Table of Contents

Vector Commands

Add

Add a Feature to a Layer.

Short Name	Long Name	Description
-v	--value	A value 'field=value'
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector add -i target/locations.shp -v id=1 -v name=Seattle -v "the_geom=POINT (-
122.334758 47.578364)"
```

the_geom	name	id
POINT (-122.334758 47.578364)	Seattle	1

Add Fields

Add one or more Fields to a Layer

Short Name	Long Name	Description
-f	--field	A Field in the format 'name=type'
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector addfields -i target/locations.shp -o target/locations_idname.shp -f id=int
-f name=string
```

Schema

Name	Type
the_geom	Point
name	String
id	Integer

Add Area Field

Add an area Field.

Short Name	Long Name	Description
-f	--area-fieldname	The name for the area Field
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector addareafield -i src/test/resources/states.shp -o target/states_area.shp
```

Schema

Name	Type
the_geom	MultiPolygon
STATE_NAME	String
SUB_REGION	String
STATE_ABBR	String
AREA	Double

Values

STATE_NAME	SUB_REGION	STATE_ABBR	AREA
Illinois	E N Cen	IL	15.396467068063995
District of Columbia	S Atl	DC	0.017769720828999
Delaware	S Atl	DE	0.553317799081003
West Virginia	S Atl	WV	6.493194953114009
Maryland	S Atl	MD	2.625116892757991

Add Length Field

Add an Length Field.

Short Name	Long Name	Description
-f	--length-fieldname	The name for the length Field
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector addlengthfield -i src/test/resources/data.gpkg -l rivers -o
target/rivers_length.shp -f length
```

Schema

Name	Type
the_geom	MultiLineString
name	String
label	String

Name	Type
length	Double

Values

name	label	length
Brahmaputra	Brahmaputra	25.21241966609205
Mekong	Mekong	34.97738061177052
Ob	Ob	48.39570358268261
Peace	Peace	44.84258394589285
Donau	Donau	26.67902946932429

Add ID Field

Add an ID Field.

Short Name	Long Name	Description
-f	--id-fieldname	The name for the ID Field
-s	--start	The number of start at
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector addidfield -i src/test/resources/data.gpkg -l places -o
target/places_id.shp
```

Schema

Name	Type
the_geom	Point
NAME	String
ID	Integer

Values

NAME	ID
Vatican City	1
San Marino	2
Vaduz	3
Lobamba	4
Luxembourg	5

Add XY Fields

Add XY Fields.

Short Name	Long Name	Description
-x	--x-fieldname	The name for the X Field
-y	--y-fieldname	The name for the Y Field
-a	--algorithm	The XY generation algorithm (centroid or interiorpoint)
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector addxyfields -i src/test/resources/data.gpkg -l places -o
target/places_xy.shp -x x_coord -y y_coord -a centroid
```

Schema

Name	Type
the_geom	Point
NAME	String
x_coord	Double
y_coord	Double

Values

NAME	x_coord	y_coord
Vatican City	12.4533865	41.9032822

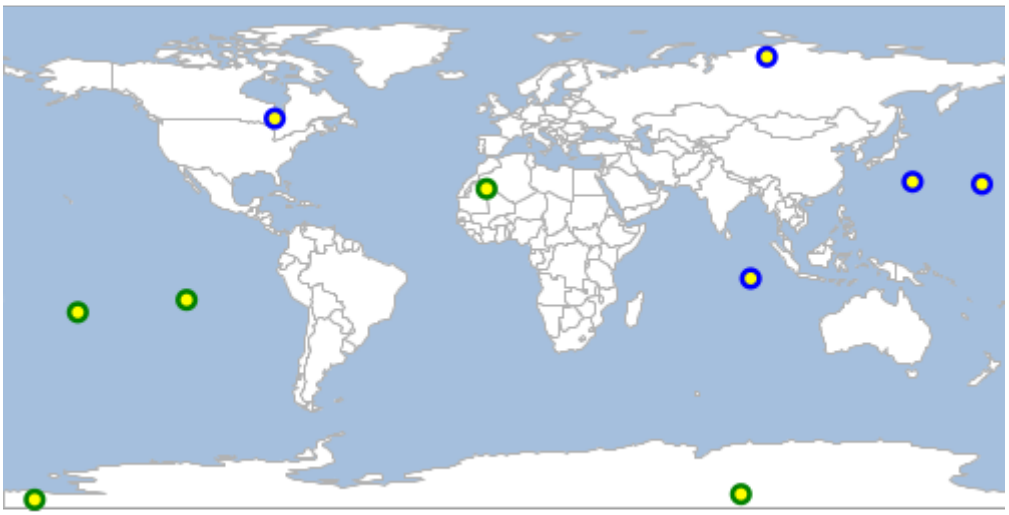
NAME	x_coord	y_coord
San Marino	12.4417702	43.9360958
Vaduz	9.5166695	47.1337238
Lobamba	31.1999971	-26.4666675
Luxembourg	6.1300028	49.6116604

Append

Add a Features from one layer to another Layer.

Short Name	Long Name	Description
-k	--other-workspace	The other workspace
-y	--other-layer	The other layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector append -i target/points1.shp -k target/points2.shp
```



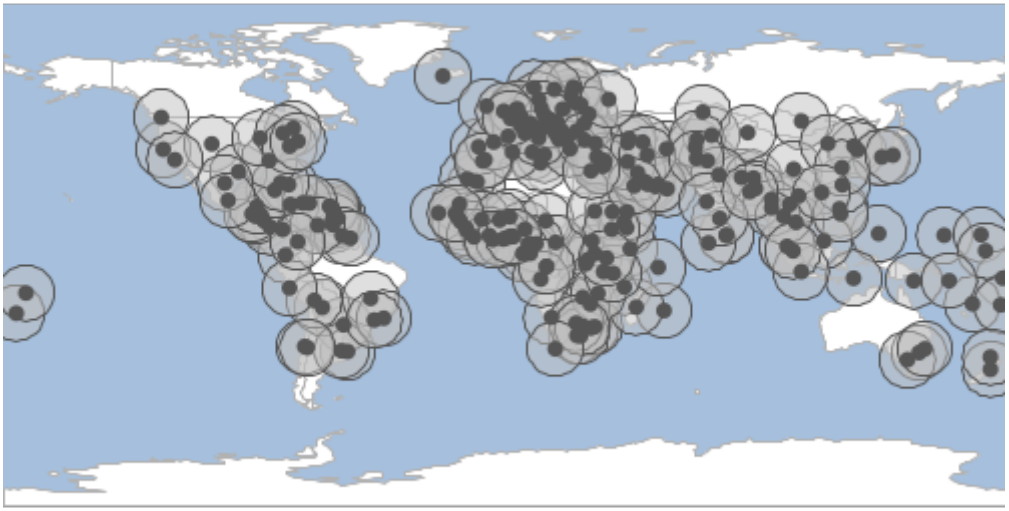
Buffer

Buffer all of the features in a Layer.

Short Name	Long Name	Description
-d	--distance	The buffer distance

Short Name	Long Name	Description
-q	--quadrantsegments	The number of quadrant segments
-s	--singlesided	Whether buffer should be single sided or not
-c	--capstyle	The cap style
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector buffer -i src/test/resources/data.gpkg -l places -o
target/places_buffer.shp -d 10
```



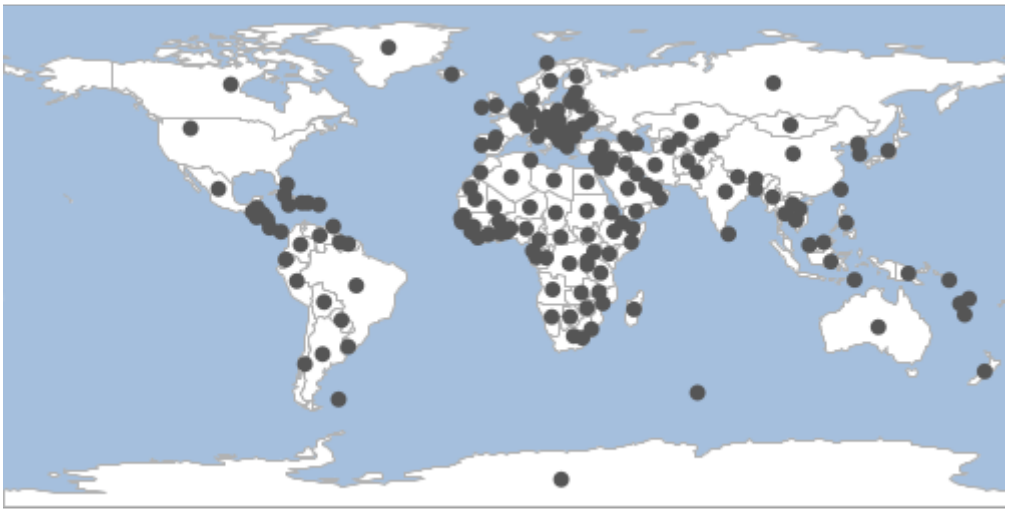
Centroid

Calculate the centroid of all the features in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer

Short Name	Long Name	Description
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector centroid -i src/test/resources/data.gpkg -l countries -o
target/countries_centroids.shp
```

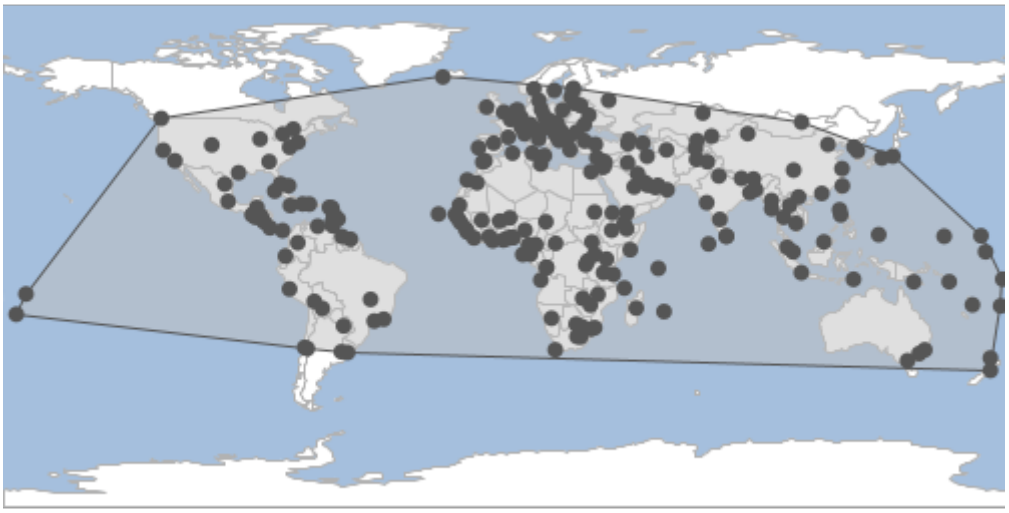


Convexhull

Calculate the convexhull of all the features in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector convexhull -i src/test/resources/data.gpkg -l places -o
target/convexhull.shp
```

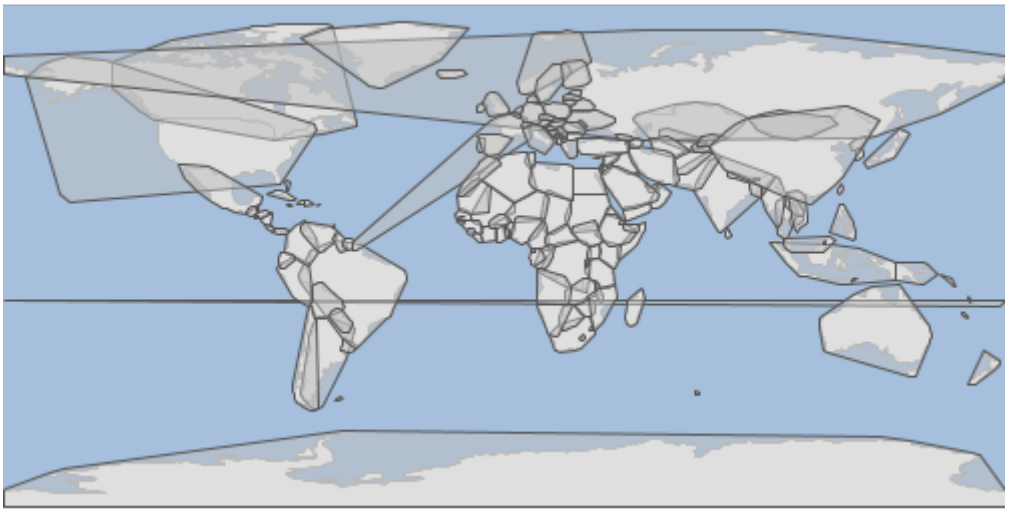


Convexhulls

Calculate the convexhulls for each feature in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector convexhulls -i src/test/resources/data.gpkg -l countries -o
target/convexhulls.shp
```

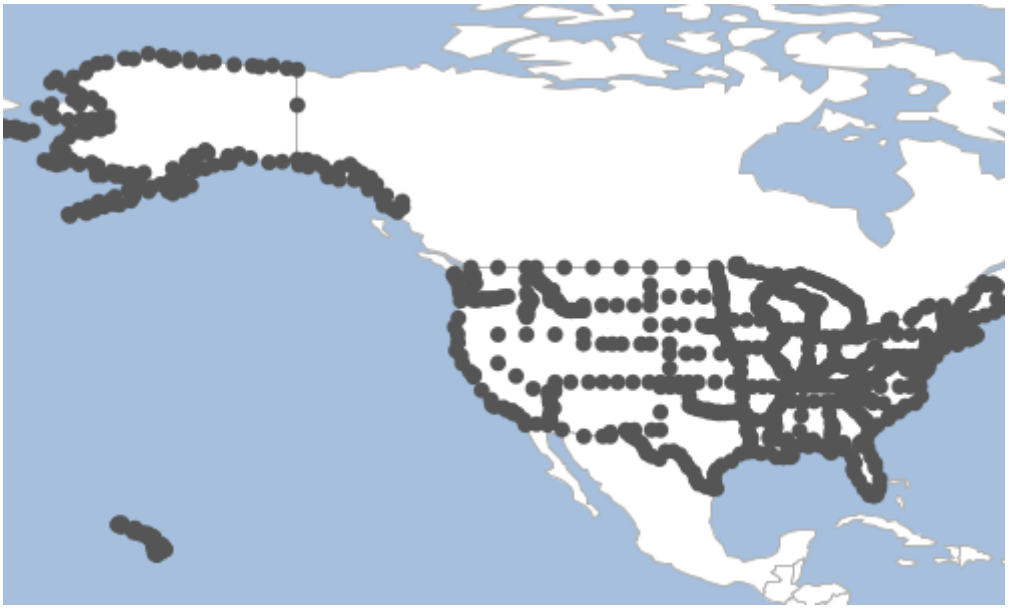


Coordinates

Extract coordinates from the input Layer and save them to the output Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector coordinates -i src/test/resources/data.gpkg -l states -o
target/coordinates.shp
```



Count

Count the Features in a Layer.

Short Name	Long Name	Description
-t	--type	Count features, geometries, or points
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector count -i src/test/resources/data.gpkg -l places
```

```
243
```

Create

Create a new Layer.

Short Name	Long Name	Description
-f	--field	A Field in the format 'name=type'
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
	--help	Print the help message

Short Name	Long Name	Description
	--web-help	Open help in a browser

```
geoc vector create -o target/locations.shp -f "the_geom=POINT EPSG:4326" -f id=integer
-f name=string
```

Name	Type
the_geom	Point
name	String
id	Integer

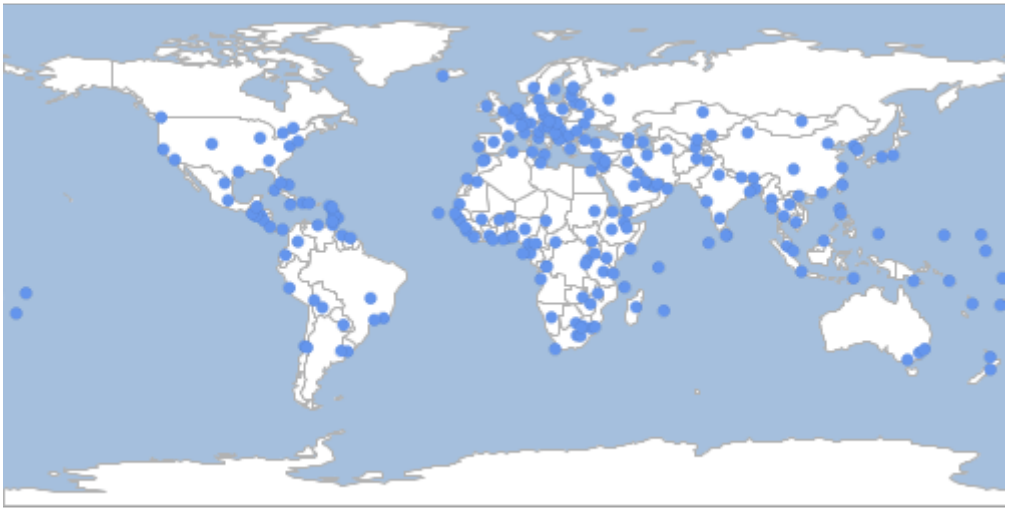
Default Style

Get the default style for a Layer.

Short Name	Long Name	Description
-g	--geometry-type	The geometry type
-c	--color	The base color
-o	--opacity	The opacity (defaults to 1.0)
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector defaultstyle -i src/test/resources/data.gpkg -l places -c cornflowerblue
```

```
<?xml version="1.0" encoding="UTF-8"?><sld:StyledLayerDescriptor xmlns:sld=
"http://www.opengis.net/sld" xmlns="http://www.opengis.net/sld" xmlns:gml=
"http://www.opengis.net/gml" xmlns:ogc="http://www.opengis.net/ogc" version="1.0.0">
  <sld:UserLayer>
    <sld:LayerFeatureConstraints>
      <sld:FeatureTypeConstraint/>
    </sld:LayerFeatureConstraints>
    <sld:UserStyle>
      <sld:Name>Default Styler</sld:Name>
      <sld:FeatureTypeStyle>
        <sld:Name>name</sld:Name>
        <sld:Rule>
          <sld:PointSymbolizer>
            <sld:Graphic>
              <sld:Mark>
                <sld:WellKnownName>circle</sld:WellKnownName>
                <sld:Fill>
                  <sld:CssParameter name="fill">#6495ed</sld:CssParameter>
                </sld:Fill>
                <sld:Stroke>
                  <sld:CssParameter name="stroke">#4668a5</sld:CssParameter>
                  <sld:CssParameter name="stroke-width">0.1</sld:CssParameter>
                </sld:Stroke>
              </sld:Mark>
              <sld:Size>6</sld:Size>
            </sld:Graphic>
          </sld:PointSymbolizer>
        </sld:Rule>
      </sld:FeatureTypeStyle>
    </sld:UserStyle>
  </sld:UserLayer>
</sld:StyledLayerDescriptor>
```

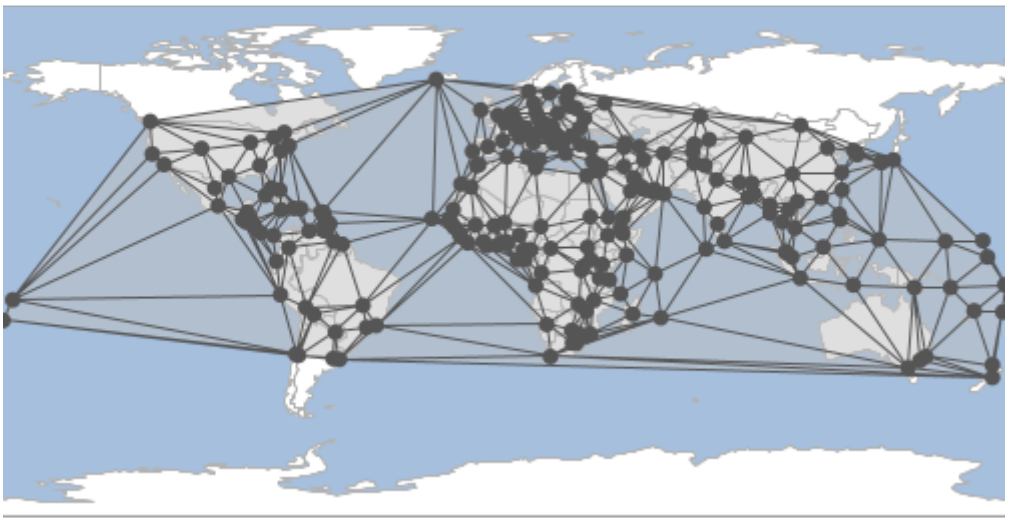


Delaunay

Calculate a delaunay diagram of all the features in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector delaunay -i src/test/resources/data.gpkg -l places -o target/delaunay.shp
```



Geometry Reader

Convert a text stream of WKT geometries to a Layer.

Short Name	Long Name	Description
-t	--text	The text
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
	--help	Print the help message
	--web-help	Open help in a browser

places.txt

```
POINT (95.93096088300103 -21.052562876111054)
POINT (108.68699242651462 31.906673138178704)
POINT (67.21295358024213 37.71179581778536)
POINT (134.80355671499728 -81.23567389016853)
POINT (140.6972351264812 63.79594874701479)
```

```
cat places.txt | geoc vector geomr -o target/places.shp
```

Geometry Writer

Convert the input layer to a text stream of WKT geometries that can be read by the geom commands.

Short Name	Long Name	Description
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector geomw -i target/locations.shp
```

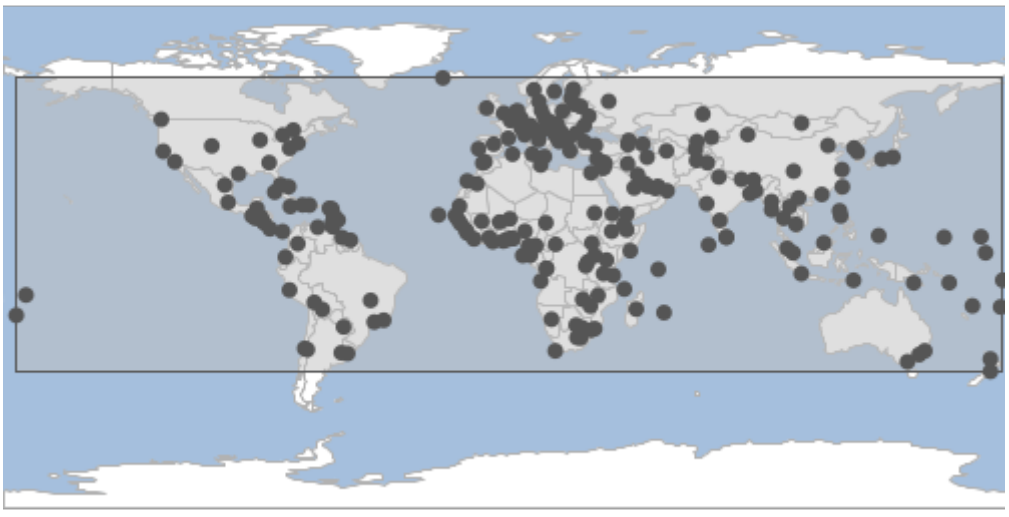
```
POINT (-100.24476853473605 36.77349651644802)
POINT (115.51532947530131 -89.52110605097157)
POINT (63.93054563922681 -51.329393824188635)
POINT (115.1474339119286 67.11699680588742)
POINT (34.7056129634509 75.15876539729692)
```

Envelope

Calculate the envelope of all the features in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector envelope -i src/test/resources/data.gpkg -l places -o target/envelope.shp
```

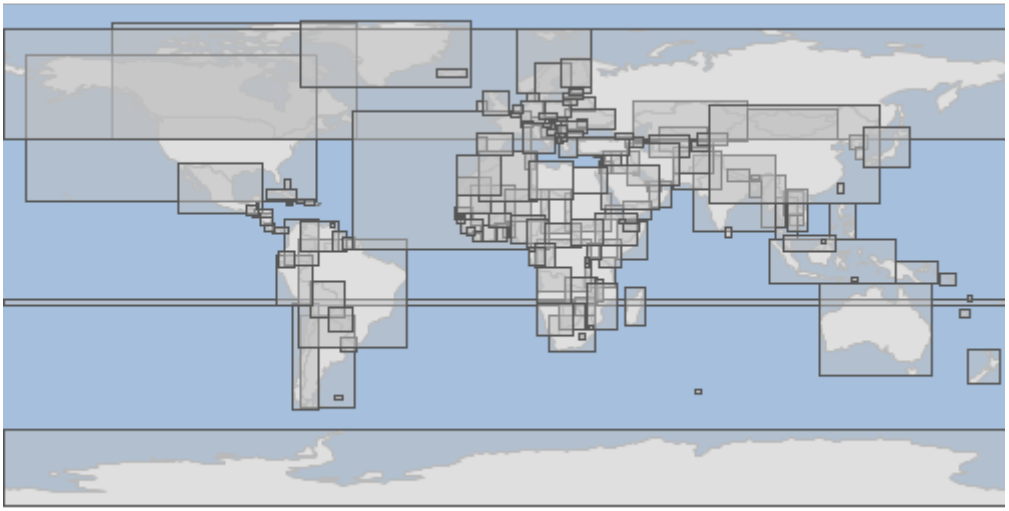


Envelopes

Calculate the envelopes for each feature in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector envelopes -i src/test/resources/data.gpkg -l countries -o
target/envelopes.shp
```



From

Create a Layer from a string of KML, CSV, GML, GEORSS, GEOBUF, GPX or GeoJSON.

Short Name	Long Name	Description
-t	--text	The text
-f	--format	The string format (CSV, GeoJSON, KML, GML)
-g	--geometry-type	The geometry type
-p	--format-options	A format options 'key=value'
-o	--output-workspace	The output workspace

Short Name	Long Name	Description
-r	--output-layer	The output layer
	--help	Print the help message
	--web-help	Open help in a browser

GeoJSON

points.json


```
{"type":"FeatureCollection","features":[{"type":"Feature","geometry":{"type":"Point","coordinates":[94.1109,42.9335]},"properties":{"id":0},"id":"randompoints.1"},{"type":"Feature","geometry":{"type":"Point","coordinates":[10.1907,21.6753]},"properties":{"id":1},"id":"randompoints.2"},{"type":"Feature","geometry":{"type":"Point","coordinates":[-129.5842,81.6634]},"properties":{"id":2},"id":"randompoints.3"},{"type":"Feature","geometry":{"type":"Point","coordinates":[-112.1149,15.1608]},"properties":{"id":3},"id":"randompoints.4"},{"type":"Feature","geometry":{"type":"Point","coordinates":[-6.8969,51.6743]},"properties":{"id":4},"id":"randompoints.5"}]}
```


```
cat points.json | geoc vector from -f csv
```

CSV

points.csv

```
"the_geom:Point:EPSG:4326","id:Integer"
"POINT (4.579216425396879 51.45049182775472)","0"
"POINT (123.42498546859872 -87.83460053256965)","1"
"POINT (-165.61532566202467 45.454045140909955)","2"
"POINT (-54.168317738727396 75.23496566049826)","3"
"POINT (20.335618310629258 -29.08219273639356)","4"
```

```
cat points.csv | geoc vector from -f csv
```

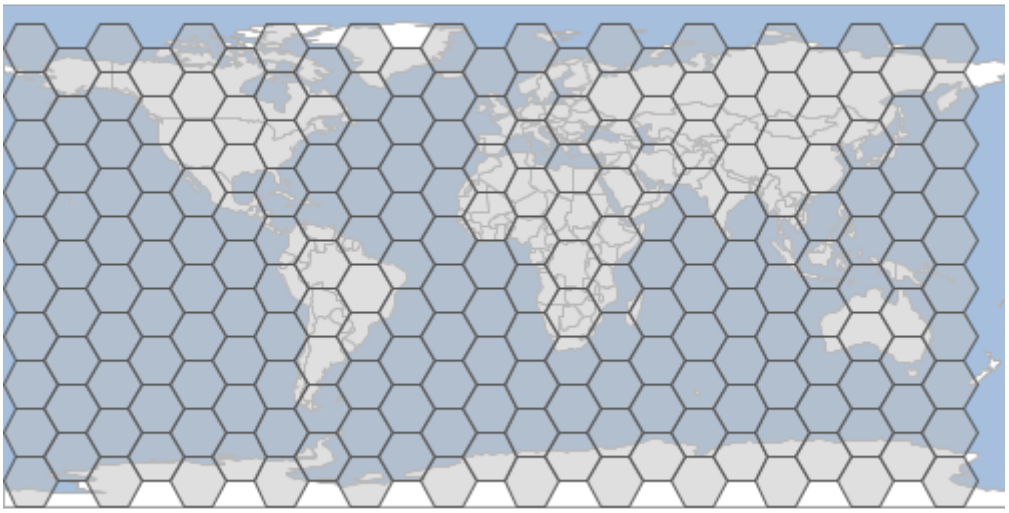
Graticule

Hexagon

Create hexagon graticules.

Short Name	Long Name	Description
-g	--geometry	The geometry
-l	--length	The length
-s	--spacing	The spacing (defaults to -1)
-t	--orientation	The orientation (flat or angled).
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector graticule hexagon -g -180,-90,180,90 -l 10 -o target/hexagons.shp
```

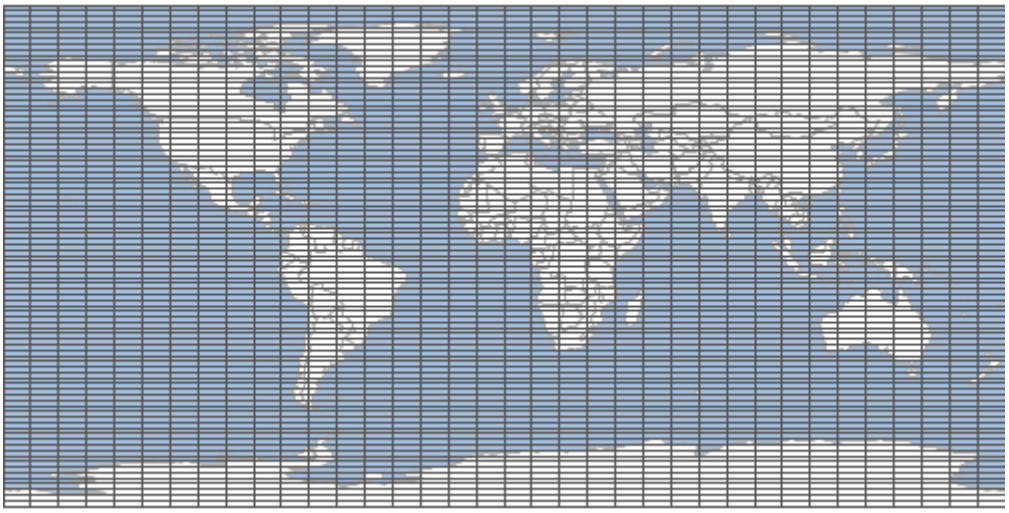


Line

Create line graticules.

Short Name	Long Name	Description
-g	--geometry	The geometry
-s	--spacing	The spacing (defaults to -1)
-l	--line-definition	Each line definition has comma delimited orientation (vertical or horizontal), level, and spacing)
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector graticule line -g -180,-90,180,90 -l vertical,2,10 -l horizontal,1,2 -o
target/lines.shp
```

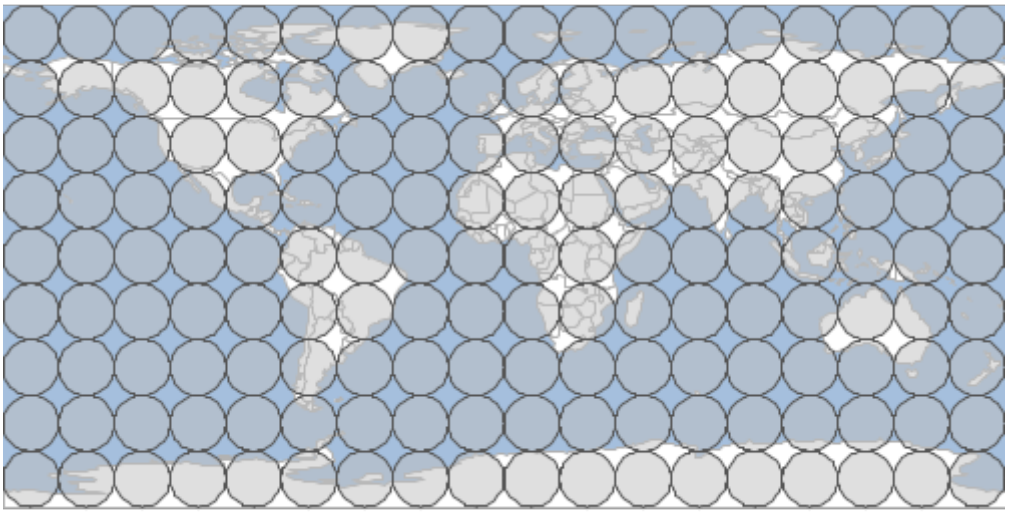


Oval

Create oval graticules.

Short Name	Long Name	Description
-g	--geometry	The geometry
-l	--length	The length
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector graticule oval -g -180,-90,180,90 -l 20 -o target/ovals.shp
```

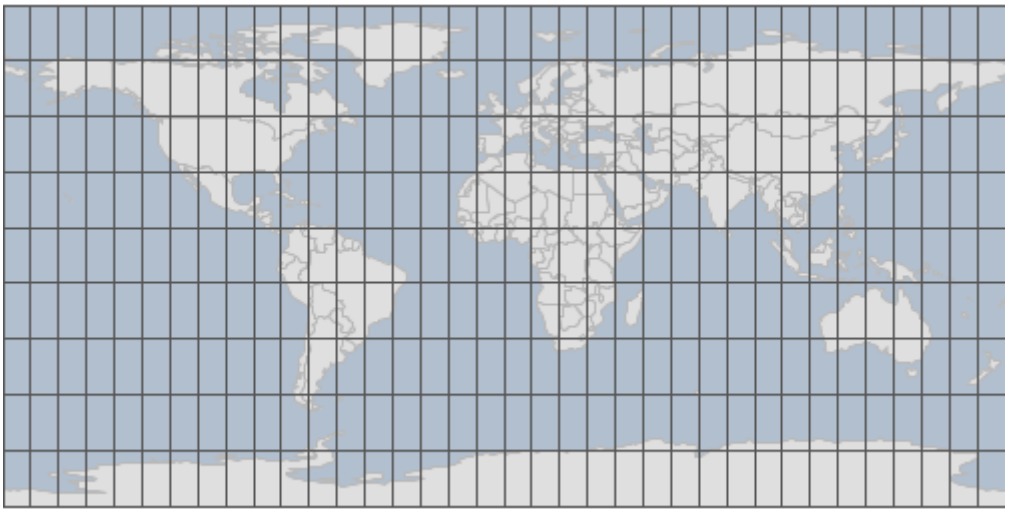


Rectangle

Create rectangle graticules.

Short Name	Long Name	Description
-g	--geometry	The geometry
-w	--width	The width
-h	--height	The height
-s	--spacing	The spacing (defaults to -1)
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector graticule rectangle -g -180,-90,180,90 -w 10 -h 20 -o
target/rectangles.shp
```



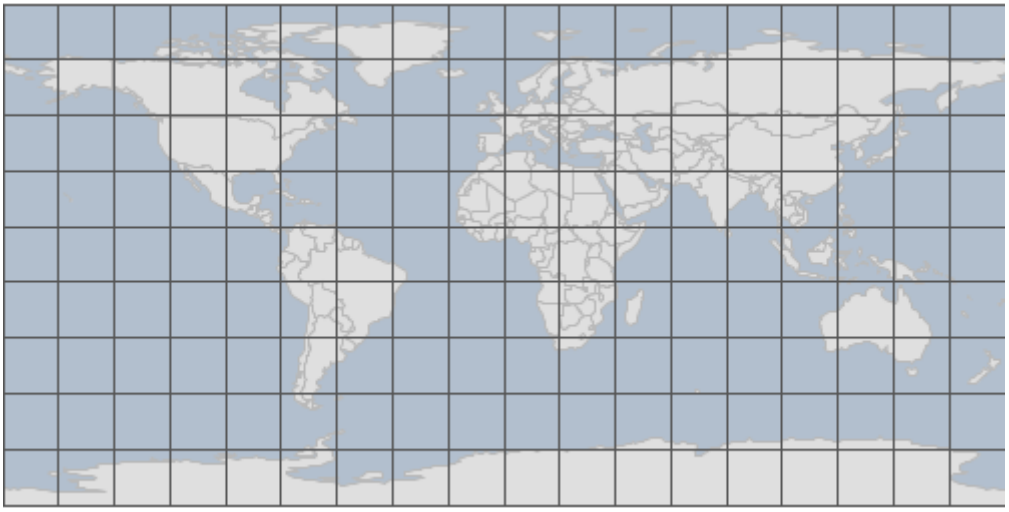
Square

Create square graticules.

Short Name	Long Name	Description
-g	--geometry	The geometry
-l	--length	The length
-s	--spacing	The spacing (defaults to -1)
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer

Short Name	Long Name	Description
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector graticule square -g -180,-90,180,90 -l 20 -o target/squares.shp
```



Info

Get information about a Layer.

Short Name	Long Name	Description
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector info -i src/test/resources/data.gpkg -l countries
```

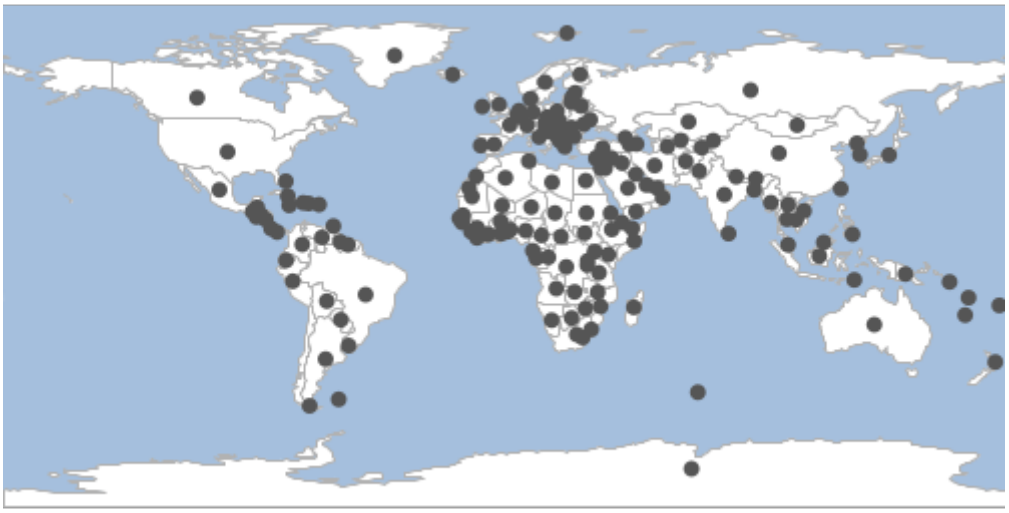
```
Name: countries
Geometry: MultiPolygon
Extent: -180.0, -90.0, 180.00000000000006, 83.64513000000001
Projection ID: EPSG:4326
Projection WKT: GEOGCS["WGS 84",
  DATUM["World Geodetic System 1984",
    SPHEROID["WGS 84", 6378137.0, 298.257223563, AUTHORITY["EPSG","7030"]],
    AUTHORITY["EPSG","6326"]],
  PRIMEM["Greenwich", 0.0, AUTHORITY["EPSG","8901"]],
  UNIT["degree", 0.017453292519943295],
  AXIS["Geodetic longitude", EAST],
  AXIS["Geodetic latitude", NORTH],
  AUTHORITY["EPSG","4326"]]
Feature Count: 177
Fields:
the_geom: MultiPolygon
featurecla: String
scalerank: Integer
LABELRANK: Integer
SOVEREIGNT: String
SOV_A3: String
ADM0_DIF: Integer
...
```

Interior Point

Calculate the interior point of all the features in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector interiorPoint -i src/test/resources/data.gpkg -l countries -o
target/countries_interiorpoints.shp
```



Layer List

List the Layers in a Workspace.

Short Name	Long Name	Description
-i	--input-workspace	The input workspace
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector list layers -i src/test/resources/data.gpkg
```

```
countries
graticules
ocean
places
rivers
states
```

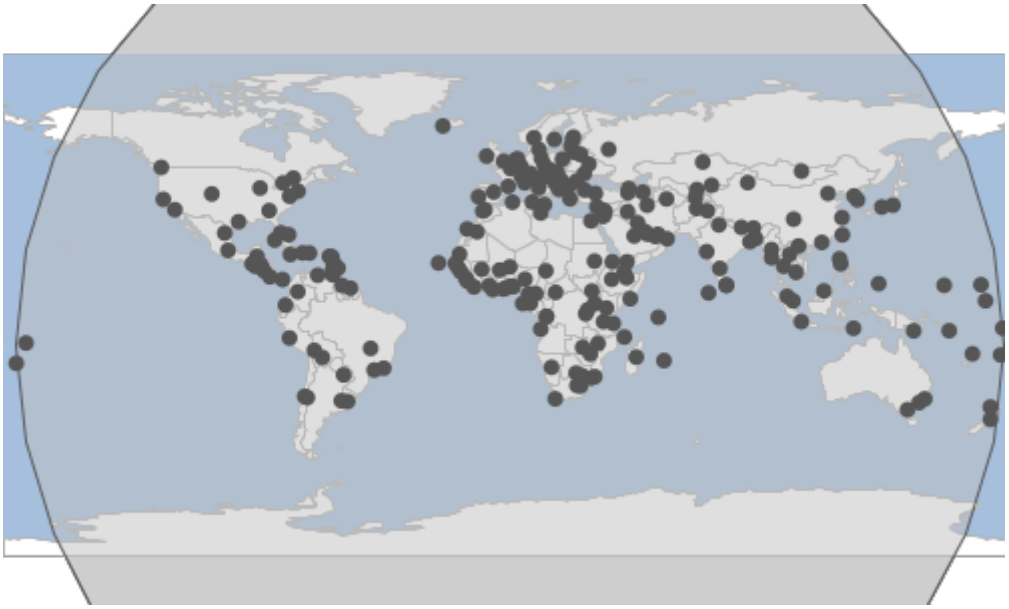
Minimum Bounding Circle

Calculate the minimum bounding circle of all the features in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer

Short Name	Long Name	Description
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector mincircle -i src/test/resources/data.gpkg -l places -o
target/mincircle.shp
```

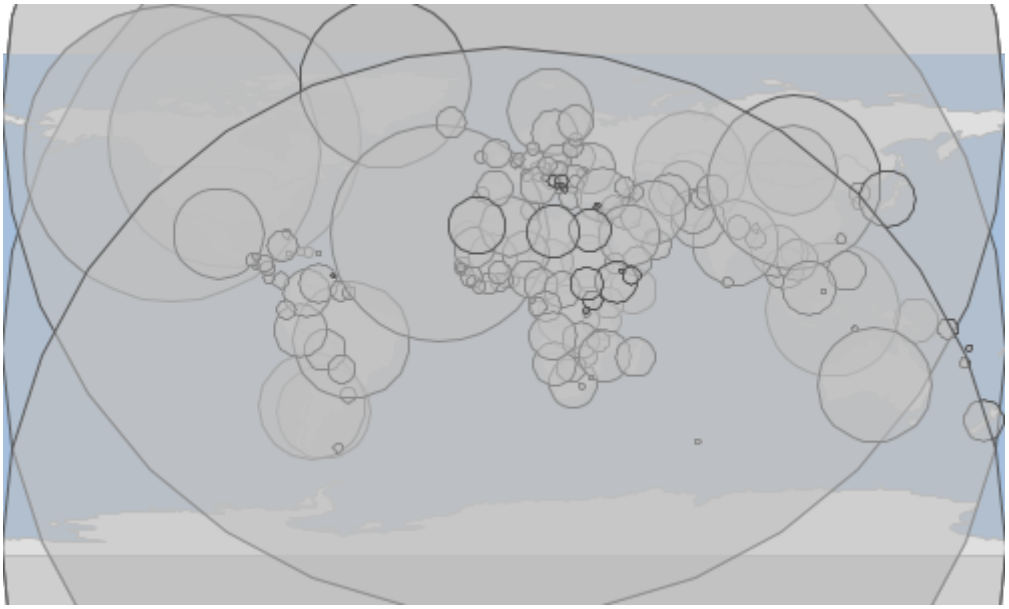


Minimum Bounding Circles

Calculate the minimum bounding circle for each feature in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector mincircles -i src/test/resources/data.gpkg -l countries -o
target/mincircles.shp
```

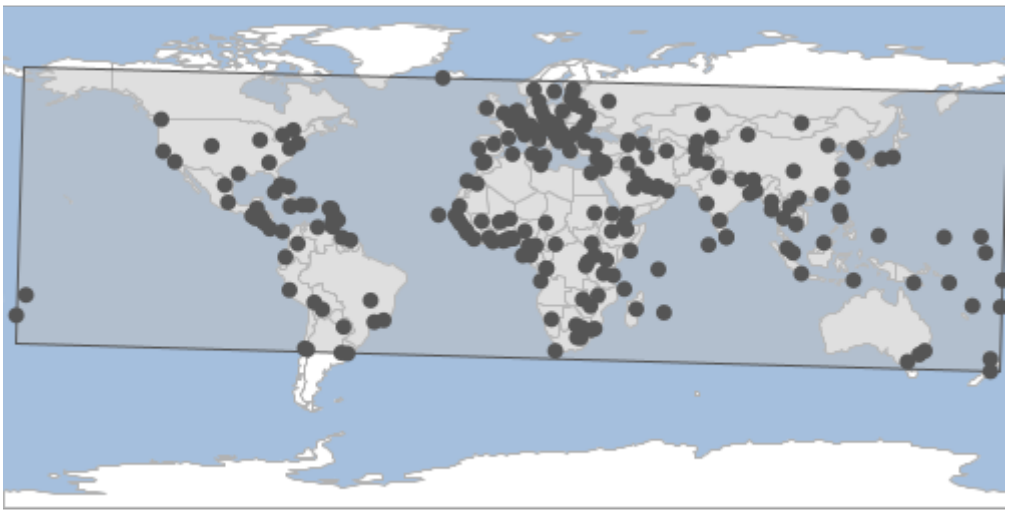


Minimum Bounding Rectangle

Calculate the minimum bounding rectangle of all the features in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector minrect -i src/test/resources/data.gpkg -l places -o target/minrect.shp
```

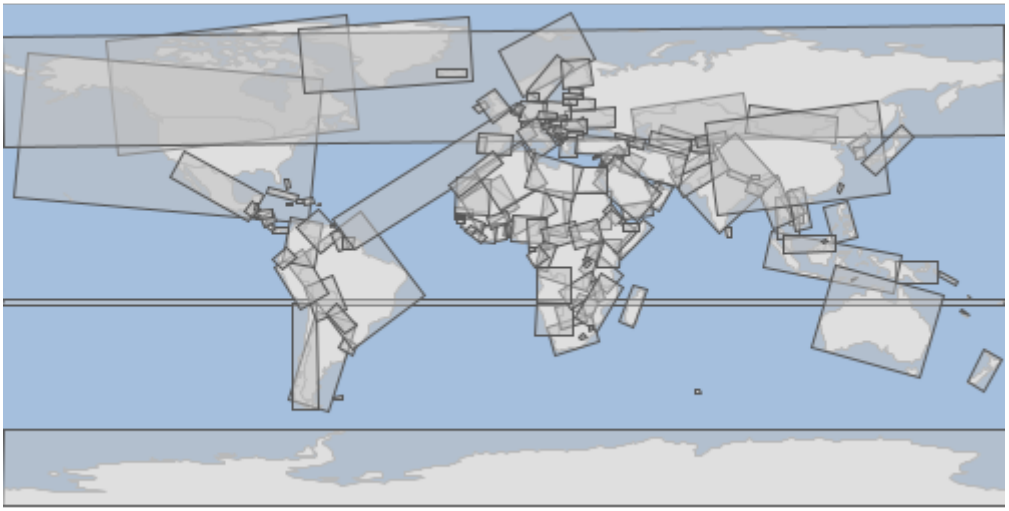


Minimum Bounding rects

Calculate the minimum bounding rectangle for each feature in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector minrects -i src/test/resources/data.gpkg -l countries -o
target/minrects.shp
```

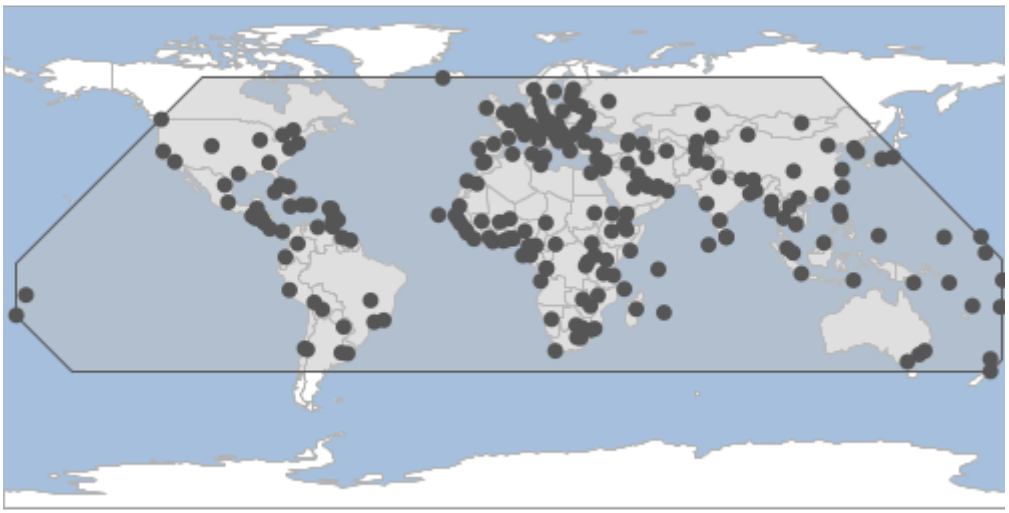


Octangonal Envelope

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

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector octagonalenvelope -i src/test/resources/data.gpkg -l places -o
target/octagonalenvelope.shp
```

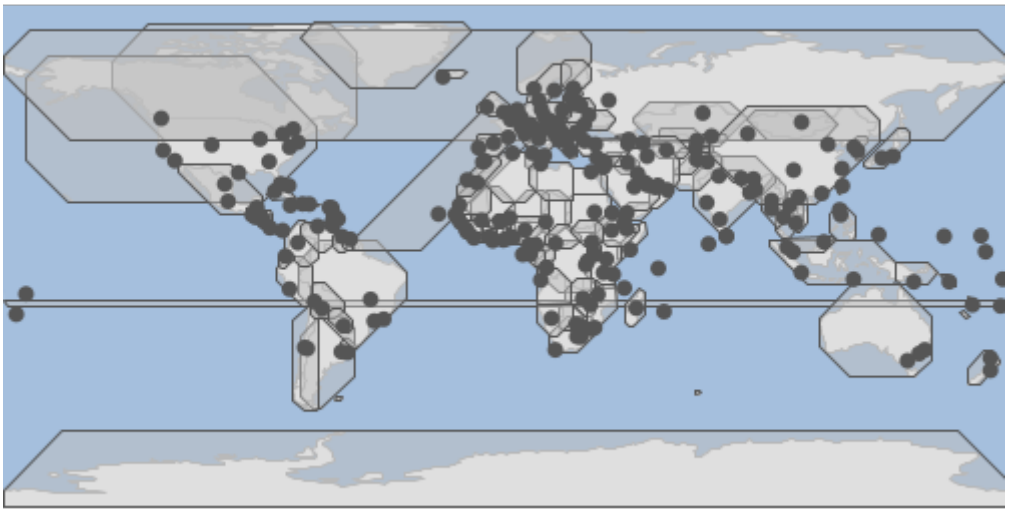


Octangonal Envelopes

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

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector octagonalenvelopes -i src/test/resources/data.gpkg -l countries -o
target/octagonalenvelopes.shp
```



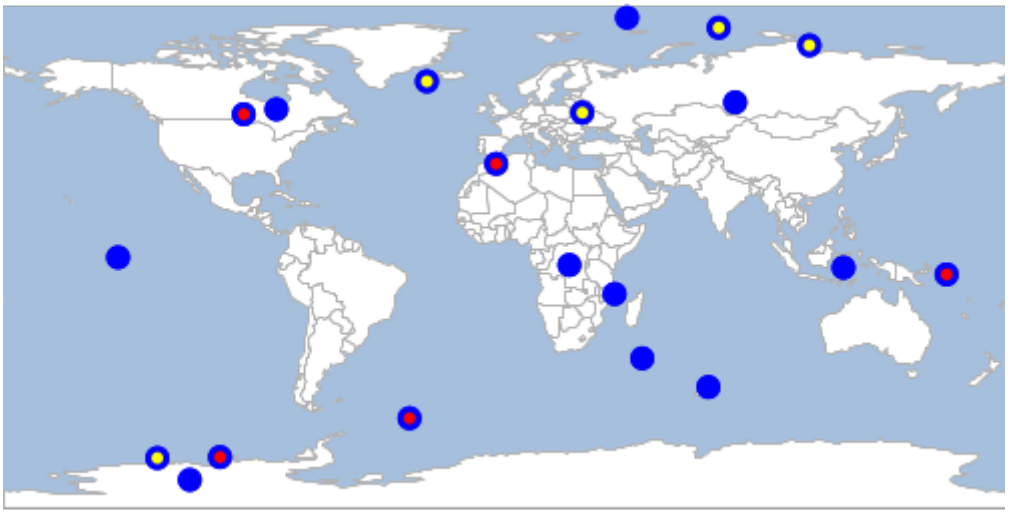
Page

Page through Feature in the input Layer.

Short Name	Long Name	Description
-m	--max	The maximum number of Features to include
-t	--start	The 0 based index of the Feature to start at
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector page -i target/locations.shp -o target/locations_1_5.shp -t 0 -m 5
```

```
geoc vector page -i target/locations.shp -o target/locations_6_10.shp -t 5 -m 5
```



Project

Project the input Layer to another Projection and save it as the output Layer.

Short Name	Long Name	Description
-s	--source-projection	The source projection
-t	--target-projection	The target projection
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

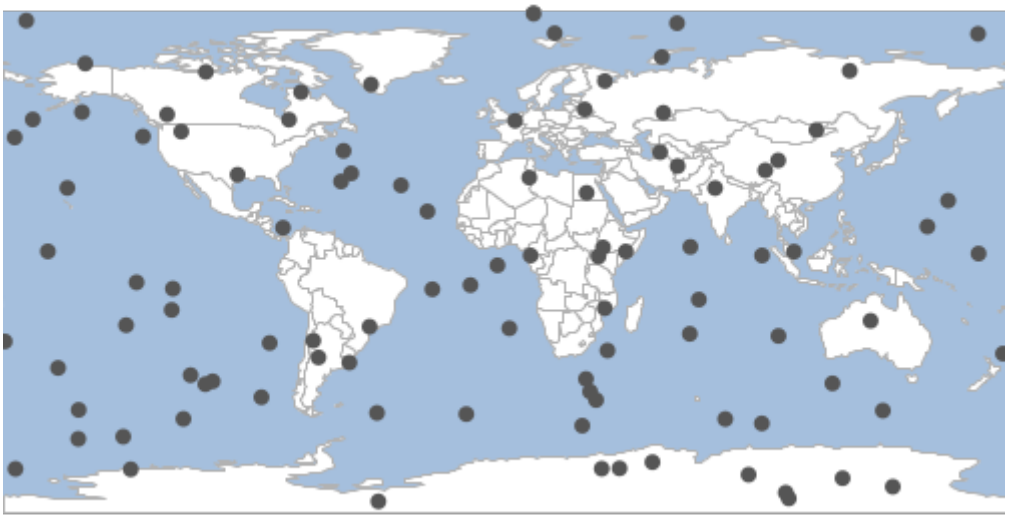
```
geoc vector project -i src/test/resources/data.gpkg -l places -o target/mercator.gpkg
-r places -s EPSG:4326 -t EPSG:3857
```

Random Points

Generate random points.

Short Name	Long Name	Description
-n	--number	The number of points
-p	--projection	The projection
-g	--geometry	The geometry
-d	--grid	Whether to create random points in grid
-c	--constrained-to-circle	Whether the points should be constrained to a circle or not
-f	--gutter-fraction	The size of the gutter between cells
-e	--geom-fieldname	The geometry field name
-u	--id-fieldname	The id field name
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector randompoints -n 100 -g -180,-90,180,90 -o target/randompoints.shp
```



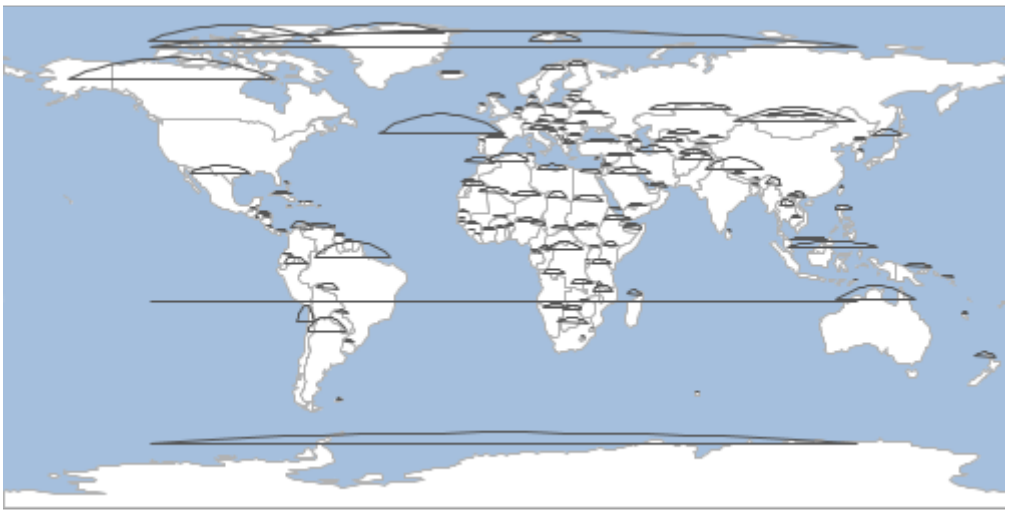
Shapes

Arc

Create a arc shape around each feature of the input Layer.

Short Name	Long Name	Description
-s	--start-angle	The start angle
-e	--end-angle	The end angle
-g	--geometry	The geometry expression
-w	--width	The width of the bounds
-h	--height	The height of the bounds
-p	--num-points	The number of points
-a	--rotation	The angle of rotation
-u	--unit	The unit can either be degrees(d) or radians(r). The default is degrees.
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector arc -i src/test/resources/data.gpkg -l countries -o
target/country_arcs.shp -s 45 -e 90
```

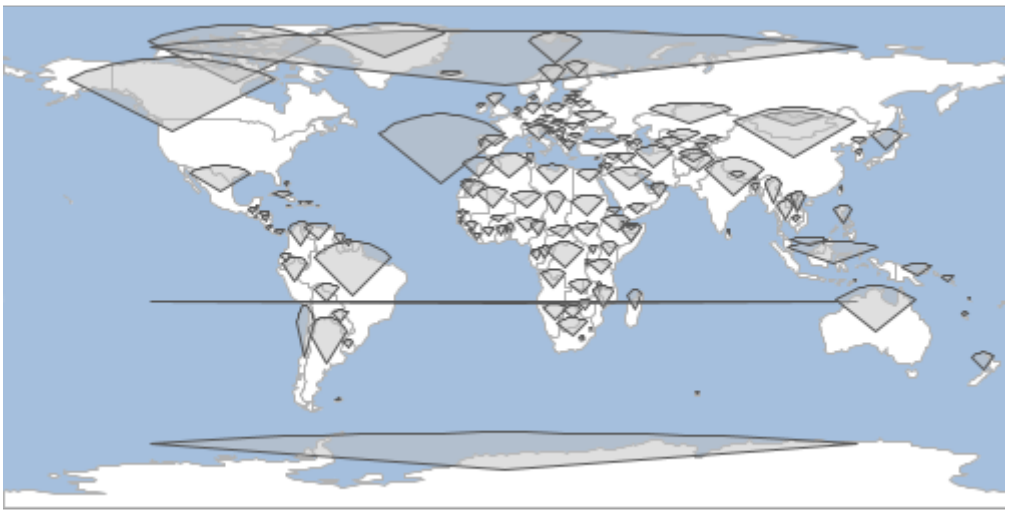


Arc Polygon

Create a arc polygon shape around each feature of the input Layer.

Short Name	Long Name	Description
-s	--start-angle	The start angle
-e	--end-angle	The end angle
-g	--geometry	The geometry expression
-w	--width	The width of the bounds
-h	--height	The height of the bounds
-p	--num-points	The number of points
-a	--rotation	The angle of rotation
-u	--unit	The unit can either be degrees(d) or radians(r). The default is degrees.
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector arcpolygon -i src/test/resources/data.gpkg -l countries -o
target/country_arcs.shp -s 45 -e 90
```

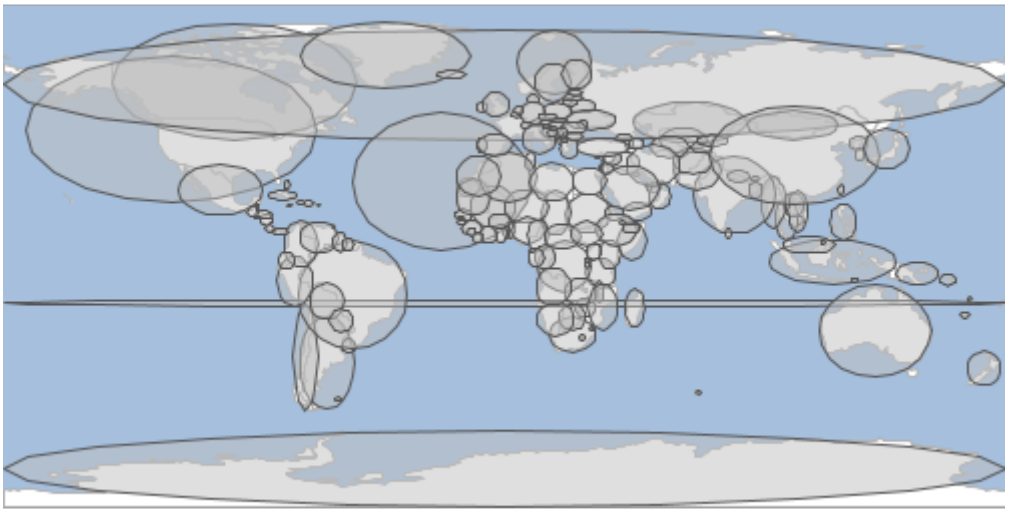


Ellipse

Calculate the ellipse around each feature in a Layer.

Short Name	Long Name	Description
-g	--geometry	The geometry expression
-w	--width	The width of the bounds
-h	--height	The height of the bounds
-p	--num-points	The number of points
-a	--rotation	The angle of rotation
-u	--unit	The unit can either be degrees(d) or radians(r). The default is degrees.
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector ellipse -i src/test/resources/data.gpkg -l countries -o target/ellipse.shp
```

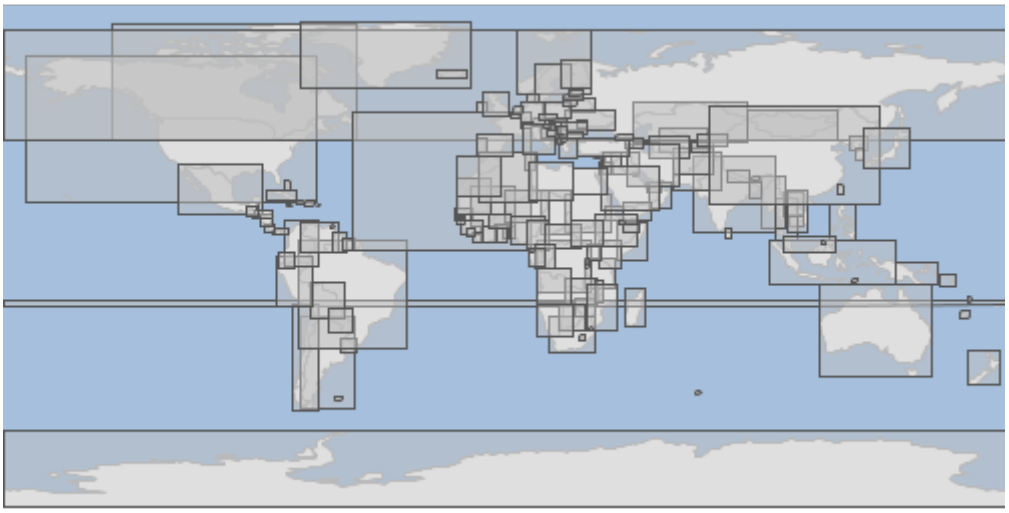


Rectangle

Create a rectangle shape around each feature of the input Layer.

Short Name	Long Name	Description
-g	--geometry	The geometry expression
-w	--width	The width of the bounds
-h	--height	The height of the bounds
-p	--num-points	The number of points
-a	--rotation	The angle of rotation
-u	--unit	The unit can either be degrees(d) or radians(r). The default is degrees.
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector rectangle -i src/test/resources/data.gpkg -l countries -o
target/rectangle.shp
```

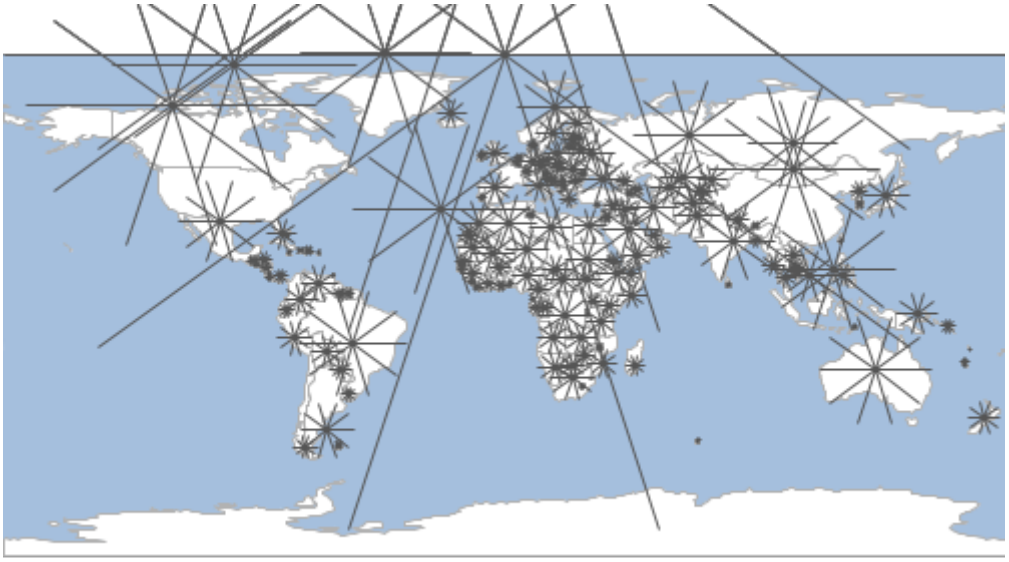


Sine Star

Create a sinestar shape around each feature of the input Layer.

Short Name	Long Name	Description
-n	--number-of-arms	The number of arms
-e	--arm-length-ratio	The arm length ratio
-g	--geometry	The geometry expression
-w	--width	The width of the bounds
-h	--height	The height of the bounds
-p	--num-points	The number of points
-a	--rotation	The angle of rotation
-u	--unit	The unit can either be degrees(d) or radians(r). The default is degrees.
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector sinestar -i src/test/resources/data.gpkg -l countries -o
target/country_stars.shp -n 10 -e 2
```

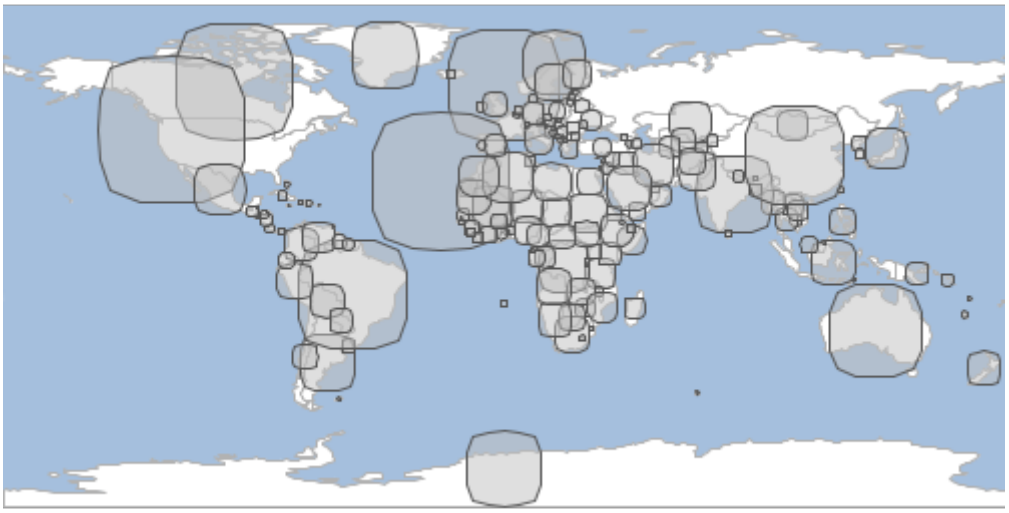


Squircle

Create a squircle shape around each feature of the input Layer.

Short Name	Long Name	Description
-g	--geometry	The geometry expression
-w	--width	The width of the bounds
-h	--height	The height of the bounds
-p	--num-points	The number of points
-a	--rotation	The angle of rotation
-u	--unit	The unit can either be degrees(d) or radians(r). The default is degrees.
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector squircle -i src/test/resources/data.gpkg -l countries -o
target/country_squircles.shp
```

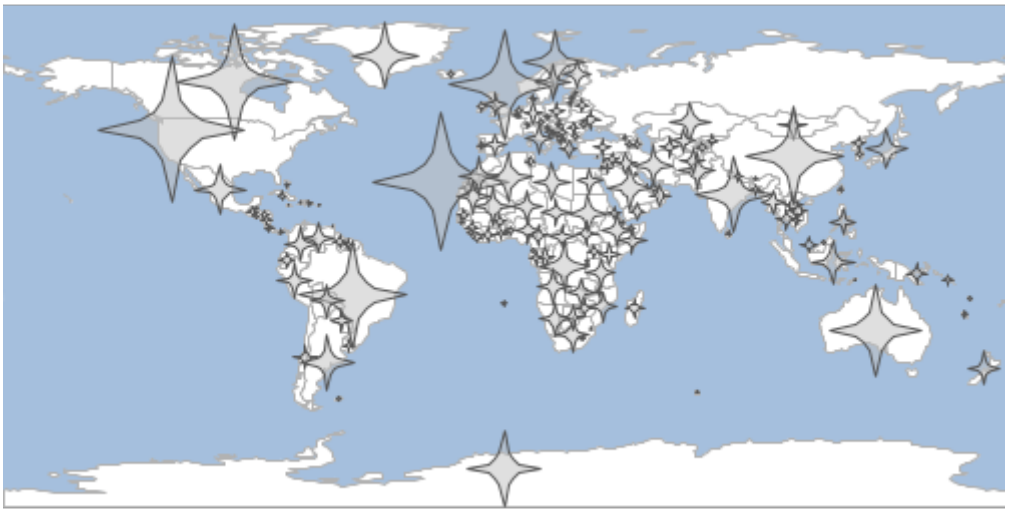


Super Circle

Create a super circle shape around each feature of the input Layer.

Short Name	Long Name	Description
-e	--power	The power
-g	--geometry	The geometry expression
-w	--width	The width of the bounds
-h	--height	The height of the bounds
-p	--num-points	The number of points
-a	--rotation	The angle of rotation
-u	--unit	The unit can either be degrees(d) or radians(r). The default is degrees.
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector supercircle -i src/test/resources/data.gpkg -l countries -o
target/country_circles.shp -e 0.5
```



To

Write a Layer to a String format (CSV, GeoJSON, KML, GML, GEORSS, GPX).

Short Name	Long Name	Description
-f	--format	The string format (CSV, GeoJSON, KML, GML, GEORSS, GPX)
-p	--format-options	A format options 'key=value'
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

GeoJSON

```
geoc vector to -i target/randompoints.shp -f geojson
```


```
{"type":"FeatureCollection","features":[{"type":"Feature","geometry":{"type":"Point","
coordinates":[-116.2628,14.2648]},"properties":{"id":0},"id":"randompoints.1"},{"type
":"Feature","geometry":{"type":"Point","coordinates":[-175.9678,-55.4132]},"
properties":{"id":1},"id":"randompoints.2"},{"type":"Feature","geometry":{"type":"Poin
t","coordinates":[-64.0759,-20.2614]},"properties":{"id":2},"id":"randompoints.3"},{
"type":"Feature","geometry":{"type":"Point","coordinates":[150.766,5.8724]},"propertie
s":{"id":3},"id":"randompoints.4"},{"type":"Feature","geometry":{"type":"Point","coord
inates":[27.2003,-37.0635]},"properties":{"id":4},"id":"randompoints.5"}]}
```


CSV

```
geoc vector to -i target/randompoints.shp -f csv
```

```
"the_geom:Point:EPSG:4326","id:Integer"
"POINT (120.36747040130155 -77.79303500567984)","0"
"POINT (122.54686415867076 -61.79258394530365)","1"
"POINT (-25.150306801789554 -84.97757529860019)","2"
"POINT (165.74635872226673 -21.522322617720548)","3"
"POINT (26.766991197448334 -8.115752126789218)","4"
```

Schema

Get a Layer's Schema.

Short Name	Long Name	Description
-p	--pretty-print	Whether to pretty print the output
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector schema -i src/test/resources/data.gpkg -l countries -p
```

```
-----------------------------
| name       | type         |
-----------------------------
| the_geom   | MultiPolygon |
| featurecla | String       |
| scalerank  | Integer      |
| LABELRANK  | Integer      |
| SOVEREIGNT | String       |
| SOV_A3     | String       |
| ADM0_DIF   | Integer      |
| LEVEL      | Integer      |
| TYPE       | String       |
| ADMIN      | String       |
| ADM0_A3    | String       |
| GEOU_DIF   | Integer      |
| GEOUNIT    | String       |
| GU_A3      | String       |
| SU_DIF     | Integer      |
| SUBUNIT    | String       |
| SU_A3      | String       |
```

```
| BRK_DIFF   | Integer      |
| NAME       | String       |
| NAME_LONG  | String       |
| BRK_A3     | String       |
| BRK_NAME   | String       |
| ABBREV     | String       |
| POSTAL     | String       |
| FORMAL_EN  | String       |
| FORMAL_FR  | String       |
| NAME_CIAWF | String       |
| NOTE_ADM0  | String       |
| NOTE_BRK   | String       |
| NAME_SORT  | String       |
| NAME_ALT   | String       |
| MAPCOLOR7  | Integer      |
| MAPCOLOR8  | Integer      |
| MAPCOLOR9  | Integer      |
| MAPCOLOR13 | Integer      |
| POP_EST    | Double       |
| POP_RANK   | Integer      |
| POP_YEAR   | Integer      |
| GDP_MD     | Integer      |
| GDP_YEAR   | Integer      |
| ECONOMY    | String       |
| INCOME_GRP | String       |
| FIPS_10    | String       |
| ISO_A2     | String       |
| ISO_A2_EH  | String       |
| ISO_A3     | String       |
| ISO_A3_EH  | String       |
| ISO_N3     | String       |
| ISO_N3_EH  | String       |
| UN_A3      | String       |
| WB_A2      | String       |
| WB_A3      | String       |
| WOE_ID     | Integer      |
| WOE_ID_EH  | Integer      |
| WOE_NOTE   | String       |
| ADM0_A3_IS | String       |
| ADM0_A3_US | String       |
| ADM0_A3_FR | String       |
| ADM0_A3_RU | String       |
| ADM0_A3_ES | String       |
| ADM0_A3_CN | String       |
| ADM0_A3_TW | String       |
| ADM0_A3_IN | String       |
| ADM0_A3_NP | String       |
| ADM0_A3_PK | String       |
| ADM0_A3_DE | String       |
| ADM0_A3_GB | String       |
| ADM0_A3_BR | String       |
```

```
| ADM0_A3_IL | String       |
| ADM0_A3_PS | String       |
| ADM0_A3_SA | String       |
| ADM0_A3_EG | String       |
| ADM0_A3_MA | String       |
| ADM0_A3_PT | String       |
| ADM0_A3_AR | String       |
| ADM0_A3_JP | String       |
| ADM0_A3_KO | String       |
| ADM0_A3_VN | String       |
| ADM0_A3_TR | String       |
| ADM0_A3_ID | String       |
| ADM0_A3_PL | String       |
| ADM0_A3_GR | String       |
| ADM0_A3_IT | String       |
| ADM0_A3_NL | String       |
| ADM0_A3_SE | String       |
| ADM0_A3_BD | String       |
| ADM0_A3_UA | String       |
| ADM0_A3_UN | Integer      |
| ADM0_A3_WB | Integer      |
| CONTINENT  | String       |
| REGION_UN  | String       |
| SUBREGION  | String       |
| REGION_WB  | String       |
| NAME_LEN   | Integer      |
| LONG_LEN   | Integer      |
| ABBREV_LEN | Integer      |
| TINY       | Integer      |
| HOMEPART   | Integer      |
| MIN_ZOOM   | Double       |
| MIN_LABEL  | Double       |
| MAX_LABEL  | Double       |
| NE_ID      | Long         |
| WIKIDATAID | String       |
| NAME_AR    | String       |
| NAME_BN    | String       |
| NAME_DE    | String       |
| NAME_EN    | String       |
| NAME_ES    | String       |
| NAME_FA    | String       |
| NAME_FR    | String       |
| NAME_EL    | String       |
| NAME_HE    | String       |
| NAME_HI    | String       |
| NAME_HU    | String       |
| NAME_ID    | String       |
| NAME_IT    | String       |
| NAME_JA    | String       |
| NAME_KO    | String       |
| NAME_NL    | String       |
```

```
| NAME_PL    | String       |
| NAME_PT    | String       |
| NAME_RU    | String       |
| NAME_SV    | String       |
| NAME_TR    | String       |
| NAME_UK    | String       |
| NAME_UR    | String       |
| NAME_VI    | String       |
| NAME_ZH    | String       |
| NAME_ZHT   | String       |
| FCLASS_ISO | String       |
| FCLASS_US  | String       |
| FCLASS_FR  | String       |
| FCLASS_RU  | String       |
| FCLASS_ES  | String       |
| FCLASS_CN  | String       |
| FCLASS_TW  | String       |
| FCLASS_IN  | String       |
| FCLASS_NP  | String       |
| FCLASS_PK  | String       |
| FCLASS_DE  | String       |
| FCLASS_GB  | String       |
| FCLASS_BR  | String       |
| FCLASS_IL  | String       |
| FCLASS_PS  | String       |
| FCLASS_SA  | String       |
| FCLASS_EG  | String       |
| FCLASS_MA  | String       |
| FCLASS_PT  | String       |
| FCLASS_AR  | String       |
| FCLASS_JP  | String       |
| FCLASS_KO  | String       |
| FCLASS_VN  | String       |
| FCLASS_TR  | String       |
| FCLASS_ID  | String       |
| FCLASS_PL  | String       |
| FCLASS_GR  | String       |
| FCLASS_IT  | String       |
| FCLASS_NL  | String       |
| FCLASS_SE  | String       |
| FCLASS_BD  | String       |
| FCLASS_UA  | String       |
-----------------------------
```

Unique Values

List the unique values in a Layer’s Field.

Short Name	Long Name	Description
-f	--field	The field name
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector uniquevalues -i src/test/resources/data.gpkg -l countries -f ECONOMY
```

```
1. Developed region: G7
2. Developed region: nonG7
3. Emerging region: BRIC
4. Emerging region: MIKT
5. Emerging region: G20
6. Developing region
7. Least developed region
```

Unique Values Style

Create an SLD document where each unique value in the Layer is a rule.

Short Name	Long Name	Description
-f	--field	The field name
-c	--colors	The color brewer palette name or a list of colors (space delimited)
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

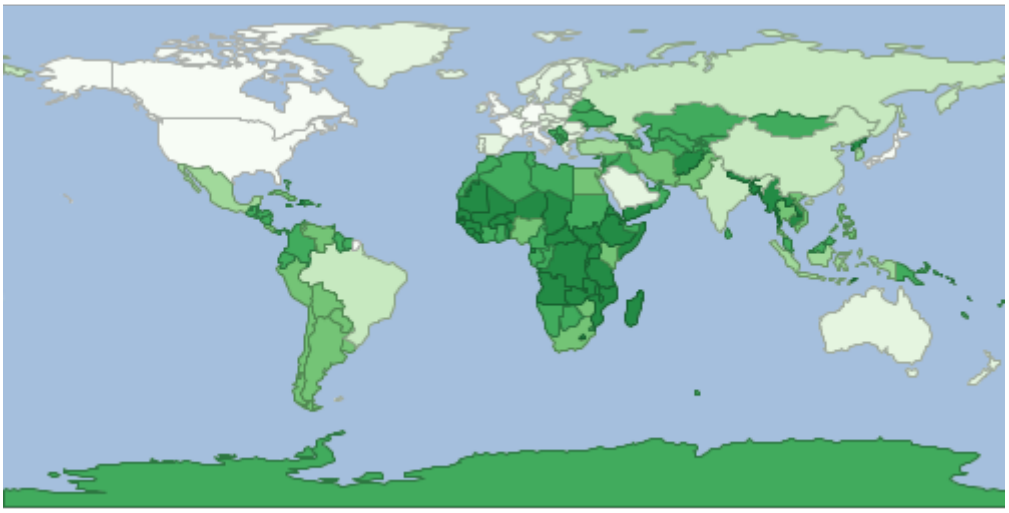
```
geoc vector uniquevaluesstyle -i src/test/resources/data.gpkg -l countries -f ECONOMY
-c GREENS
```

```
<?xml version="1.0" encoding="UTF-8"?><sld:StyledLayerDescriptor xmlns:sld=
"http://www.opengis.net/sld" xmlns="http://www.opengis.net/sld" xmlns:gml=
"http://www.opengis.net/gml" xmlns:ogc="http://www.opengis.net/ogc" version="1.0.0">
  <sld:UserLayer>
    <sld:LayerFeatureConstraints>
      <sld:FeatureTypeConstraint/>
```

```
    </sld:LayerFeatureConstraints>
    <sld:UserStyle>
      <sld:Name>Default Styler</sld:Name>
      <sld:FeatureTypeStyle>
        <sld:Name>name</sld:Name>
        <sld:Rule>
          <sld:Name>1. Developed region: G7</sld:Name>
          <ogc:Filter>
            <ogc:PropertyIsEqualTo>
              <ogc:PropertyName>ECONOMY</ogc:PropertyName>
              <ogc:Literal>1. Developed region: G7</ogc:Literal>
            </ogc:PropertyIsEqualTo>
          </ogc:Filter>
          <sld:PolygonSymbolizer>
            <sld:Fill>
              <sld:CssParameter name="fill">#f7fcf5</sld:CssParameter>
            </sld:Fill>
          </sld:PolygonSymbolizer>
          <sld:LineSymbolizer>
            <sld:Stroke>
              <sld:CssParameter name="stroke">#acb0ab</sld:CssParameter>
              <sld:CssParameter name="stroke-width">0.5</sld:CssParameter>
            </sld:Stroke>
          </sld:LineSymbolizer>
        </sld:Rule>
        <sld:Rule>
          <sld:Name>2. Developed region: nonG7</sld:Name>
          <ogc:Filter>
            <ogc:PropertyIsEqualTo>
              <ogc:PropertyName>ECONOMY</ogc:PropertyName>
              <ogc:Literal>2. Developed region: nonG7</ogc:Literal>
            </ogc:PropertyIsEqualTo>
          </ogc:Filter>
          <sld:PolygonSymbolizer>
            <sld:Fill>
              <sld:CssParameter name="fill">#e5f5e0</sld:CssParameter>
            </sld:Fill>
          </sld:PolygonSymbolizer>
          <sld:LineSymbolizer>
            <sld:Stroke>
              <sld:CssParameter name="stroke">#a0ab9c</sld:CssParameter>
              <sld:CssParameter name="stroke-width">0.5</sld:CssParameter>
            </sld:Stroke>
          </sld:LineSymbolizer>
        </sld:Rule>
        <sld:Rule>
          <sld:Name>3. Emerging region: BRIC</sld:Name>
          <ogc:Filter>
            <ogc:PropertyIsEqualTo>
              <ogc:PropertyName>ECONOMY</ogc:PropertyName>
              <ogc:Literal>3. Emerging region: BRIC</ogc:Literal>
```

```
      </ogc:PropertyIsEqualTo>
    </ogc:Filter>
    <sld:PolygonSymbolizer>
      <sld:Fill>
        <sld:CssParameter name="fill">#c7e9c0</sld:CssParameter>
      </sld:Fill>
    </sld:PolygonSymbolizer>
    <sld:LineSymbolizer>
      <sld:Stroke>
        <sld:CssParameter name="stroke">#8ba386</sld:CssParameter>
        <sld:CssParameter name="stroke-width">0.5</sld:CssParameter>
      </sld:Stroke>
    </sld:LineSymbolizer>
  </sld:Rule>
  <sld:Rule>
    <sld:Name>4. Emerging region: MIKT</sld:Name>
    <ogc:Filter>
      <ogc:PropertyIsEqualTo>
        <ogc:PropertyName>ECONOMY</ogc:PropertyName>
        <ogc:Literal>4. Emerging region: MIKT</ogc:Literal>
      </ogc:PropertyIsEqualTo>
    </ogc:Filter>
    <sld:PolygonSymbolizer>
      <sld:Fill>
        <sld:CssParameter name="fill">#a1d99b</sld:CssParameter>
      </sld:Fill>
    </sld:PolygonSymbolizer>
    <sld:LineSymbolizer>
      <sld:Stroke>
        <sld:CssParameter name="stroke">#70976c</sld:CssParameter>
        <sld:CssParameter name="stroke-width">0.5</sld:CssParameter>
      </sld:Stroke>
    </sld:LineSymbolizer>
  </sld:Rule>
  <sld:Rule>
    <sld:Name>5. Emerging region: G20</sld:Name>
    <ogc:Filter>
      <ogc:PropertyIsEqualTo>
        <ogc:PropertyName>ECONOMY</ogc:PropertyName>
        <ogc:Literal>5. Emerging region: G20</ogc:Literal>
      </ogc:PropertyIsEqualTo>
    </ogc:Filter>
    <sld:PolygonSymbolizer>
      <sld:Fill>
        <sld:CssParameter name="fill">#74c476</sld:CssParameter>
      </sld:Fill>
    </sld:PolygonSymbolizer>
    <sld:LineSymbolizer>
      <sld:Stroke>
        <sld:CssParameter name="stroke">#518952</sld:CssParameter>
        <sld:CssParameter name="stroke-width">0.5</sld:CssParameter>
```

```
            </sld:Stroke>
          </sld:LineSymbolizer>
        </sld:Rule>
        <sld:Rule>
          <sld:Name>6. Developing region</sld:Name>
          <ogc:Filter>
            <ogc:PropertyIsEqualTo>
              <ogc:PropertyName>ECONOMY</ogc:PropertyName>
              <ogc:Literal>6. Developing region</ogc:Literal>
            </ogc:PropertyIsEqualTo>
          </ogc:Filter>
          <sld:PolygonSymbolizer>
            <sld:Fill>
              <sld:CssParameter name="fill">#41ab5d</sld:CssParameter>
            </sld:Fill>
          </sld:PolygonSymbolizer>
          <sld:LineSymbolizer>
            <sld:Stroke>
              <sld:CssParameter name="stroke">#2d7741</sld:CssParameter>
              <sld:CssParameter name="stroke-width">0.5</sld:CssParameter>
            </sld:Stroke>
          </sld:LineSymbolizer>
        </sld:Rule>
        <sld:Rule>
          <sld:Name>7. Least developed region</sld:Name>
          <ogc:Filter>
            <ogc:PropertyIsEqualTo>
              <ogc:PropertyName>ECONOMY</ogc:PropertyName>
              <ogc:Literal>7. Least developed region</ogc:Literal>
            </ogc:PropertyIsEqualTo>
          </ogc:Filter>
          <sld:PolygonSymbolizer>
            <sld:Fill>
              <sld:CssParameter name="fill">#238b45</sld:CssParameter>
            </sld:Fill>
          </sld:PolygonSymbolizer>
          <sld:LineSymbolizer>
            <sld:Stroke>
              <sld:CssParameter name="stroke">#186130</sld:CssParameter>
              <sld:CssParameter name="stroke-width">0.5</sld:CssParameter>
            </sld:Stroke>
          </sld:LineSymbolizer>
        </sld:Rule>
      </sld:FeatureTypeStyle>
    </sld:UserStyle>
  </sld:UserLayer>
</sld:StyledLayerDescriptor>
```



Voronoi

Calculate a voronoi diagram of all the features in a Layer.

Short Name	Long Name	Description
-o	--output-workspace	The output workspace
-r	--output-layer	The output layer
-i	--input-workspace	The input workspace
-l	--input-layer	The input layer
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc vector voronoi -i src/test/resources/data.gpkg -l places -o target/voronoi.shp
```