Table of Contents

V	ector Commands	2
	Add	2
	Add Fields.	2
	Add Area Field	3
	Add Length Field	4
	Add XY Fields	5
	Append	6
	Buffer	6
	Centroid	7
	Convexhull	8
	Convexhulls	9
	Count	. 10
	Create	. 10
	Delaunay	. 11
	Ellipse	. 12
	Envelope.	. 12
	Envelopes	. 13
	From	. 14
	Graticule - Hexagon	. 16
	Graticule - Line	. 16
	Graticule - Oval	. 17
	Graticule - Rectangle	. 18
	Graticule - Square	. 19
	Info	. 20
	Interior Point.	. 21
	Layer List	. 22
	Minimum Bounding Circle	. 22
	Minimum Bounding Circles.	. 23
	Minimum Bounding Rectangle	. 24
	Minimum Bounding rects	. 25
	Project	. 25
	Random Points	. 26
	To	. 27
	Schema	. 28
	Voronoi	. 32

Vector Commands

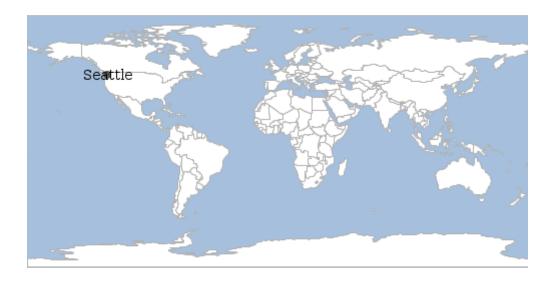
Add

Add a Feature to a Layer.

Short Name	Long Name	Description
-V	value	A value 'field=value'
-i	input-workspace	The input workspace
-1	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'
-0	output-workspace	The output workspace

Short Name	Long Name	Description
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	input-layer	The input layer
	help	Print the help message
	web-help	Open help in a browser

 ${\tt geoc\ vector\ addfields\ -i\ target/locations.shp\ -o\ target/locations_idname.shp\ -f\ id=int-f\ name=string}$

Schema

Name	Туре
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
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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	Туре
the_geom	MultiPolygon
STATE_NAME	String
SUB_REGION	String

Name	Туре
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
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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	Туре
the_geom	MultiLineString
name	String
label	String
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 XY Fields

Add XY Fields.

Short Name	Long Name	Description
-X	x-fieldname	The name for the X Field
-у	y-fieldname	The name for the Y Field
-a	algorithm	The XY generation algorithm (centroid or interiorpoint)
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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	Туре
the_geom	Point
NAME	String
x_coord	Double
y_coord	Double

Values

NAME	x_coord	y_coord
Vatican City	12.4533865	41.9032822

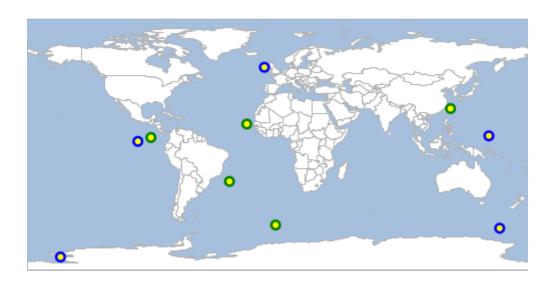
NAME	x_coord	y_coord
San Marino	12.4417702	43.9360958
Vaduz	9.5166695	47.1337238
Lobamba	31.1999971	-26.4666675
Luxembourg	6.1300028	49.6116604

Append

Add a Features from one layer to another Layer.

Short Name	Long Name	Description
-k	other-workspace	The other workspace
-у	other-layer	The other layer
-i	input-workspace	The input workspace
-1	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



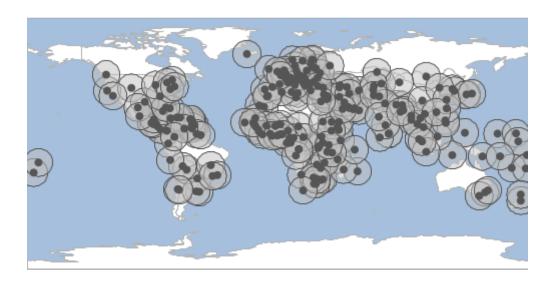
Buffer

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
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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

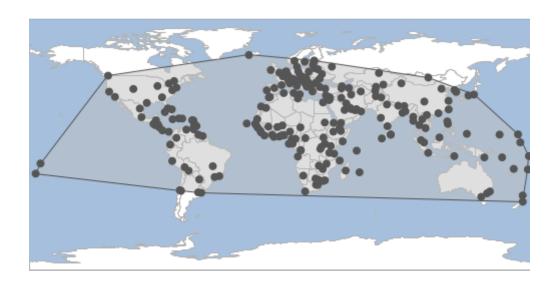


Convexhull

Calculate the convexhull of all the features in a Layer.

Short Name	Long Name	Description
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	input-layer	The input layer
	help	Print the help message
	web-help	Open help in a browser

 ${\tt geoc\ vector\ convexhull\ -i\ src/test/resources/data.gpkg\ -l\ places\ -o\ target/convexhull.shp}$

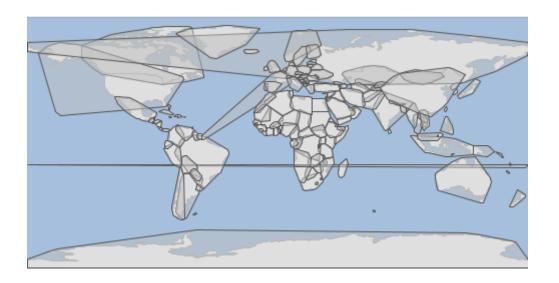


Convexhulls

Calculate the convexhulls for each feature in a Layer.

Short Name	Long Name	Description
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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



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
-1	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'
-0	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

 ${\tt geoc\ vector\ create\ -o\ target/locations.shp\ -f\ "the_geom=POINT\ EPSG:4326"\ -f\ id=integer-f\ name=string}$

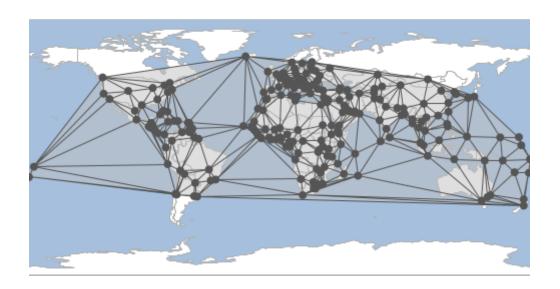
Name	Туре
the_geom	Point
name	String
id	Integer

Delaunay

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

Short Name	Long Name	Description
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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

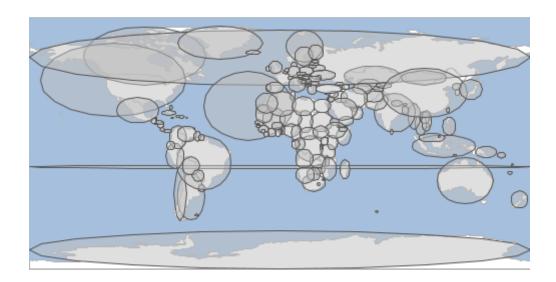


Ellipse

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.
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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

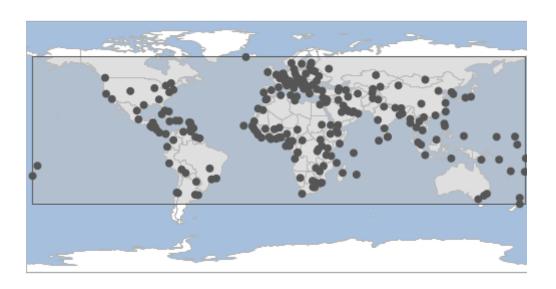


Envelope

Calculate the envelope of all the features in a Layer.

Short Name	Long Name	Description
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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

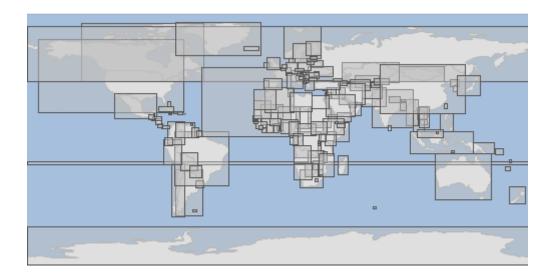


Envelopes

Calculate the envelopes for each feature in a Layer.

Short Name	Long Name	Description
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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.

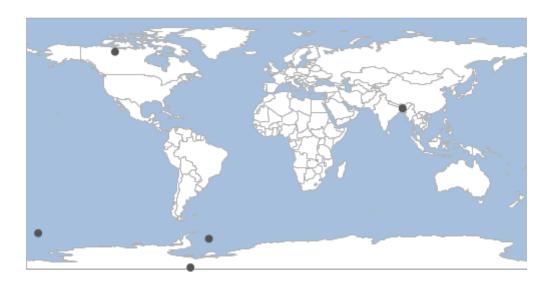
Short Name	Long Name	Description
-t	text	The text
-f	format	The string format (CSV, GeoJSON, KML, GML)
-g	geometry-type	The geometry type
-р	format-options	A format options 'key=value'
-0	output-workspace	The output workspace
-r	output-layer	The output layer
	help	Print the help message
	web-help	Open help in a browser

GeoJSON

points.json

```
{"type":"FeatureCollection", "features":[{"type":"Feature", "geometry":{"type":"Point", "coordinates":[-61.8136,-89.2411]}, "properties":{"id":0}, "id":"randompoints.1"}, {"type ":"Feature", "geometry":{"type":"Point", "coordinates":[-48.5521,-68.6749]}, "properties ":{"id":1}, "id":"randompoints.2"}, {"type":"Feature", "geometry":{"type":"Point", "coordinates":[90.647,25.0924]}, "properties":{"id":2}, "id":"randompoints.3"}, {"type":"Feature ", "geometry":{"type":"Point", "coordinates":[-116.0201,65.7219]}, "properties":{"id":3}, "id":"randompoints.4"}, {"type":"Feature", "geometry":{"type":"Point", "coordinates":[-17.2454,-64.6266]}, "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 (-79.68444974957335 35.77440699040798)","0"

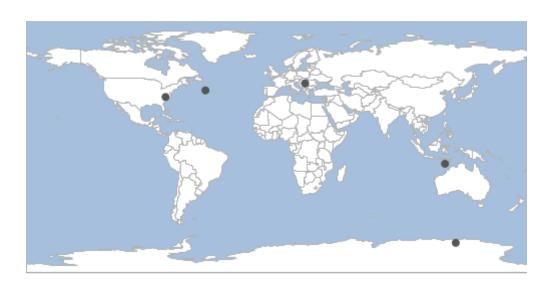
"POINT (20.647705369264116 45.53552046414774)","1"

"POINT (121.08277047159919 -12.219992378837418)","2"

"POINT (128.81868771953873 -69.08330126889933)","3"

"POINT (-51.042454545109365 40.516355485913266)","4"
```

cat points.csv | geoc vector from -f csv

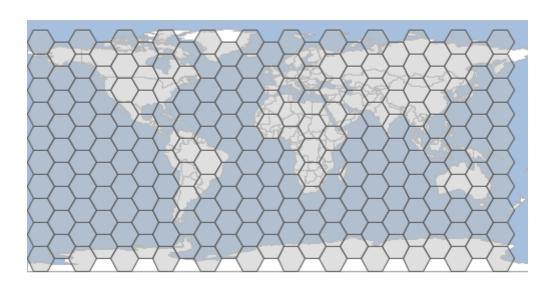


Graticule - Hexagon

Create hexagon graticules.

Short Name	Long Name	Description
-g	geometry	The geometry
-1	length	The length
-S	spacing	The spacing (defaults to -1)
-t	orientation	The orientation (flat or angled).
-0	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



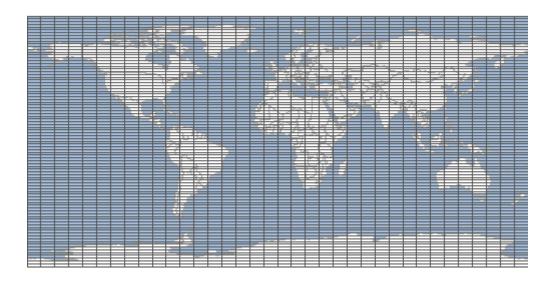
Graticule - Line

Create line graticules.

Short Name	Long Name	Description
-g	geometry	The geometry
-S	spacing	The spacing (defaults to -1)

Short Name	Long Name	Description
-1	line-definition	Each line definition has comma delimited orientation (vertical or horizontal), level, and spacing)
-0	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

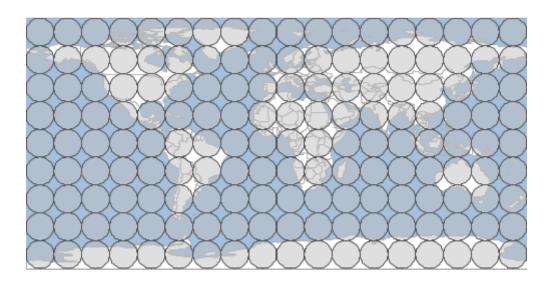


Graticule - Oval

Create oval graticules.

Short Name	Long Name	Description
-g	geometry	The geometry
-1	length	The length
-0	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

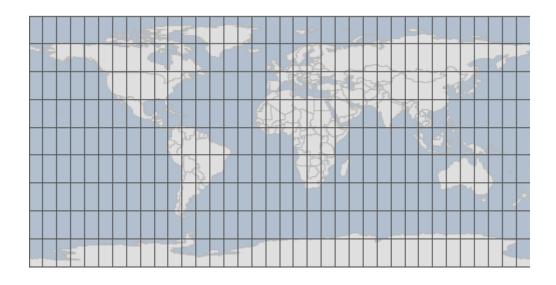


Graticule - Rectangle

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)
-0	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

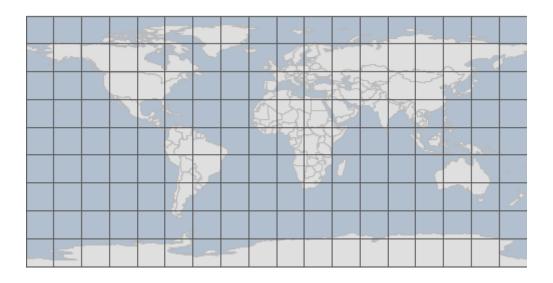


Graticule - Square

Create square graticules.

Short Name	Long Name	Description
-g	geometry	The geometry
-1	length	The length
-S	spacing	The spacing (defaults to -1)
-0	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 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
-1	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, 180.0000000000006, 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
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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

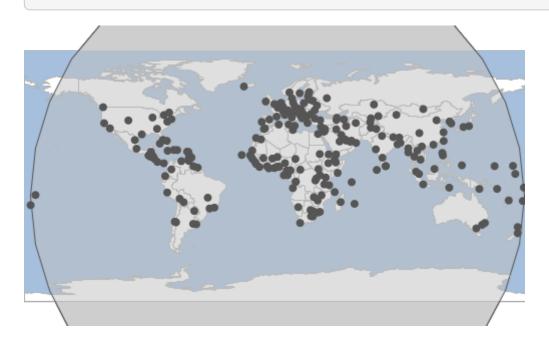
Minimum Bounding Circle

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

Short Name	Long Name	Description
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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

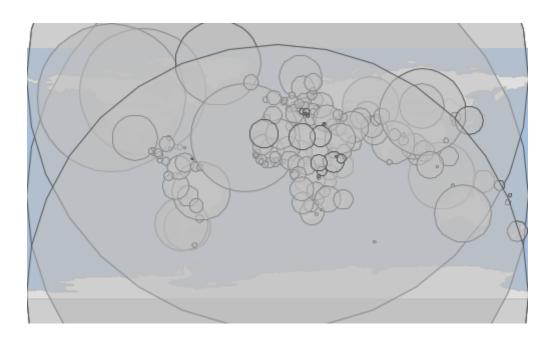


Minimum Bounding Circles

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

Short Name	Long Name	Description
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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

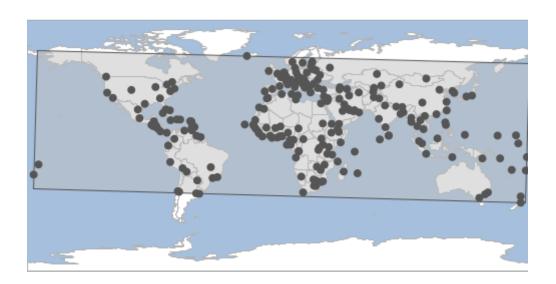


Minimum Bounding Rectangle

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

Short Name	Long Name	Description
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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

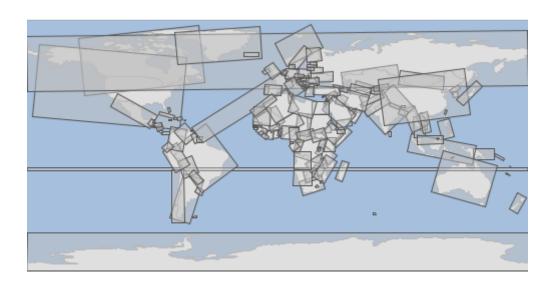


Minimum Bounding rects

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

Short Name	Long Name	Description
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	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



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
-0	output-workspace	The output workspace
-r	output-layer	The output layer
-i	input-workspace	The input workspace
-1	input-layer	The input layer

Short Name	Long Name	Description	
	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



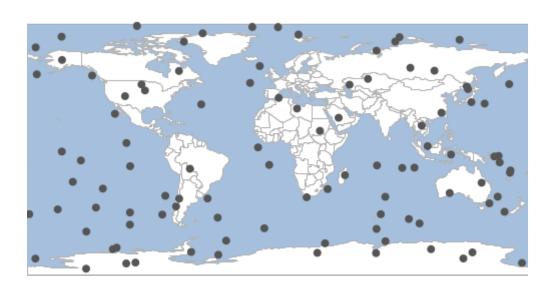
Random Points

Generate random points.

Short Name	Long Name	Description
-n	number	The number of points
-р	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
-е	geom-fieldname	The geometry field name

Short Name	Long Name	Description		
-u	id-fieldname	The id field name		
-0	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



ToWrite 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)
-р	format-options	A format options 'key=value'
-i	input-workspace	The input workspace
-1	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

CSV

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

```
"the_geom:Point:EPSG:4326","id:Integer"
"POINT (139.96060793237467 -80.18469295900358)","0"
"POINT (-82.69311301786185 -80.12414688079643)","1"
"POINT (136.58993290618997 58.59452854861797)","2"
"POINT (144.29692646541736 -63.03141139274279)","3"
"POINT (-69.84630377956992 37.56205446552673)","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
-1	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
```

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
ADMO_A3_RU	String
ADMO_A3_KO ADMO_A3_ES	String String
ADMO_A3_CN	String
ADMO_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_K0	String
ADM0_A3_VN	String
ADMO_A3_TR	String
ADM0_A3_TR	String
	String String
ADMO_A3_PL	
ADMO_A3_GR	String
ADMO_A3_IT	String
ADMO_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 NAME_EN	String String

NAME_ES	String
NAME_FA	String
NAME_FR	String
·	String
NAME_EL	
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					

Voronoi

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

Short Name	Long Name	Description	
-0	output-workspace	The output workspace	
-r	output-layer	The output layer	
-i	input-workspace	The input workspace	
-1	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

