell> **layer style set** --name ocean --style examples/ocean.sld
Style /home/travis/build/jericks/geo-shell/examples/ocean.sld set on ocean

geo-shell> **map open** --name map
Map map opened!

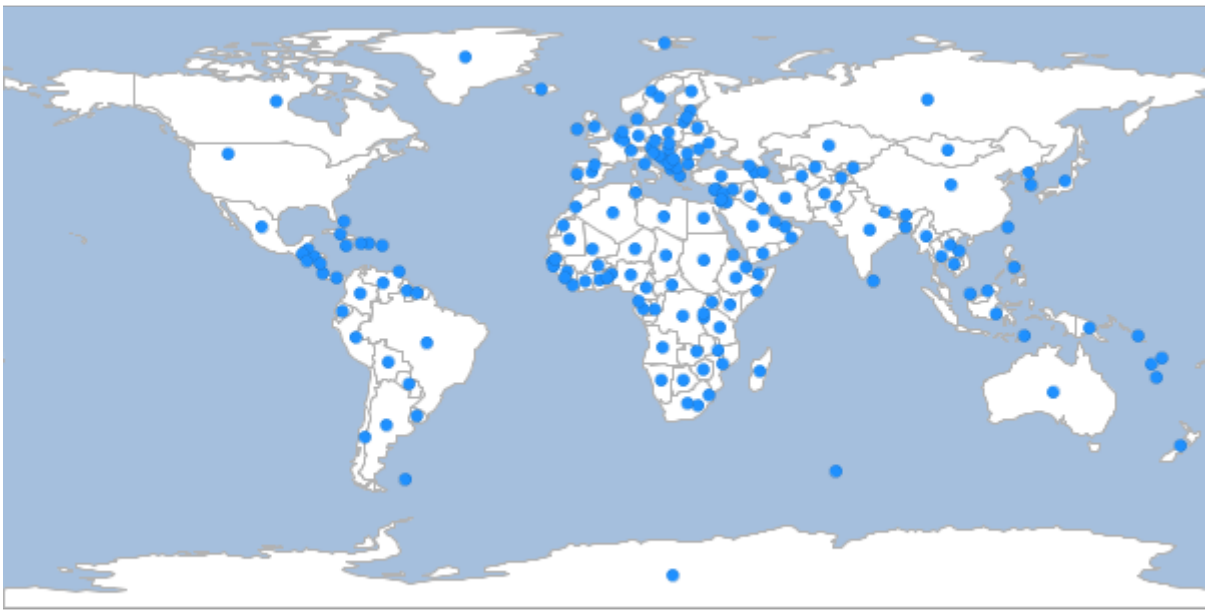
geo-shell> **map add layer** --name map --layer ocean
Added ocean layer to map map

geo-shell> **map add layer** --name map --layer countries
Added countries layer to map map

geo-shell> **map add layer** --name map --layer centroids
Added centroids layer to map map

geo-shell> **map draw** --name map --file examples/layer_centroid.png
Done drawing /home/travis/build/jericks/geo-shell/examples/layer_centroid.png!

geo-shell> **map close** --name map
Map map closed!



Interior Point

Calculate the interior points of the input Layer to the output Layer.

geo-shell> **layer interiorpoint** --input-name countries --output-name interiorpoints --output -workspace layers

Name	Description	Mandatory	Specified Default	Unspecified Default
input-name	The Layer name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **workspace open** --name naturalearth --params examples/naturalearth.gpkg
Workspace naturalearth opened!

geo-shell> **layer open** --workspace naturalearth --layer countries --name countries
Opened Workspace naturalearth Layer countries as countries

geo-shell> **layer style set** --name countries --style examples/countries.sld
Style /home/travis/build/jericks/geo-shell/examples/countries.sld set on countries

geo-shell> **layer interiorpoint** --input-name countries --output-name interiorpoints --output -workspace layers

Done!

geo-shell> **style vector default** --layer interiorpoints --color #1E90FF --file examples/interiorpoints.sld
Default Vector Style for interiorpoints written to /home/travis/build/jericks/geo-shell/examples/interiorpoints.sld!

geo-shell> **layer style set** --name interiorpoints --style examples/interiorpoints.sld
Style /home/travis/build/jericks/geo-shell/examples/interiorpoints.sld set on interiorpoints

geo-shell> **layer open** --workspace naturalearth --layer ocean --name ocean
Opened Workspace naturalearth Layer ocean as ocean

geo-shell> **layer style set** --name ocean --style examples/ocean.sld
Style /home/travis/build/jericks/geo-shell/examples/ocean.sld set on ocean

geo-shell> **map open** --name map
Map map opened!

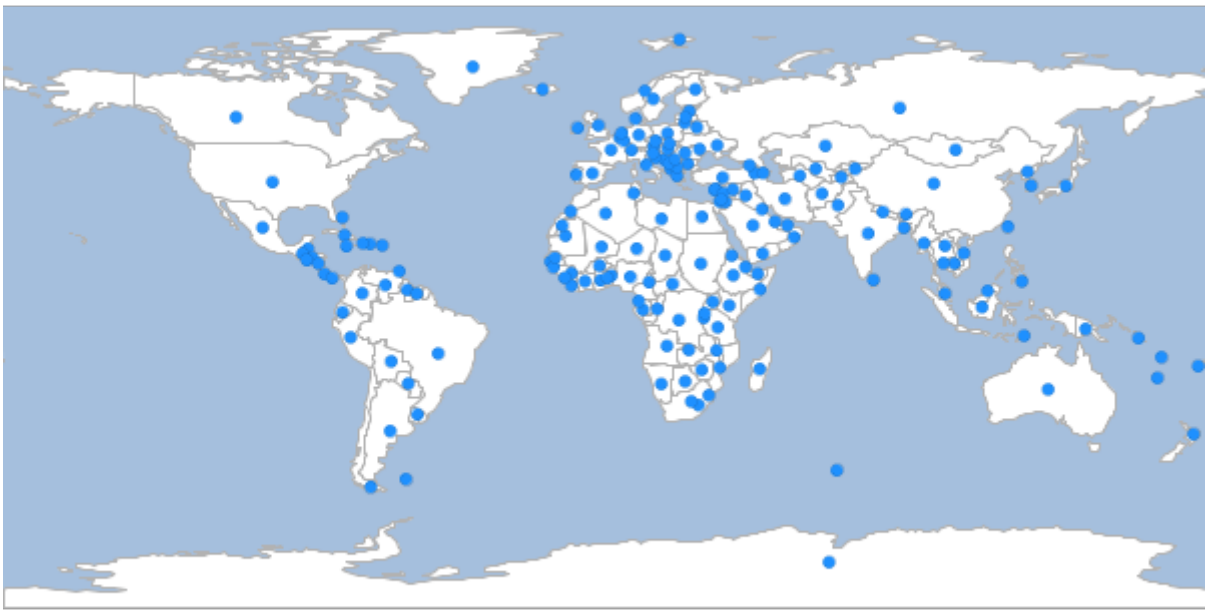
geo-shell> **map add layer** --name map --layer ocean
Added ocean layer to map map

geo-shell> **map add layer** --name map --layer countries
Added countries layer to map map

geo-shell> **map add layer** --name map --layer interiorpoints
Added interiorpoints layer to map map

geo-shell> **map draw** --name map --file examples/layer_interiorpoint.png
Done drawing /home/travis/build/jericks/geo-shell/examples/layer_interiorpoint.png!

geo-shell> **map close** --name map
Map map closed!



Extent

Calculate the extent of the input Layer and save it to the output Layer.

geo-shell> **layer extent** --input-name states --output-workspace layers --output-name usa

Name	Description	Mandatory	Specified Default	Unspecified Default
input-name	The Layer name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		
geometry-field	The geometry field name	false	the_geom	the_geom

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **workspace open** --name naturalearth --params examples/naturalearth.gpkg
Workspace naturalearth opened!

geo-shell> **layer style set** --name states --style examples/states.sld
Unable to find Layer states

geo-shell> **layer open** --workspace naturalearth --layer states --name states
Opened Workspace naturalearth Layer states as states

geo-shell> **layer extent** --input-name states --output-workspace layers --output-name usa
Done!

geo-shell> **style vector default** --layer usa --color #1E90FF --opacity 0.25 --file examples/extent.sld
Default Vector Style for usa written to /home/travis/build/jericks/geo-shell/examples/extent.sld!

geo-shell> **layer style set** --name usa --style examples/extent.sld
Style /home/travis/build/jericks/geo-shell/examples/extent.sld set on usa

geo-shell> **layer open** --workspace naturalearth --layer countries --name countries
Opened Workspace naturalearth Layer countries as countries

geo-shell> **layer style set** --name countries --style examples/countries.sld
Style /home/travis/build/jericks/geo-shell/examples/countries.sld set on countries

geo-shell> **layer open** --workspace naturalearth --layer ocean --name ocean
Opened Workspace naturalearth Layer ocean as ocean

geo-shell> **layer style set** --name ocean --style examples/ocean.sld
Style /home/travis/build/jericks/geo-shell/examples/ocean.sld set on ocean

geo-shell> **map open** --name map
Map map opened!

geo-shell> **map add layer** --name map --layer ocean
Added ocean layer to map map

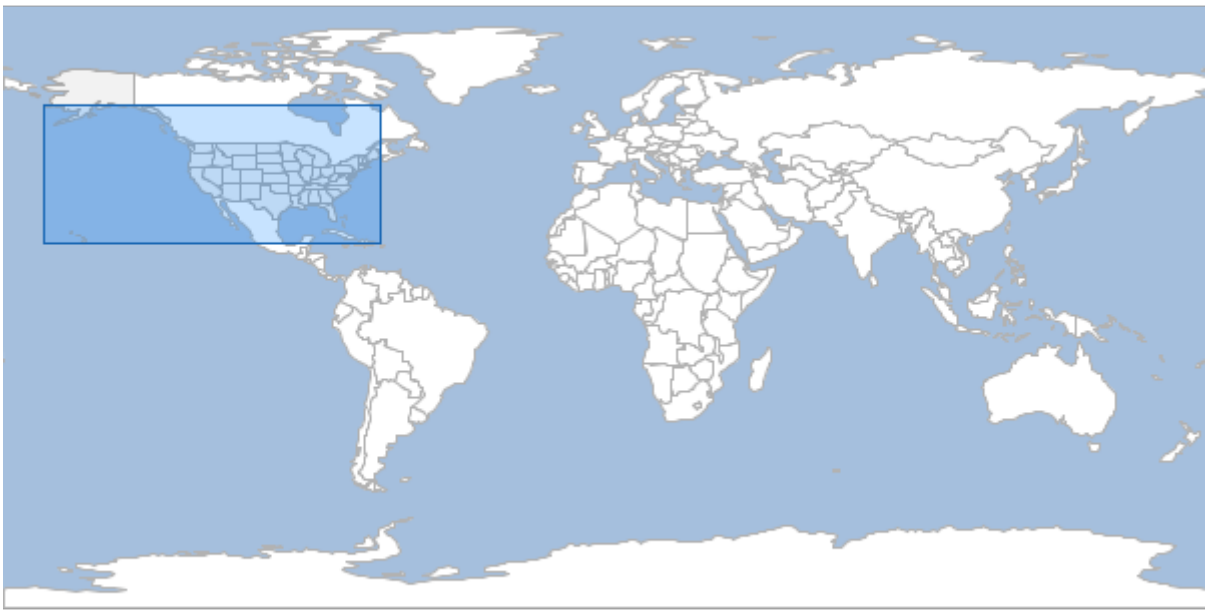
geo-shell> **map add layer** --name map --layer countries
Added countries layer to map map

geo-shell> **map add layer** --name map --layer states
Added states layer to map map

geo-shell> **map add layer** --name map --layer usa
Added usa layer to map map

geo-shell> **map draw** --name map --file examples/layer_extent.png
Done drawing /home/travis/build/jericks/geo-shell/examples/layer_extent.png!

geo-shell> **map close** --name map
Map map closed!



Extents

Calculate the extents of each Feature in the input Layer and save them to the output Layer.

geo-shell> **layer extents** --input-name states --output-workspace layers --output-name state_extents

Name	Description	Mandatory	Specified Default	Unspecified Default
input-name	The Layer name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **workspace open** --name naturalearth --params examples/naturalearth.gpkg
Workspace naturalearth opened!

geo-shell> **layer style set** --name states --style examples/states.sld
Unable to find Layer states

geo-shell> **layer open** --workspace naturalearth --layer states --name states
Opened Workspace naturalearth Layer states as states

geo-shell> **layer extents** --input-name states --output-workspace layers --output-name state_extents
Done!

geo-shell> **style vector default** --layer state_extents --color #1E90FF --opacity 0.25 --file examples/extent.sld
Default Vector Style for state_extents written to /home/travis/build/jericks/geo-shell/examples/extent.sld!

geo-shell> **layer style set** --name state_extents --style examples/extent.sld
Style /home/travis/build/jericks/geo-shell/examples/extent.sld set on state_extents

geo-shell> **layer open** --workspace naturalearth --layer countries --name countries
Opened Workspace naturalearth Layer countries as countries

geo-shell> **layer style set** --name countries --style examples/countries.sld
Style /home/travis/build/jericks/geo-shell/examples/countries.sld set on countries

geo-shell> **layer open** --workspace naturalearth --layer ocean --name ocean
Opened Workspace naturalearth Layer ocean as ocean

geo-shell> **layer style set** --name ocean --style examples/ocean.sld
Style /home/travis/build/jericks/geo-shell/examples/ocean.sld set on ocean

geo-shell> **map open** --name map
Map map opened!

geo-shell> **map add layer** --name map --layer ocean
Added ocean layer to map map

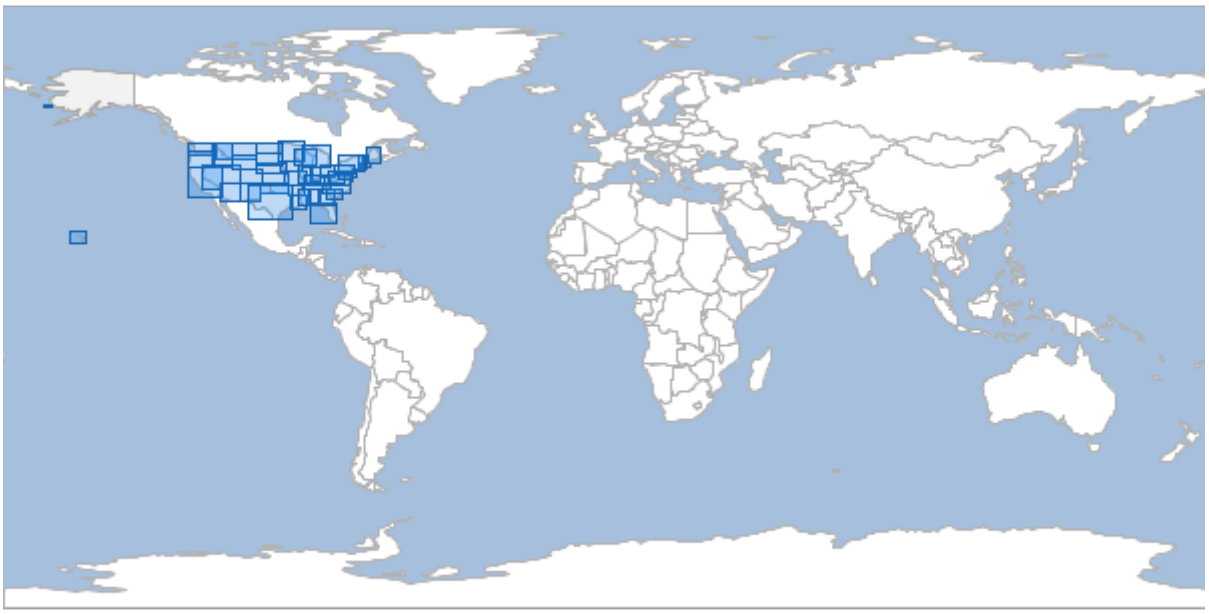
geo-shell> **map add layer** --name map --layer countries
Added countries layer to map map

geo-shell> **map add layer** --name map --layer states
Added states layer to map map

geo-shell> **map add layer** --name map --layer state_extents
Added state_extents layer to map map

geo-shell> **map draw** --name map --file examples/layer_extents.png
Done drawing /home/travis/build/jericks/geo-shell/examples/layer_extents.png!

geo-shell> **map close** --name map
Map map closed!



Graticule

Square

Create a square graticule.

geo-shell> **layer graticule square** --workspace layers --name squares --bounds -180,-90,180,90 --length 20

Name	Description	Mandatory	Specified Default	Unspecified Default
workspace	The Workspace name	true		
name	The new Layer name	true		
bounds	The bounds	true		
length	The length	true		
spacing	The spacing	false	-1	-1

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **layer graticule square** --workspace layers --name squares --bounds -180,-90,180,90 --length 20
Created Square Graticule Layer squares!

geo-shell> **style vector default** --layer squares --color #1E90FF --opacity 0.30 --file

examples/squares.sld
Default Vector Style for squares written to /home/travis/build/jericks/geo-shell/examples/squares.sld!

geo-shell> **layer style set** --name squares --style examples/squares.sld
Style /home/travis/build/jericks/geo-shell/examples/squares.sld set on squares

geo-shell> **workspace open** --name naturalearth --params examples/naturalearth.gpkg
Workspace naturalearth opened!

geo-shell> **layer open** --workspace naturalearth --layer countries --name countries
Opened Workspace naturalearth Layer countries as countries

geo-shell> **layer style set** --name countries --style examples/countries.sld
Style /home/travis/build/jericks/geo-shell/examples/countries.sld set on countries

geo-shell> **layer open** --workspace naturalearth --layer ocean --name ocean
Opened Workspace naturalearth Layer ocean as ocean

geo-shell> **layer style set** --name ocean --style examples/ocean.sld
Style /home/travis/build/jericks/geo-shell/examples/ocean.sld set on ocean

geo-shell> **map open** --name graticule
Map graticule opened!

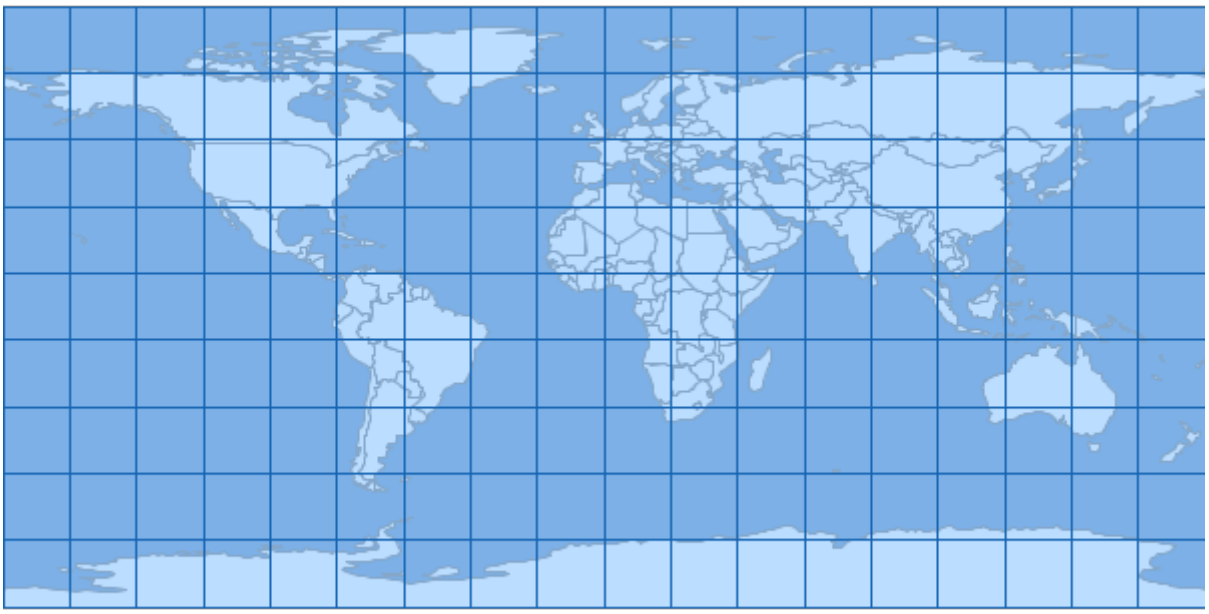
geo-shell> **map add layer** --name graticule --layer ocean
Added ocean layer to map graticule

geo-shell> **map add layer** --name graticule --layer countries
Added countries layer to map graticule

geo-shell> **map add layer** --name graticule --layer squares
Added squares layer to map graticule

geo-shell> **map draw** --name graticule --file examples/square_graticules.png
Done drawing /home/travis/build/jericks/geo-shell/examples/square_graticules.png!

geo-shell> **map close** --name graticule
Map graticule closed!



Rectangle

Create a rectangle graticule.

geo-shell> **layer graticule rectangle** --workspace layers --name rectangles --bounds -180,-90,180,90 --width 20 --height 10

Name	Description	Mandatory	Specified Default	Unspecified Default
workspace	The Workspace name	true		
name	The new Layer name	true		
bounds	The bounds	true		
width	The width	true		
height	The height	true		
spacing	The spacing	false	-1	-1

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **layer graticule rectangle** --workspace layers --name rectangles --bounds -180,-90,180,90 --width 20 --height 10
Created Rectangle Graticule Layer rectangles!

geo-shell> **style vector default** --layer rectangles --color #1E90FF --opacity 0.30 --file examples/rectangles.sld

Default Vector Style for rectangles written to /home/travis/build/jericks/geo-shell/examples/rectangles.sld!

geo-shell> **layer style set** --name rectangles --style examples/rectangles.sld
Style /home/travis/build/jericks/geo-shell/examples/rectangles.sld set on rectangles

geo-shell> **workspace open** --name naturalearth --params examples/naturalearth.gpkg
Workspace naturalearth opened!

geo-shell> **layer open** --workspace naturalearth --layer countries --name countries
Opened Workspace naturalearth Layer countries as countries

geo-shell> **layer style set** --name countries --style examples/countries.sld
Style /home/travis/build/jericks/geo-shell/examples/countries.sld set on countries

geo-shell> **layer open** --workspace naturalearth --layer ocean --name ocean
Opened Workspace naturalearth Layer ocean as ocean

geo-shell> **layer style set** --name ocean --style examples/ocean.sld
Style /home/travis/build/jericks/geo-shell/examples/ocean.sld set on ocean

geo-shell> **map open** --name graticule
Map graticule opened!

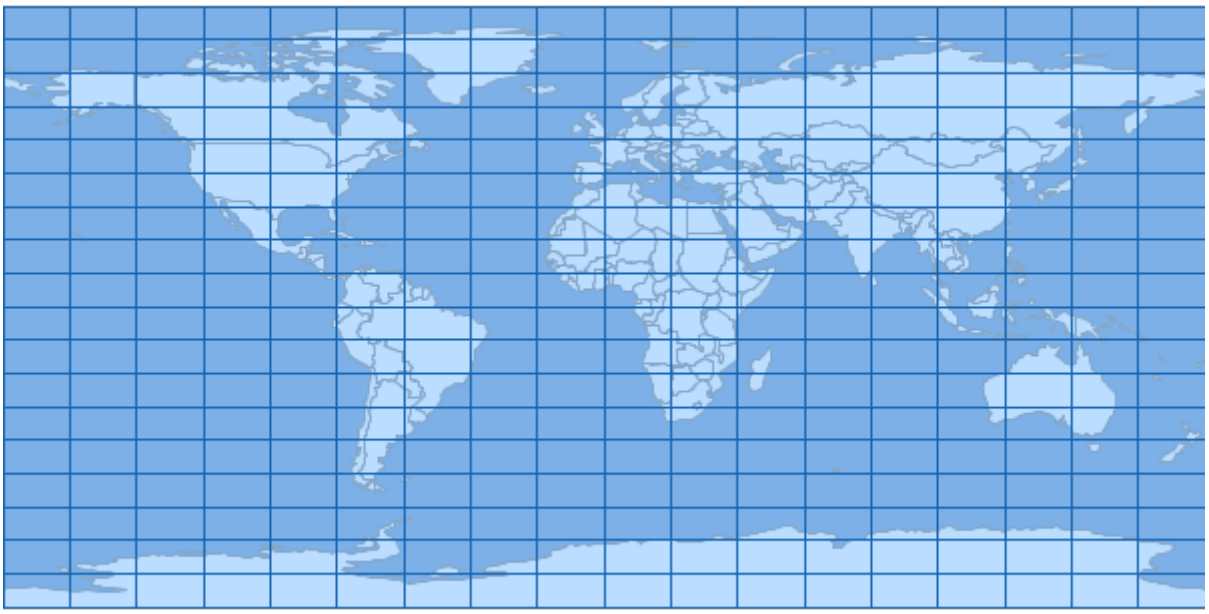
geo-shell> **map add layer** --name graticule --layer ocean
Added ocean layer to map graticule

geo-shell> **map add layer** --name graticule --layer countries
Added countries layer to map graticule

geo-shell> **map add layer** --name graticule --layer rectangles
Added rectangles layer to map graticule

geo-shell> **map draw** --name graticule --file examples/rectangle_graticules.png
Done drawing /home/travis/build/jericks/geo-shell/examples/rectangle_graticules.png!

geo-shell> **map close** --name graticule
Map graticule closed!



Oval

Create a oval graticule.

geo-shell> **layer graticule oval** --workspace layers --name ovals --bounds -180,-90,180,90 --size 20

Name	Description	Mandatory	Specified Default	Unspecified Default
workspace	The Workspace name	true		
name	The new Layer name	true		
bounds	The bounds	true		
size	The size	true		

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **layer graticule oval** --workspace layers --name ovals --bounds -180,-90,180,90 --size 20
Created Oval Graticule Layer ovals!

geo-shell> **style vector default** --layer ovals --color #1E90FF --opacity 0.30 --file examples/ovals.sld
Default Vector Style for ovals written to /home/travis/build/jericks/geo-shell/examples/ovals.sld!

geo-shell> **layer style set** --name ovals --style examples/ovals.sld
Style /home/travis/build/jericks/geo-shell/examples/ovals.sld set on ovals

geo-shell> **workspace open** --name naturalearth --params examples/naturalearth.gpkg

Workspace naturalearth opened!

geo-shell> **layer open** --workspace naturalearth --layer countries --name countries
Opened Workspace naturalearth Layer countries as countries

geo-shell> **layer style set** --name countries --style examples/countries.sld
Style /home/travis/build/jericks/geo-shell/examples/countries.sld set on countries

geo-shell> **layer open** --workspace naturalearth --layer ocean --name ocean
Opened Workspace naturalearth Layer ocean as ocean

geo-shell> **layer style set** --name ocean --style examples/ocean.sld
Style /home/travis/build/jericks/geo-shell/examples/ocean.sld set on ocean

geo-shell> **map open** --name graticule
Map graticule opened!

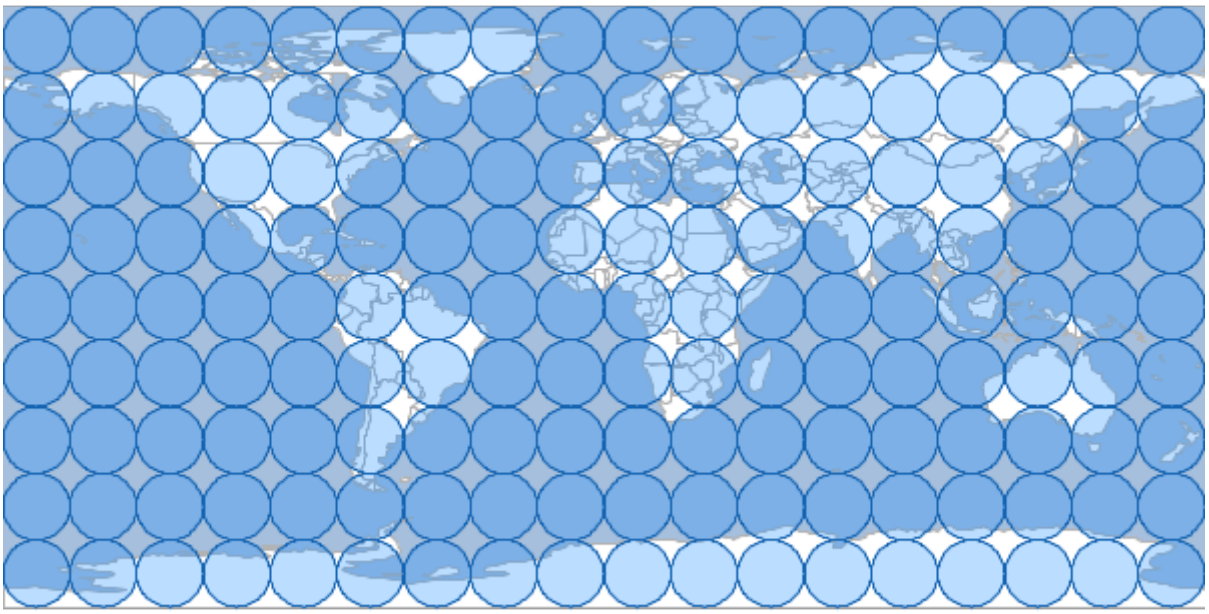
geo-shell> **map add layer** --name graticule --layer ocean
Added ocean layer to map graticule

geo-shell> **map add layer** --name graticule --layer countries
Added countries layer to map graticule

geo-shell> **map add layer** --name graticule --layer ovals
Added ovals layer to map graticule

geo-shell> **map draw** --name graticule --file examples/oval_graticules.png
Done drawing /home/travis/build/jericks/geo-shell/examples/oval_graticules.png!

geo-shell> **map close** --name graticule
Map graticule closed!



Hexagon

Create a hexagon graticule.

geo-shell> **layer graticule hexagon** --workspace layers --name hexagons --bounds -180,-90,180,90 --length 10

Name	Description	Mandatory	Specified Default	Unspecified Default
workspace	The Workspace name	true		
name	The new Layer name	true		
bounds	The bounds	true		
length	The length	true		
spacing	The spacing	false	5	5
orientation	The orientation (flat or angled)	false	flat	flat

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **layer graticule hexagon** --workspace layers --name hexagons --bounds -180,-90,180,90 --length 10
Created Hexagon Graticule Layer hexagons!

geo-shell> **style vector default** --layer hexagons --color #1E90FF --opacity 0.30 --file

examples/hexagons.sld
Default Vector Style for hexagons written to /home/travis/build/jericks/geo-shell/examples/hexagons.sld!

geo-shell> **layer style set** --name hexagons --style examples/hexagons.sld
Style /home/travis/build/jericks/geo-shell/examples/hexagons.sld set on hexagons

geo-shell> **workspace open** --name naturalearth --params examples/naturalearth.gpkg
Workspace naturalearth opened!

geo-shell> **layer open** --workspace naturalearth --layer countries --name countries
Opened Workspace naturalearth Layer countries as countries

geo-shell> **layer style set** --name countries --style examples/countries.sld
Style /home/travis/build/jericks/geo-shell/examples/countries.sld set on countries

geo-shell> **layer open** --workspace naturalearth --layer ocean --name ocean
Opened Workspace naturalearth Layer ocean as ocean

geo-shell> **layer style set** --name ocean --style examples/ocean.sld
Style /home/travis/build/jericks/geo-shell/examples/ocean.sld set on ocean

geo-shell> **map open** --name graticule
Map graticule opened!

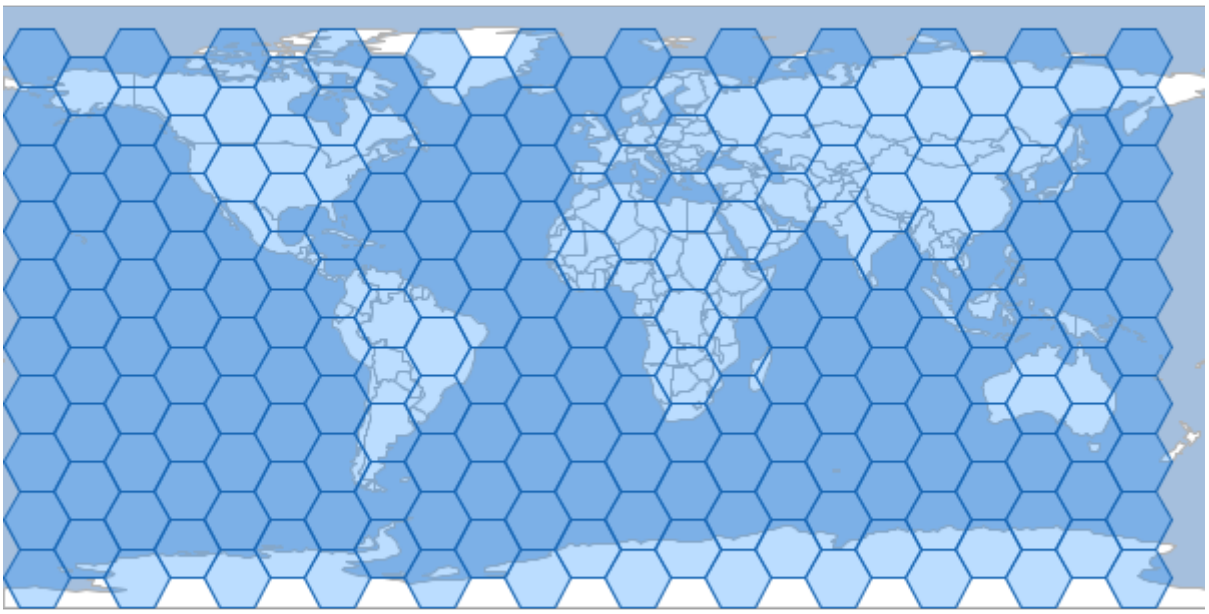
geo-shell> **map add layer** --name graticule --layer ocean
Added ocean layer to map graticule

geo-shell> **map add layer** --name graticule --layer countries
Added countries layer to map graticule

geo-shell> **map add layer** --name graticule --layer hexagons
Added hexagons layer to map graticule

geo-shell> **map draw** --name graticule --file examples/hexagon_graticules.png
Done drawing /home/travis/build/jericks/geo-shell/examples/hexagon_graticules.png!

geo-shell> **map close** --name graticule
Map graticule closed!



Format

Open

Open a Raster Format.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Format name	false		
input	The input string	true		

List

List open Raster Formats.

Close

Close a Raster Format.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Format name	true		

Rasters

List the Rasters in a Format.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Format name	true		

Raster

Open

Open a Raster.

Name	Description	Mandatory	Specified Default	Unspecified Default
format	The Format name	true		
raster	The Raster name	true		
name	The name	false		

Close

Close a Raster.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		

List

List open Rasters.

Info

Get information about a Raster.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		

Value

Get a value from the Raster.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
band	The x coordinate	false	0	0
x	The x coordinate	true		
y	The y coordinate	true		
type	The y coordinate	false	geometry	geometry

Envelope

Create a Vector Layer from the envelope of a Raster.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		

Get Style

Get the Raster’s style.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
style	The SLD File	false		

Set Style

Set a Raster’s style

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
style	The SLD or CSS File	true		

Add Raster

Add two Rasters together

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

Add Constant

Add constant values to a Raster

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
values	The values	true		

Subtract Raster

Subtract one Raster from another

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

Subtract Constant

Subtract constant values from a Raster

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		

output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
values	The values	true		
from	Whether to subtract the Raster from the constant or vice verse	false	false	false

Multiply Raster

Multiply two Raster together

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

Multiply Constant

Multiply constant values to a Raster

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
values	The values	true		

Divide Raster

Divide one Raster by another Raster

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		

output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

Divide Constant

Divide constant values against a Raster

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
values	The values	true		

Contours

Create contours.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		
band	The Raster band to contour	false	0	0
levels	The contour level or interval	true		
simplify	Whether to simplify	false	false	false
smooth	Whether to smooth	false	false	false
bounds	The Bounds	false		

Crop

Crop a Raster.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
geometry	The geometry	true		

Mosaic

Mosaic two Rasters together

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

Reclassify

Reclassify a Raster.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
ranges	The comma delimited reclassification ranges (from-to=value)	true		
band	The Raster band to contour	false	0	0
nodata	The NODATA value	false	0	0

Reproject

Project a Raster.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
projection	The projection	true		

Scale

Scale a Raster.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
x	The scale factor along the x axis	true		
y	The scale factor along the y axis	true		
x-trans	The x translation	false	0	0
y-trans	The y translation	false	0	0
interpolation	The interpolation method (bicubic, bicubic2, bilinear, nearest)	false	nearest	nearest

Shaded Relief

Create a shaded relief raster

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		

output-name	The output Raster name	false		
scale	The scale	true		
altitude	The altitude	true		
azimuth	The azimuth	true		
resx	The x resolution	false	0.5	0.5
resy	The y resolution	false	0.5	0.5
zetafactory	The zeta factory	false	1.0	1.0
algorithm	The x resolution	false	DEFAULT	DEFAULT

Stylize

Create a new Raster by baking the style into an existing Raster

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

Tile

Open

Open a Tile Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The tile name	true		
params	The connection parameters	true		

Close

Close a Tile Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The tile name	true		

List

List open Tile Layers.

Info

Get information about a Tile Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The tile name	true		

Delete

Delete tiles from a Tile Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The tile name	true		
tile	The tile z/x/y	false		
bounds	The bounds	false		
width	The width	false	400	400
height	The height	false	400	400
z	The zoom level	false	0	-1
minx	The min x or column	false		-1
miny	The min y or row	false		-1
maxx	The max x or column	false		-1
maxy	The max y or row	false		-1

Generate

Generate tiles for a Tile Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The tile name	true		
map	The map name	true		
start	The map name	true		
end	The map name	true		
bounds	The map name	false		

metatile	The metatile width,height	false		
missingOnly	The map name	false	false	false
verbose	The map name	false	false	false

Stitch Raster

Create a Raster from a Tile Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The tile name	true		
format	The raster format name	true		
raster	The raster name	true		
bounds	The bounds	false		
width	The raster width	false	400	400
height	The raster height	false	400	400
z	The zoom level	false	0	-1
minx	The min x or column	false		-1
miny	The min y or row	false		-1
maxx	The max x or column	false		-1
maxy	The max y or row	false		-1

Tiles

List tiles within a given bounds.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The tile name	true		
bounds	The bounds	true		
z	The zoom level	true		

Vector Grid

Create a Vector Grid Layer from the pyramid of a Tile Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default

name	The tile name	true		
workspace	The workspace name	true		
layer	The layer name	true		
bounds	The bounds	false		
width	The raster width	false	400	400
height	The raster height	false	400	400
z	The zoom level	false	0	-1
minx	The min x or column	false		-1
miny	The min y or row	false		-1
maxx	The max x or column	false		-1
maxy	The max y or row	false		-1

Style

Create

Create a simple style.

Name	Description	Mandatory	Specified Default	Unspecified Default
params	The style parameters	true		
file	The output file	true		

Vector Default

Create a default vector style.

Name	Description	Mandatory	Specified Default	Unspecified Default
layer	The Layer	true		
color	The color	false	#f2f2f2	#f2f2f2
opacity	The opacity	false	1.0	1.0
file	The output file	true		

Vector Gradient

Create a gradient vector style.

Name	Description	Mandatory	Specified Default	Unspecified Default
layer	The Layer	true		
field	The field	true		
number	The number of categories	true		
colors	The colors	true		
method	The classification method (Quantile or EqualInterval)	false	Quantile	Quantile
elsemode	The else mode (ignore, min, max)	false	ignore	ignore
file	The output file	true		

Vector Unique Values

Create a unique values vector style.

Name	Description	Mandatory	Specified Default	Unspecified Default
layer	The Layer	true		
field	The field	true		
colors	The colors	true		
file	The output file	true		

Vector Unique Values From Text File

Create a unique values vector style from a text file

Name	Description	Mandatory	Specified Default	Unspecified Default
field	The field name	true		
geometryType	The geometry type	true		
textFile	The input text file	true		
styleFile	The output sld or ysld file	true		

Raster Default

Create a default raster style.

Name	Description	Mandatory	Specified Default	Unspecified Default

raster	The Raster	true		
opacity	The opacity	false	1.0	1.0
file	The output file	true		

Raster Color Map

Create a color map raster style.

Name	Description	Mandatory	Specified Default	Unspecified Default
raster	The Raster	true		
opacity	The opacity	false	1.0	1.0
values	The comma delimited list of values (key=value)	true		
type	The type (intervals, values, ramp)	false	ramp	ramp
extended	Whether to use extended colors or not	false	false	false
file	The output file	true		

Map

Open

Open a new Map.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The map name	true		

Close

Close a Tile Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The map name	true		

List

List open Maps.

Add Layer

Add a Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The map name	true		
layer	The layer	true		
mapLayerName	The map layer name	false		

Add Raster

Add a Raster.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The map name	true		
raster	The raster	true		
mapLayerName	The map layer name	false		

Add Tle

Add a Tile.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The map name	true		
tile	The tile	true		
mapLayerName	The map layer name	false		

Remove Layer

Remove a Layer.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The map name	true		

layer	The layer name	true		

Reorder

Reorder a Layer in the Map.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The map name	true		
layer	The layer name	true		
order	The order parameters	true		

Layers

List the Map’s Layers.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The map name	true		

Draw

Draw a map.

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The map name	true		
bounds	The Bounds	false		
projection	The Projection	false		
width	The width	false	600	600
height	The height	false	400	400
type	The type	false	png	png
file	The file	false		
background-color	The background color	false		

Other

Unzip

Unzip a file

Name	Description	Mandatory	Specified Default	Unspecified Default
file	The zip file	true		
directory	The directory	true		

Open

Open a File.

Name	Description	Mandatory	Specified Default	Unspecified Default
file	The File	true		