

GEOLOCK User Manual

When compiling a scenery or object library .bgl file for Microsoft Flight Simulator or Prepar3D, the compiler examines each entry that places an object. If the object being placed is a model in the same file, then the file will be “geo-locked”, that is, the items in the file will only be “seen” by Flight Simulator when the user aircraft is within the coverage area of then file. Simplified, the coverage area is determined by the northwest and the southeast corners of a cardinal rectangle which encloses all the objects placed by the file and is expressed in the file header as QMIDs Quad mesh Identifier). (QMID is a scheme to represent an area of the earths surface in two 32-bit “words”. (or more information, see the Terrain and scenery document in the FSX or P3D SDKs. Simple object library files that do not contain positioning data are not geo-locked.)

GeoLock is a utility which allows you to:

- unlock geo-locked .bgl files, and
- create geo-locked or unlocked subsets of models contained in scenery and object library .bgl files irrespective of whether the source bgl was geo-locked or not.

Other file types besides scenery and object libraries may be geo-locked. But, there seems little purposed in unlocking them since doing so would have adverse consequences on the performance of the simulator

Installing, Executing and Uninstalling GEOLOCK

Installation - To install GeoLock, simply copy all the files from the downloaded archive into a folder of your choice which will be referred to as your GeoLock folder.

GeoLock does not affect the system registry.

GeoLock is a Microsoft NET.Framework 3.5 application. If NET.Framework 3.5 or later is not already installed on your computer, the “redistributable” can be downloaded from the Microsoft website at no charge.

Execution - To execute GeoLock, double-click on *GeoLock.exe*.

Users of Vista and later versions of Windows usually must have and, depending on circumstances, others may require, administrator privileges when running GeoLock. If you need but do not have administrator privileges, you may not be able to access/write the necessary files. To run GeoLock with administrator privileges, right-click *Geolock.exe*, select “Run As ...” and then “administrator”. Such issues can sometimes be avoided by installing GeoLock on other than the C: drive.

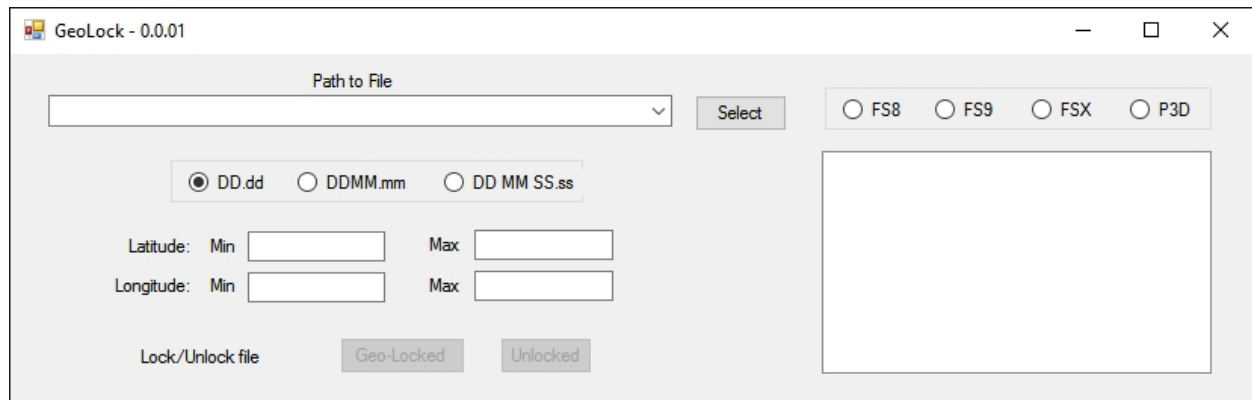
Windows 7 users may wish to run GeoLock in the XP compatibility mode. Running it otherwise results in a “this program may not have installed correctly” message when GeoLock is shut-down. Despite the error message, there is no known problem - other than the annoyance factor.

Initialization - When you shut-down Terrain Sculptor for the first time, an additional file, *GeoLock.ini*, will be created and saved to the GeoLock folder. GeoLock “remembers” key settings from one session to the next. Those settings are in *GeoLock.ini*. The next time GeoLock is run, the settings are preselected based on this file.

Un-Installation - To uninstall GeoLock, just delete the GeoLock folder and all its contents

The Data Display Area

Shown below is Terrain Sculptor's Main Panel.



GeoLock's Main Panel

The first step in any operation with GeoLock is to load the source .bgl file. Select the file of interest using the Select button and/or the associated combobox. (The paths to files accessed previously in the session are saved in the combobox for convenience.)

If the file is geo-locked, the coverage area will be shown in the Latitude and Longitude text boxes in the selected format. For other than FS8 files, if the .bgl contains any model definitions, those models will be listed in the list box on the right hand side of the dialog and the version of the models is shown in the radio-buttons above the list box. Since FS9 models don't contain any name information, the models list box will show the assigned Guid. For FSX and P3D models, the name of the model will be shown.

To assist you in selecting the desired models, if you hover the mouse over any item in the listbox for more than 1 second, a 3D image of the model will be displayed. As you move the mouse to other lines in the listbox, the corresponding models are shown.

Locking/Unlocking Files

If a file is geo-locked (i.e., the Latitude and Longitude textboxes are all non-blank), it may be unlocked simply by "pressing" the Unlock button. The unlocked file will be saved in the same folder as the original with the suffix "_Unlocked" added to the original name.

If the file is not geo-locked (i.e., the Latitude and Longitude textboxes are all blank), it may be locked by specifying the bounding latitudes and longitudes and "pressing" the Geo-Lock button. The locked file will be saved in the same folder as the original with the suffix "_Locked" added to the original name.

Please note, QMIDs can be rather coarse. So, the QMID saved in the file header may reflect a slightly larger area than you specified. So, if you geo-lock a file and then load it into GeoLock, the geo-lock parameters shown will reflect the larger area.

As with all my other applications, buttons and other controls are only enabled when they can be used. If a control is not enabled when you suspect it should be, the most likely cause is that you have not entered all the prerequisite information or met other necessary conditions.

Making Locked or Unlocked Subsets of Models

All the models available in a scenery or object library .bgl file are shown in the models listbox. You may create a locked or unlocked subset of those models by first selecting the specific models to be included in the subset. If you wish the subset to be geo-locked, specify the bounding latitudes and longitudes of the area in which those models are to be active. Then, “press” Geo-lock or Unlock as applicable. As above, the subset will be saved in a file named as the original and suffixed with “_Locked” or “_Unlocked” as appropriate in the same folder as the original.

If you wish to make more than one such subset, be sure to rename the previous subset first. Otherwise, it will be overwritten.

Acknowledgements

Thanks in particular to:

- Arno Gerretsen for allowing me to use his ModelConverterX .dlls in GeoLock.
- Patrick Germain for his fsDeveloper Wiki article explaining the .bgl header format and offering some code for QMID manipulation on which portions of GeoLock are based.

Support

For the time being at least, please report any difficulties and make comments in my Terrain Sculptor's support forum at <http://www.fsdeveloper.com/forum/forums/terrain-sculptor.146>.

I also have a support website at <http://stuff4fs.com> for all my airports and development utilities. (Navigate to the User Applications / GeoLock page.) Among other things, the site lists all known problems with the latest release. The most recent release of GeoLock is available from that site as are occasional development releases of new features.

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End User License Agreement (EULA)

As used in this end user license agreement, the term GeoLock (whether or not suffixed by a version identifier) shall be construed as encompassing the full contents of the downloadable archive (.zip) file originally created and posted for distribution on “download sites” by the author, including without limitation: the executable GeoLock.exe, the associated user manuals and certain files proprietary to third parties including but not limited to the files bglcomp.exe, bglcomp.xsd and all the files of type “.dll”

You are granted a free, non-exclusive right solely to install and use GeoLock on your computer system(s) for your personal enjoyment and, subject to the rights of others, to unlock geo-locked files or create locked or unlocked subsets of models intended for use with Microsoft Flight Simulator® for use and distribution as may be permitted by their original authors.

You may not:

- upload GeoLock, whether or not modified, in whole or in part, to any file distribution system,
- reverse engineer, disassemble or decompile any part of GeoLock,
- incorporate GeoLock in whole or in part into any commercial product or facility, "shareware" or "freeware", or any other product or facility for which there is a charge of any kind, or
- incorporate geo-locked or unlocked files created with GeoLock, whether or not edited or further compiled, into any commercial product or facility, "shareware" or any other product or facility for which there is a charge of any kind notwithstanding any permission by the author of the original source file,

without the express written permission of the author.

Your use of GeoLock is entirely at your own risk. The author accepts no liability whatsoever for any damage arising from its use no matter how caused.

By downloading and installing this software, you are deemed to have agreed to the foregoing.

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