# Table of Contents

# 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.

### Schema

Inspect a Layer's Schema.

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

### Features

Display the Features of a Layer.

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| name | The Layer name | true | | |
| filter | The CQL Filter | false | | |
| sort | A Sort parameter (fld dir) | false | | |

| | | | | |
|---|---|---|---|---|
| start | The start index | false | | -1 |
| max | The maximum number of records | false | | -1 |
| field | A subfield to include | false | | |

## Count

Count the Feature in a Layer.

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

## Copy

Copy one Layer to another Workspace.

| 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 | | |
| filter | The CQL Filter | false | | |
| sort | A Sort parameter (fld dir) | false | | |
| start | The start index | false | | -1 |
| max | The maximum number of records | false | | -1 |
| field | A subfield to include | false | | |

## Projection

Get the Projection of a Layer.

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

## Get Style

Get the Layer’s style.

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| name | The Layer name | true | | |
| style | The SLD File | false | | |

### Set Style

Set a Layer's style

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| name | The Layer name | true | | |
| style | The SLD or CSS File | true | | |

### Add

Add a new Feature to a Layer.

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| name | The Layer name | true | | |
| values | The pipe delimited list of values (field=value) | true | | |

### Remove

Remove a Layer from a Workspace.

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

### Create

Create a new Layer.

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| workspace | The Workspace name | true | | |
| name | The new Layer name | true | | |

| | | | | |
|---|---|---|---|---|
| fields | The pipe delimited list of fields (name=type) | true | | |

## Delete

Delete features from the Layer

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| name | The Layer name | true | | |
| filter | The CQL Filter | true | | |

## Update

Calculate the update between a Layer with another Layer

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

## Update Field

Delete features from the Layer

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| name | The Layer name | true | | |
| field | The field name | true | | |
| value | The value | true | | |
| filter | The CQL Filter | false | INCLUDE | INCLUDE |
| script | Whether the value is a script or not | false | false | false |

## Add Fields

Add Fields to the input Layer and save the result to the output Layer

| 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 | | |
| fields | The Fields (name=type proj) | true | | |

## Add Area Field

Add area Field to the input Layer and save the result to the output Layer

| 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 | | |
| area-fieldname | The area field name | true | area | area |

## Add ID Field

Add area ID to the input Layer and save the result to the output Layer

| 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 | | |
| id-fieldname | The id field name | true | id | id |
| start-value | The value to start at | true | 1 | 1 |

## Add XY Fields

Add x and y coordinate Fields to the input Layer and save the result to the output Layer

| 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 | | |
| x-fieldname | The x field name | true | x | x |
| y-fieldname | The y field name | true | y | y |

### Validity

Check for invalid geometries in the Layer.

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| name | The Layer name | true | | |
| fields | A comma delimited list of Fields to include | false | | |

# Geoprocessing

## Clip

Clip the input Layer by the other Layer to produce the output Layer

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

## Convex Hull

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

| 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 |

## Convex Hulls

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

| 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 | | |

## Coordinates

Extract the coordinates each Feature in the input Layer and save them to the output Layer.

| 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 | | |

## Delaunay

Calculate a delaunay diagram of the input Layer and save it to the output Layer.

| 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 |

## Densify

Densify the features of the input Layer and save them to the output Layer

| 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 distance tolerance | true | | |

## Dissolve

Dissolve the Features of a Layer by a Field.

| 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 | | |
| field | The field to use to dissolve features | true | | |
| idField | The name of the id field | false | id | id |
| countField | The name of the count field | false | count | count |

## Erase

Erase one Layer from another Layer

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

## Grid Row / Column

Create a grid Layer with rows and columns

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| output-workspace | The output Layer Workspace | true | | |
| output-name | The output Layer name | true | | |
| rows | The number of rows | true | | |
| columns | The number of columns | true | | |
| geometry | The constraining geometry | true | | |
| type | The geometry type (point or polygon | false | polygon | polygon |
| projection | The projection | false | EPSG:4326 | EPSG:4326 |
| geometry-field | The geometry field name | false | the_geom | the_geom |

## Grid Width / Height

Create a grid Layer with cell width and height

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| output-workspace | The output Layer Workspace | true | | |
| output-name | The output Layer name | true | | |
| cell-width | The width of each cell | true | | |
| cell-height | The height of each cell | true | | |
| geometry | The constraining geometry | true | | |
| type | The geometry type (point or polygon | false | polygon | polygon |
| projection | The projection | false | EPSG:4326 | EPSG:4326 |
| geometry-field | The geometry field name | false | the_geom | the_geom |

## Identity

Calculate the intersection between a Layer with another Layer

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| input-name | The Layer name | true | | |
| other-name | The other Layer name | true | | |
| output-workspace | The output Layer Workspace | true | | |
| output-name | The output Layer name | true | | |
| postfix-all | Whether to postfix all field names when combining schemas | false | false | false |
| include-duplicates | Whether to include duplicate field names | false | true | true |

## Intersection

Calculate the intersection between a Layer with another Layer

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| input-name | The Layer name | true | | |
| other-name | The other Layer name | true | | |
| output-workspace | The output Layer Workspace | true | | |
| output-name | The output Layer name | true | | |
| postfix-all | Whether to postfix all field names when combining schemas | false | false | false |
| include-duplicates | Whether to include duplicate field names | false | true | true |

## Minimum Circle

Calculate the mininmum bounding circle of the input Layer and save it to the output Layer.

| 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 |

## Minimum Circles

Calculate the minimum bounding circle of each Feature in the input Layer and save them to the output Layer.

| 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 | | |

## Minimum Rectangle

Calculate the mininmum rectangle of the input Layer and save it to the output Layer.

| 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 |

## Minimum Rectangles

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

| 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 | | |

## Octangle Envelope

Calculate the octagonal envelope of the input Layer and save it to the output Layer.

| 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 |

## Octangle Envelopes

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

| 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 | | |

## Points Along Lines

Create points along lines

| 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 distance between points | true | | |

## Simplify

Simplify the features of the input Layer and save them to the output Layer

| 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 | | |
| algorithm | The simplify algorithm (DouglasPeucker - dp or TopologyPreserving - tp) | false | tp | tp |
| distance | The distance tolerance | true | | |

## Symmetric Difference

Calculate the symmetric difference between a Layer and another Layer.

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| input-name | The Layer name | true | | |
| other-name | The other Layer name | true | | |
| output-workspace | The output Layer Workspace | true | | |
| output-name | The output Layer name | true | | |
| postfix-all | Whether to postfix all field names when combining schemas | false | false | false |
| include-duplicates | Whether to include duplicate field names | false | true | true |

## Transform

Transform the features of the input Layer and save them to the output Layer

| 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 | | |
| transforms | The pipe delimited list of transforms (field=expression or function) | true | | |

## Union

Union a Layer with another Layer

| Name | Description | Mandatory | Specified Default | Unspecified Default |
|---|---|---|---|---|
| input-name | The Layer name | true | | |
| other-name | The other Layer name | true | | |
| output-workspace | The output Layer Workspace | true | | |
| output-name | The output Layer name | true | | |
| postfix-all | Whether to postfix all field names when combining schemas | false | false | false |
| include-duplicates | Whether to include duplicate field names | false | true | true |

## Voronoi

Calculate a voronoi diagram of the input Layer and save it to the output Layer.

| 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 |

## 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!

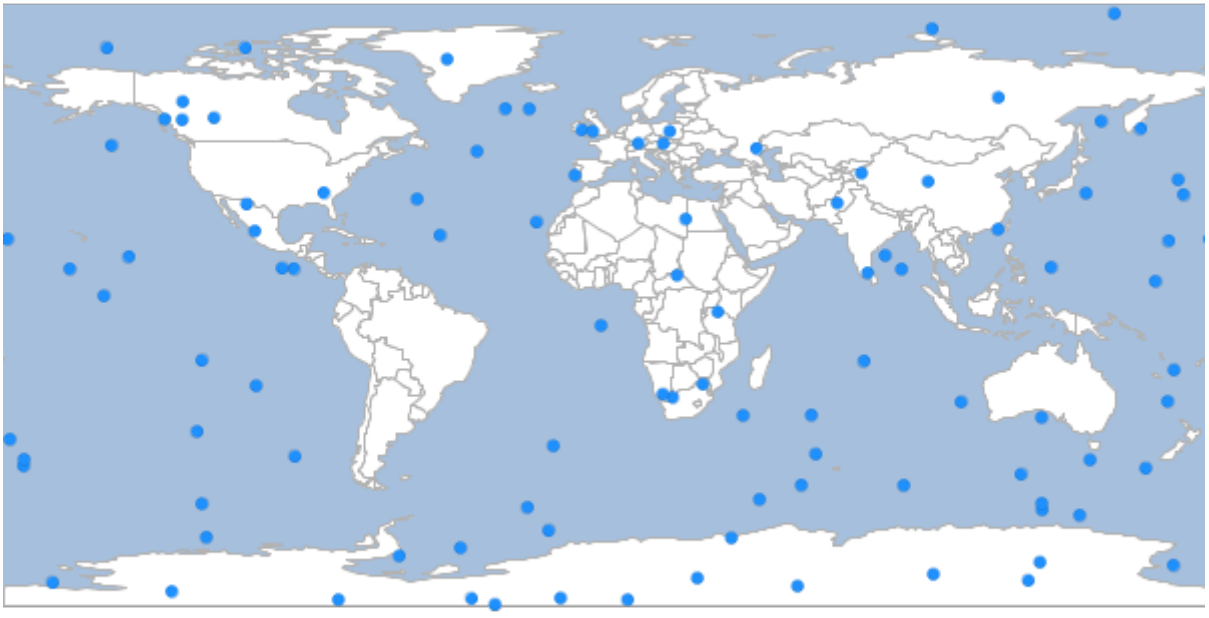
geo-shell> **map add layer** --name randomMap --layer ocean
Added ocean layer to map randomMap

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

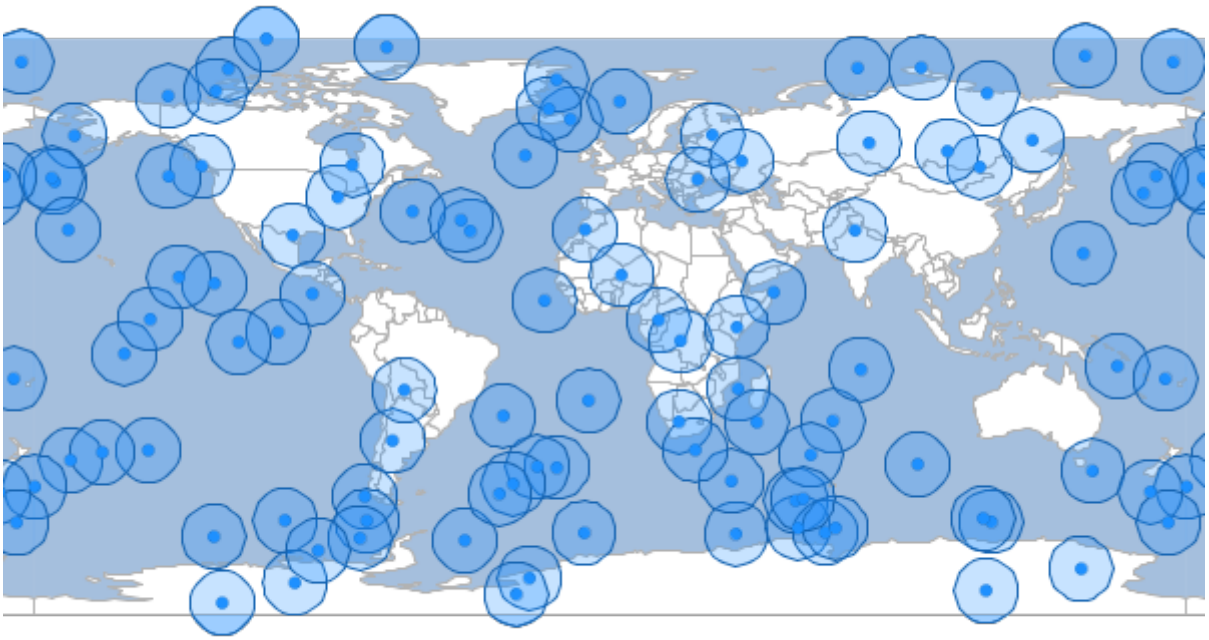
geo-shell> **map add layer** --name map --layer countries
Added countries layer to map map

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

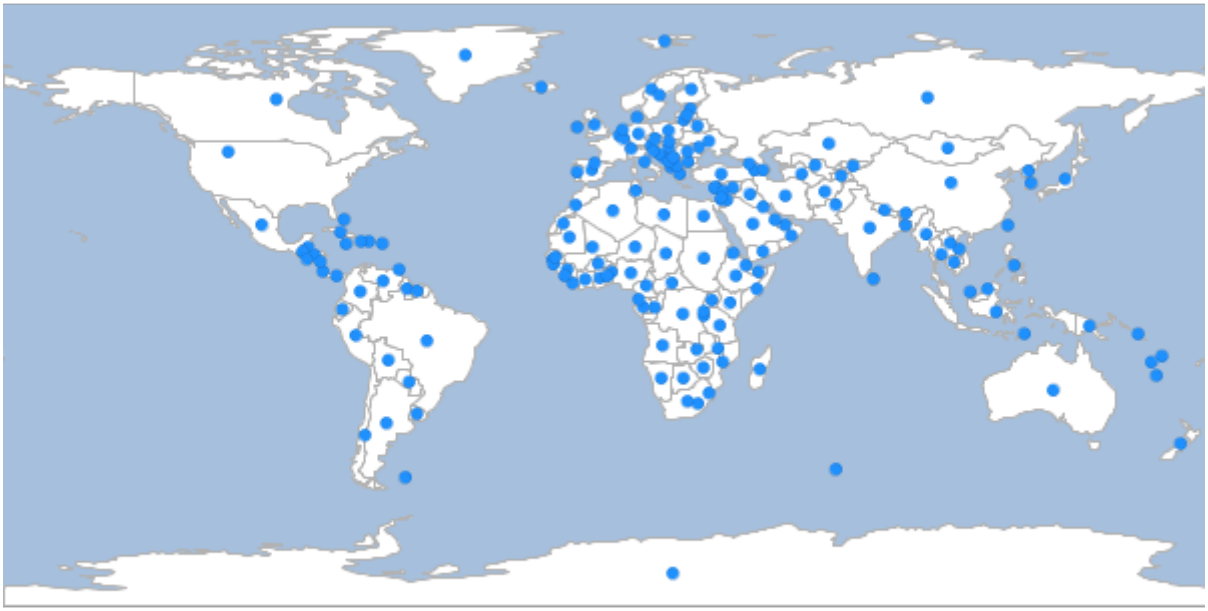
geo-shell> **map add layer** --name map --layer countries
Added countries layer to map map

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!

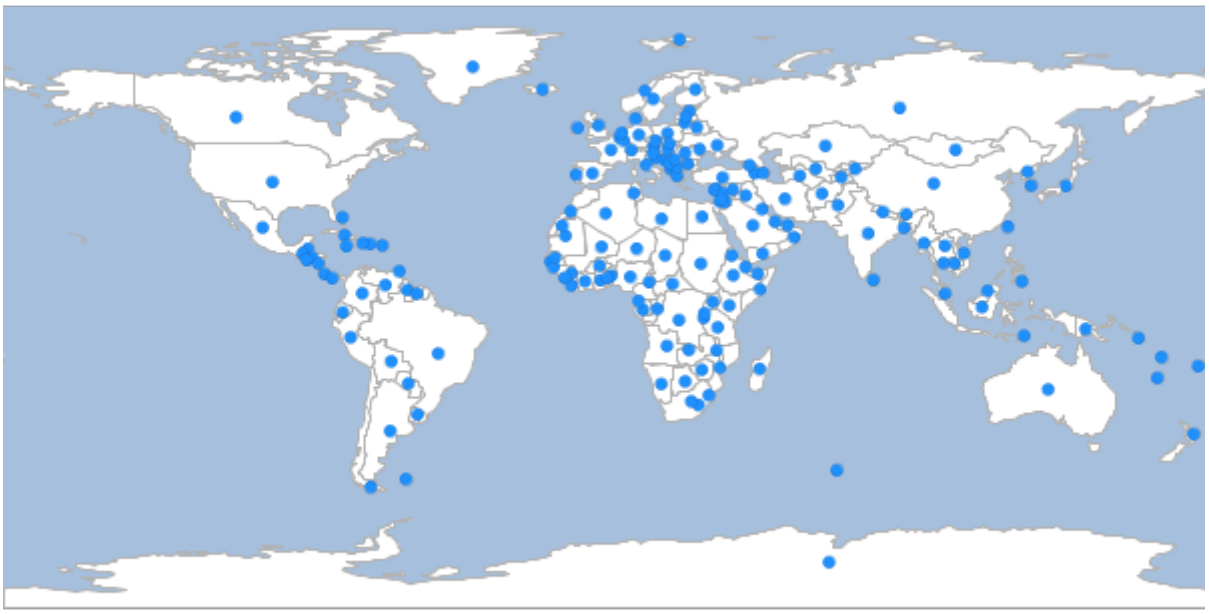
geo-shell> **map add layer** --name map --layer ocean
Added ocean layer to map map

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

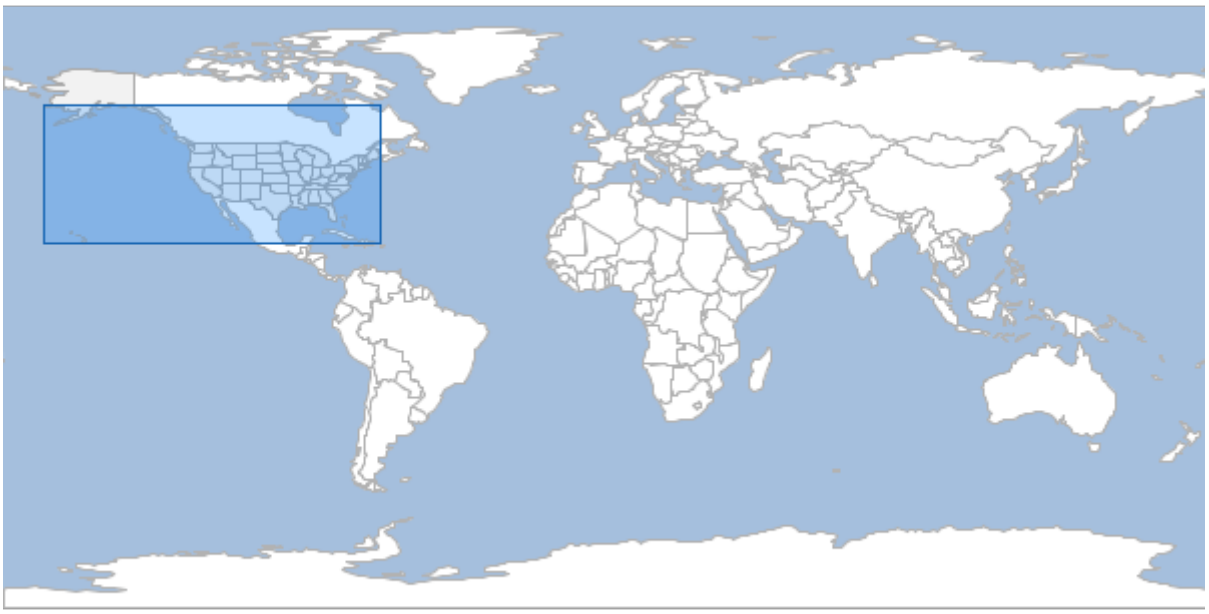
geo-shell> **map add layer** --name map --layer countries
Added countries layer to map map

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

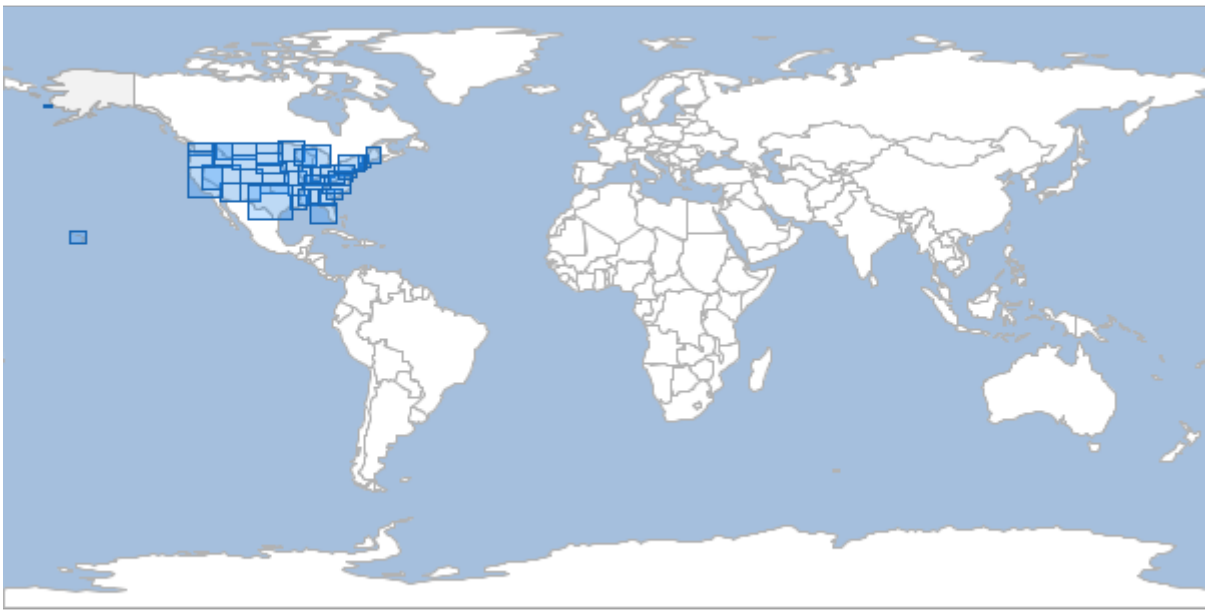
geo-shell> **map add layer** --name map --layer countries
Added countries layer to map map

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!

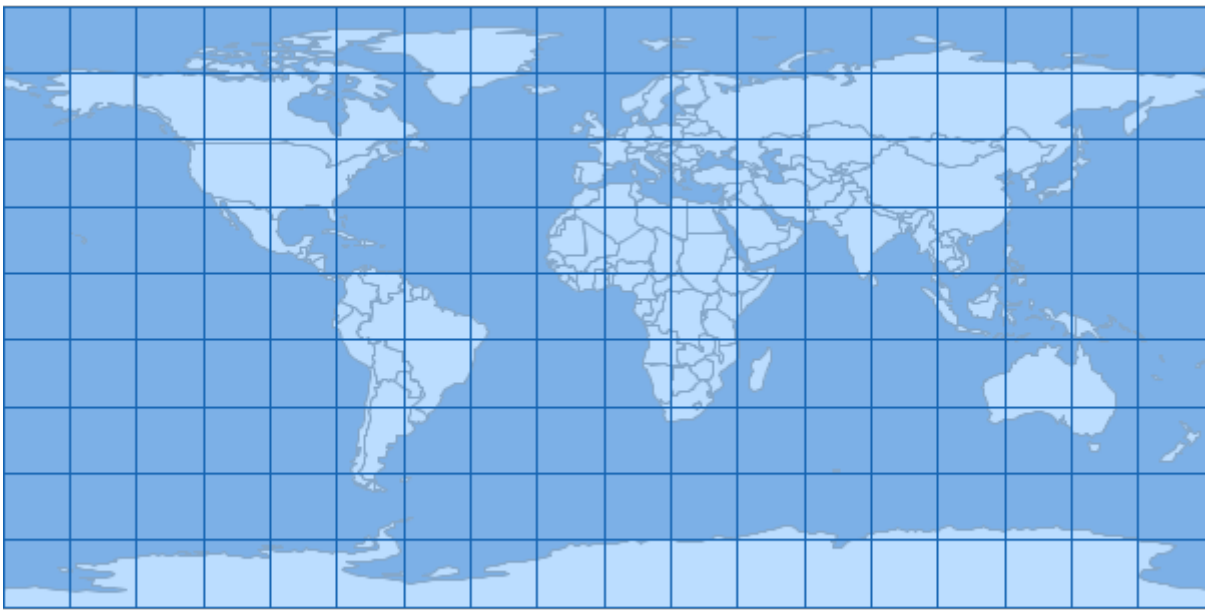
geo-shell> **map add layer** --name graticule --layer ocean
Added ocean layer to map graticule

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!

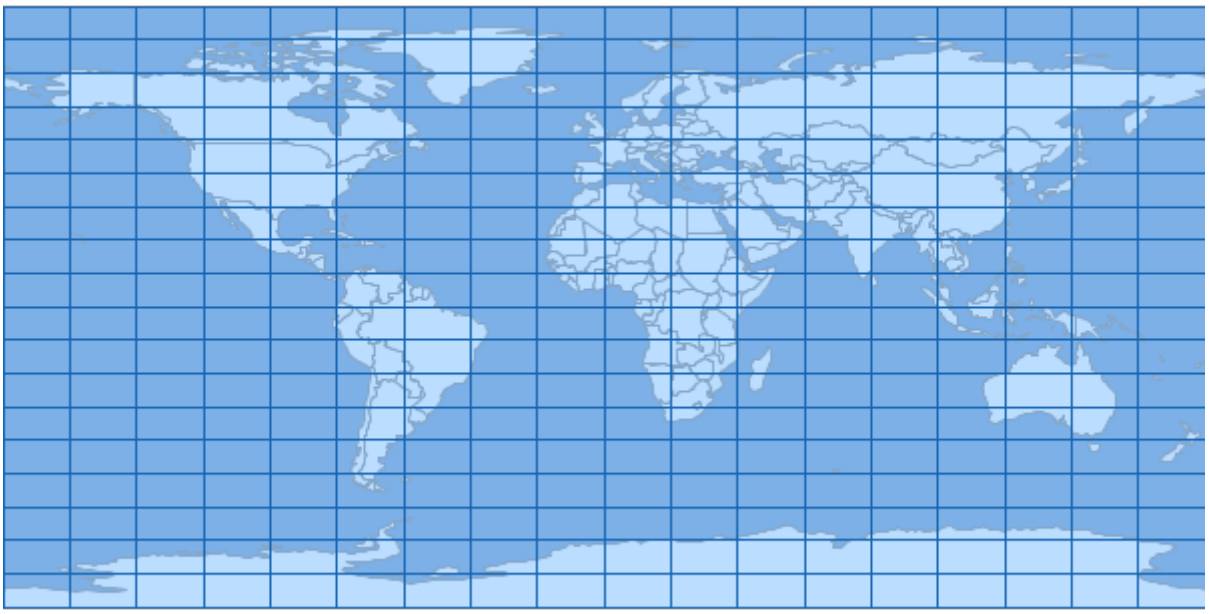
geo-shell> **map add layer** --name graticule --layer ocean
Added ocean layer to map graticule

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!

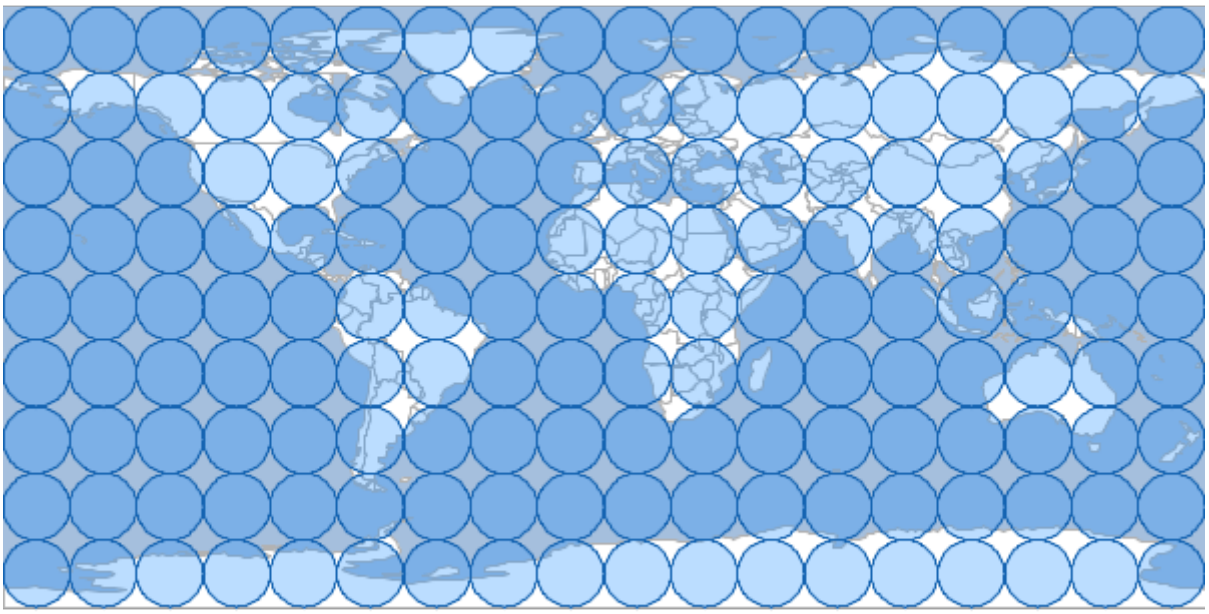
geo-shell> **map add layer** --name graticule --layer ocean
Added ocean layer to map graticule

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!