Geo-Fence Vehicle Tracking Python Software

The Geo-Fence vehicle tracking Python software allows the user to specify up to 10 "areas" (latitude, longitude, radius), and for an SMS message to be sent when those areas are either entered into or exited out of.

It is primarily suitable for those interested in knowing a vehicle is where it should be (or is not where it should not be) when do not require constant live tracking and the associated GPRS data cost is not required.

The Geo-Fence vehicle tracking software is controlled via the use of SMS Command messages, these are standard text messages send via a mobile phone however they are formatted in a specific way that configure the Geo-Fence software (i.e. add / deleted / view fences).

Command messages can also be sent view an SMS Gateway server for those implementing their own backend control systems.

The software is designed to operate on a range of embedded Python supporting hardware modules from Telit. For further details see http://www.telit.com/en/products.php It can be used either directly by those designing their own hardware incorporating the Telit modules (GM862-QUAD-PY, GE863-PY, GC864-PY etc) or those who purchase off the shelf pre boxed hardware such as the GT863-PY, GT864-PY, Gatetel EZ10 PY or EZ863 PY Terminals.

SMS Commands

Default password: connect

unit setname

Format: `[smspassword] [noreply] unit setname {newname}`

Example: `connect unit setname myunit`

Allows setting of the unit name. The unit name is sent in replies to SMS comment message. Valid values are 1-8 characters of 0-9, a-z only.

unit setsmspassword

Format: `[smspassword] [noreply] unit setsmspassword {newpassword}`

Example: `connect unit setsmspassword mypassword`

Allows setting of a new password. The password is required in all SMS command messages sent to the unit. The default password is "connect". Valid values are 1-8 characters of 0-9, a-z only.

unit setfencesmstel

Format: `[smspassword] [noreply] unit setfencesmstel {newtel}`

Example: `connect unit setfencesmstel +441234567891`

Allows setting of the telephone number where fence breach notifications should be sent via SMS message.

position

Format: `[smspassword] position`

Example 1: `connect position`

Request the units current position (latitude, longitude).

fence viewnamelist

Format: `[smspassword] fence viewnamelist`

Example: `connect fence viewnamelist`

Requests a list of all fence names.

fence view

Format: `[smspassword] fence view [fencename]`

Example: `connect fence view fence1`

Requests full details on a specified fence (i.e. latitude, longitude, radius, in/out type).

fence set

Format:
```
connect [noreply] [write] fence set {name}
{latitude} {longitude} {radius} {in_or_out_type}
```

Example:
```
connect write fence set myfence1 0021.1000N
00011.0000E 10.000 out
```

Allows setting/updating of a fence. Fence name must be 1-8 characters of 0-9, a-z only. Radius is specified in miles with upto 3 decimal places. "in" / "out" indicates if the fence breach alert should be sent when the fence area is exited out of, or entered into.

fence clear

Format: `[smspassword] [noreply] [write] fence clear {name}`

Example: `connect fence clear myfence1`

Allows deleting of an existing fence, fence breach will no-longer be reported via SMS.

fence clearall

Format: `[smspassword] [noreply] [write] fence clearall`

Example: `connect fence clearall`

Allows deleting of all existing fences, fence breaches will no-longer be reported via SMS.

fence resettimeout

Format: `[smspassword] [noreply] resettimeout`

Example: `connect fence resettimeout`

A maximum of 1 fence breach SMS will be sent per hour. If you wish to reset the 1hr timeout this can be done via the "fence resettimeout" SMS command.

[] = an optional keyword that may or may not be included in the message

General Notes

- The "noreply" keyword possible on certain commands as shown above suppresses the "OK" confirmation messages sent from the device after receipt of e.g. a "fence set" command message (note it does not suppress "ERROR" messages).

- The "write" keyword possible on "fence" commands only, causes changes to be saved immediately, its use is not recommended. By default all "fence" commands are saved after a 5 minute timeout (from the issuing of the last command) to minimise the amount of erase / write cycles performed to internal memory.