

# geoDataClient

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## Introduction

This Windows program combines digital elevation data with texture data, based on a given street address.

You may also specify just the coordinates of the top left (Northwest) corner of the desired quad.

The tool can also overlay waypoints (geodesic coordinates in the same coordinate system as the main data) from a waypoint list to the resulting texture file.

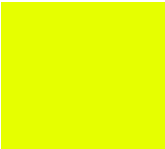
## Disclaimer

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## Example

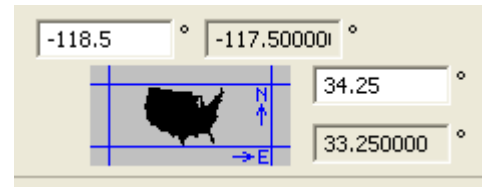
We want to plot this quadrangle:

-118.50/34.25	-118.25/34.25
	
-118.50/34.00	-118.25/34.00

And we want to plot this waypoint list on the terrain (file "waypoints.txt"):

34.077808	-118.418512
34.079000	-118.419617
34.082874	-118.420010
34.088465	-118.422637
34.112823	-118.424374
34.106374	-118.436635

First, enter the Northwest corner coordinates in the main dialog. As you can see, the Southeast corner indicates a quadrangle size of one degree. This we have to change in the "Settings" dialog.

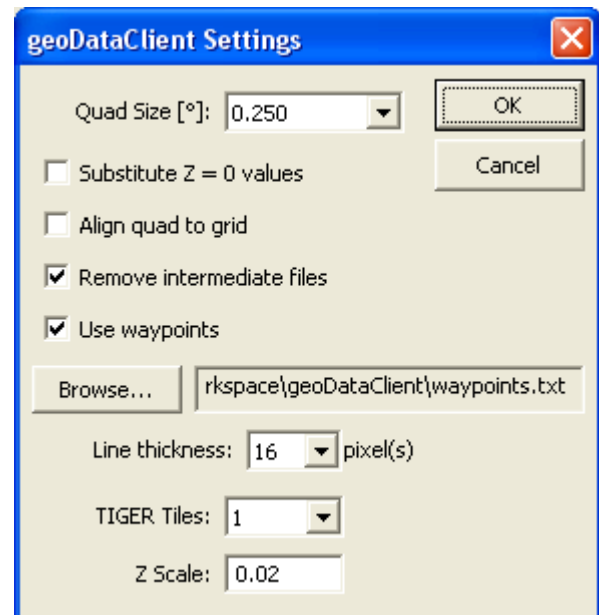


Then, open the "Settings" dialog;

- set "Quad Size [°]" to 0.250
- check "Use waypoints"
- click "Browse..."
- select the file "waypoints.txt"
- set the line thickness to 16 pixels
- click "OK"

That's all to proceed. In the main dialog, click the "Proceed" button.

The message list displays the progress. The log of a fully successful procedure is shown in the appendix.



The last line of the list should be, "Download successfully finished."

## ***Waypoint File***

The waypoint file is an ASCII text file. It may have:

comment lines starting with a hash sign: #

lines containing latitude (dd.ddddd), longitude (ddd.ddddd), and an optional comment. The fields are white space separated (spaces or tabs). The comment is ignored.

### **Waypoint File Example:**

```
# Specify latitude, then longitude, then (optional) comment.  
# Demo waypoint list for: 34.25/-118.50 (Bev Hills, 0.25 degree quad size)  
34.077808 -118.418512  
34.079000 -118.419617  
34.082874 -118.420010  
34.088465 -118.422637  
34.112823 -118.424374  
34.106374 -118.436635
```

## ***Automatic Geocoding***

You may also enter a valid U.S. street address in the "Address" edit field.

Example: Enter "1700 N Roxbury Dr, Beverly Hills, CA", then click the "Geocode"

The result list should then display:

quad: -118.543512, -118.293512, 34.202808, 33.952808  
(if the settings are: 0.25 degrees quad size, don't align quad to grid)

or

quad: -118.500000, -118.250000, 34.250000, 34.000000  
(if the settings are: 0.25 degrees quad size, align quad to grid)

## Result

The result of the geoDataClient download are four files (nnnnnnnn is a number that varies from session to session):

- an elevation file (nnnnnnnn\_el.tga);
- a texture file (nnnnnnnn\_tx\_c.tga or nnnnnnnn\_tx\_cw.tga);
- two TruFlite scenery files (nnnnnnnn\_1.trf and nnnnnnnn\_2.trf) ready to be run using TruFlite for Windows.

All those files are created in the current working directory of geoDataClient. There is no menu to change the destination subdirectory for those files.

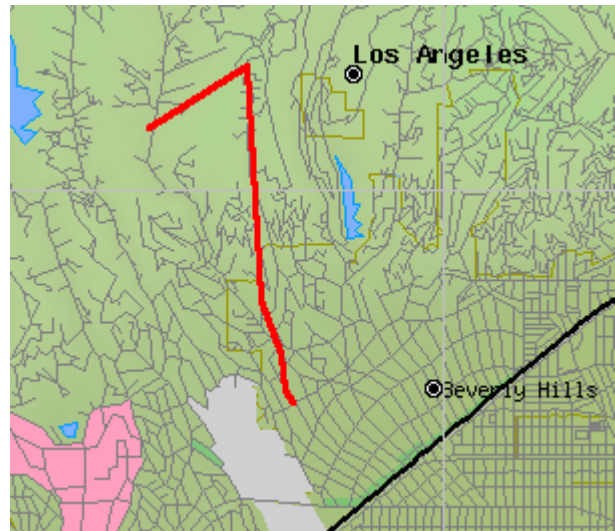
Additionally, a lot of intermediate files are created in the same subdirectory. They will all be removed at the end of a successful download session if the "Remove intermediate files" checkbox is checked ("Settings" dialog).

For an explanation of the information stored in those files, see the TruFlite for Windows help file:  
<http://www.truflite.com/programs/TruFliteHelp-5.11.zip>

To download TruFlite for Windows:  
<http://www.truflite.com/programs/TruFliteExe-5.11.zip>

Additionally, the waypoint list was plotted onto the texture file. This portion of the texture file acquired in the above described example shows a red line: the waypoints.

Note that in the present version (V 1.00), geoDataClient can only plot red lines of this style. This may change in the future.



## Appendix

Log of a fully successful procedure (Northwest corner -118.50/34.25, 0.25 degrees quad size).  
Note that the zid code ("zid=...") and eight digit file names vary from session to session.

```
geoDataClientDialog log file created Sunday, October 21, 2007 17:52:55 UTC
Opening Internet...
Status Code is 200
Adding your request to the queue...
Redirected to
http://extract.cr.usgs.gov/diststatus/servlet/gov.usgs.edc.RequestStatus?zid=20071021.125202712.085127087053
Waiting 10 seconds
Opening Internet...
Status Code is 200
Extracting data...
Redirected to
http://extract.cr.usgs.gov/diststatus/servlet/gov.usgs.edc.RequestStatus?zid=20071021.125202712.085127087053
Waiting 10 seconds
Opening Internet...
Status Code is 200
Extracting Metadata...
Redirected to
http://extract.cr.usgs.gov/diststatus/servlet/gov.usgs.edc.RequestStatus?zid=20071021.125202712.085127087053
Waiting 10 seconds
Opening Internet...
Status Code is 200
Raster Extract has completed.
Redirected to
http://extract.cr.usgs.gov/diststatus/servlet/gov.usgs.edc.RequestStatus?zid=20071021.125202712.085127087053
Waiting 1 second
Opening Internet...
Status Code is 302
Redirected to http://152.61.128.18:80/Extractor_Output/20628333.zip
Waiting 0 seconds
Opening Internet...
Status Code is 200
Writing file "D:\workspace\geoDataClient\20628333.zip"...
Writing file "D:\workspace\geoDataClient\20628333.zip" finished.
Converting "D:\workspace\geoDataClient\20628333\20628333.bil" to "D:\workspace\geoDataClient\20628333_el.tga".
BIL import successful: "D:\workspace\geoDataClient\20628333_el.tga" written.
Executing HTTP request: "http://tiger.census.gov/cgi-bin/mapper/map.gif?lon=-
118.37500&lat=34.12500&wid=0.25000&ht=0.26000&iwd=1200&iht=1248&on=CITIES,GRID,counties,indian,majroads,miscell,places
,railroad,shorelin,streets,interstate,statehwy,ushwy,states,water".
Opening Internet...
Status Code is 200
Writing file "D:\workspace\geoDataClient\20628333_tx_00.gif"...
Writing file "D:\workspace\geoDataClient\20628333_tx_00.gif" finished.
HTTP request was successful.
Converting "D:\workspace\geoDataClient\20628333_tx_00.gif" to "D:\workspace\geoDataClient\20628333_tx_00.tga".
GIF conversion successful: "D:\workspace\geoDataClient\20628333_tx_00.tga" written.
Stretching/shrinking "D:\workspace\geoDataClient\20628333_tx_00.tga" to
"D:\workspace\geoDataClient\20628333_tx_r_00.tga".
Stretching/shrinking successful: "D:\workspace\geoDataClient\20628333_tx_r_00.tga" written.
Adding "D:\workspace\geoDataClient\20628333_tx_r_00.tga" to "D:\workspace\geoDataClient\20628333_tx_r.tga" at (0/0).
Adding successful: "D:\workspace\geoDataClient\20628333_tx_r.tga" written.
Converting elevation "D:\workspace\geoDataClient\20628333_el.tga" to color
"D:\workspace\geoDataClient\20628333_el_c.tga".
Color conversion successful: "D:\workspace\geoDataClient\20628333_el_c.tga" written.
Combining "D:\workspace\geoDataClient\20628333_tx_r.tga" and "D:\workspace\geoDataClient\20628333_el_c.tga" to
"D:\workspace\geoDataClient\20628333_tx_c.tga".
Stretching/shrinking "D:\workspace\geoDataClient\20628333_el_c.tga" to
"D:\workspace\geoDataClient\20628333_el_c.tga.stretched.tga".
Stretching/shrinking successful: "D:\workspace\geoDataClient\20628333_el_c.tga.stretched.tga" written.
Combining successful: "D:\workspace\geoDataClient\20628333_tx_c.tga" written.
DEBUG: plot (323/373) - (319/379)
DEBUG: plot (319/379) - (317/397)
DEBUG: plot (317/397) - (307/424)
DEBUG: plot (307/424) - (300/541)
DEBUG: plot (300/541) - (251/510)
Adding Waypoints successful: "D:\workspace\geoDataClient\20628333_tx_cw.tga" written.
Result file written: "D:\workspace\geoDataClient\20628333_1.trf".
Result file written: "D:\workspace\geoDataClient\20628333_2.trf".
Download successfully finished.

+++ END OF LOG FILE +++
```