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PROGRAM GEOCONV, SAMPLE BATCH-FILES

About this document

This document is a series of GeoConv-sample batch-runs with explanations.

Named sample batch-runs are included in GeoConv's delivery-package.

Applying sample-batch runs in your on computer environment

Prior to using these sample runs in your on computer, you must modify the runs to agree with your own computer environment and directory structure. I have used in these sample runs my own directory structure, which you of course can copy and apply in your own computer; this way you minimize the need to modify the sample runs and get the benefits why I have chosen this directory structure:

I use myself a directory system, where I have first one directory for GPS-data:

```
C:\GPSDATA\
```

Under that directory I have one subdirectory for every format I use, e.g.

```
C:\GPSDATA\OZI
C:\GPSDATA\WAYPOINT
C:\GPSDATA\DELORME
C:\GPSDATA\PCX5
C:\GPSDATA\NMEA
C:\GPSDATA\MAGELLAN
C:\GPSDATA\GPX
Etc.
```

Under every format directory I have two sub-directories, SOUR and DEST. SOUR (Source) is for files, which are originally in this format and DEST (Destination) is for files, which are converted to this format from some other format.

The main reason to this SOUR/DEST separation is, that when I perform mass-conversion, where I convert all source files to every useful other formats I have to be able to distinguish between original and already converted files. Otherwise I would be converting same files back and forth forever.

One other benefit is, that I know, which files I need to save/back up and which files I can regenerate whenever I need to.

Using command-line options only

GeoConv is designed to be used in batch mode only - there is no way to give the parameter-values interactively.

Parameters can be set in two ways. The first way is to give the parameters in the command-line when calling GeoConv. Command line parameters are given in format *parameter name=parameter value*. If you omit the parameter name, GeoConv assumes the first command-line parameter to be the name of the input file (INFILE=) and the second command-line parameter to be the name of the output file (OUTFILE=).

Sample command

```
GEOCONV MyPlaces.wpt MyPlaces.txt inform=pcx5 outform=waypoint
```

Setting parameter-values using program FVALUE

In batch-files the parameter-values can be set using program FVALUE prior to calling GeoConv.

Setting parameters in the command-line and using program FVALUE can be mixed. If same parameter is set both in the command-line and with program FVALUE, GeoConv uses the value given in the command-line.

Sample batch file BASIC01.BAT

This command converts PCX5-format waypoint-file MyPlaces.wpt to Waypoint+-format waypoint-file MyPlaces.txt.

```
fvalue geoconv.infile=MyPlaces.wpt
fvalue geoconv.inform=PCX5
fvalue geoconv.outfile=MyPlaces.txt
fvalue geoconv.outform=waypoint
GEOCONV
```

Passing parameters to the batch file

If you want to use same batch-file repeatedly, you can give some parameter-values as batch-run parameters.

Sample batch file PCX2WAYP.BAT

This command converts PCX5-format waypoint-file to Waypoint+-format waypoint-file. The names of the files (base-parts) are given as batch-run parameters.

```
fvalue geoconv.infile=%1.wpt
fvalue geoconv.inform=PCX5
fvalue geoconv.outfile=%2.txt
fvalue geoconv.outform=waypoint
GEOCONV
```

E.g. converting MyPlaces.wpt to MyPlaces2.txt could be done using batch-run call:

```
PCX2WAYP MyPlaces MyPlaces2
```

Initializing GeoConv-parameters

Because GeoConv-parameters are stored in a file, the values of the parameters preserve their values between settings. This gives you the opportunity to set rarely used parameters once, and then "forget" these parameters. Then of course, you have to make sure, that your settings are not initialized by initialization run.

An initialization run GEOCOINI.BAT is included in the delivery package. It is recommended to use this run in the beginning of your own batch files to make sure, that parameters are initialized after previous run. If you make a personal copy of GEOCOINI.BAT, change its name too, because you get a new GEOCOINI.BAT with the next version of GeoConv.

Sample batch file PLT2PCX5.BAT

This command initializes the values of all parameters and then converts OziExplorer track-file to PCX5 track-file.

```
call geocoini.bat
fvalue geoconv.infile=%1.plt
fvalue geoconv.inform=OZITRK
fvalue geoconv.outfile=%2.trk
fvalue geoconv.outform=PCX5
GEOCONV
```

Using full path names

All previous sample runs assume, that the converted files are located in the working/default-directory. If you have a lot of files from various sources, you don't want to store them all in one directory. Then you have to include the full pathname in the filename.

Sample batch file

```
call geocoini.bat
fvalue geoconv.infile=c:\gpsdata\pcx5\sour\Brazil.wpt
fvalue geoconv.inform=PCX5
fvalue geoconv.outfile=c:\gpsdata\waypoint\dest\Brazil.txt
fvalue geoconv.outform=waypoint
GEOCONV
```

Converting a group of files in one command

You can use wild chars (*,?) in the name of the input-file. If you use wild chars, GeoConv converts all files matching with the name. In this case need to use the possibility to let GeoConv to define the name of the output-file based on name the input-file: "If the name of the output-file is not complete, that is, e.g. the base or the extension of the name is missing, GeoConv takes the missing parts from the input-file-name."

Sample batch file GRPCONV.BAT

This command converts all waypoint-files in the directory c:\gpsdata\pcx5\sour from PCX5 format to Waypoint+-format in the directory c:\gpsdata\waypoint\dest. Below an example of the naming logic.

input-file name	output-file name
*.WPT	.TXT (base-part is missing)
ITALY.WPT	ITALY.TXT
INARI.WPT	INARI.TXT
LAPLAND.WPT	LAPLAND.TXT
etc.	

```
call geocoini.bat
fvalue geoconv.infile=C:\gpsdata\pcx5\sour\*.wpt
fvalue geoconv.inform=PCX5
fvalue geoconv.outfile=c:\gpsdata\waypoint\dest\*.txt
fvalue geoconv.outform=waypoint
GEOCONV
```

Multiple tasks in one batch file

In batch-files you can put a series of tasks in one batch and then launch all tasks with one command.

Sample batch file CONVALL.BAT

This command converts all track-files in the directory c:\gpsdata\pcx5\sour from PCX5 format to several formats and puts the results in respective directories.

```
call geocoini.bat

fvalue geoconv.infile=C:\gpsdata\pcx5\sour\*.trk
fvalue geoconv.inform=PCX5

fvalue geoconv.outfile=c:\gpsdata\waypoint\dest\*.txt
fvalue geoconv.outform=waypoint
geoconv

fvalue geoconv.outfile=c:\gpsdata\ozi\dest\*.plt
fvalue geoconv.outform=ozitrk
```

geoconv

fvalue geoconv.outfile=c:\gpsdata\magellan\dest\.wpl
fvalue geoconv.outform=magellan
geoconv

fvalue geoconv.outfile=c:\gpsdata\NMEA\dest\.txt
fvalue geoconv.outform=nmea0183
geoconv

fvalue geoconv.outfile=c:\gpsdata\gpx\dest\.gpx
fvalue geoconv.outform=gpx
geoconv

Creating a log-file / displaying results

If you create long and complex batch-runs, you might want to create a log-file. GeoConv writes all error messages in the standard output, and therefore you can create a log-file by redirecting the standard output to log-file.

If you want to have a look at the results during or at the end of the batch file, you can use program show.exe. You can exit Show.exe with Esc-key. Pressing Alt+5 changes to 50 rows/screen display and Alt+2 again 25 rows/screen display. You can also launch Notepad, Word or other text editor in the batch-file using start-command. Then you also have to name the files accordingly, e.g. .doc for Word.

Sample batch file GCSAMPLE.BAT

```
REM      SAMPLE GEOCONV BATCH-RUN

goto EndOfDocument

      This sample batch-run contains mandatory elements to perform a
      GeoConv conversion and in addition to that, some extra features like
      document blocks, log-file handling and displaying the result and
      the log-file on the screen.

      You can use this file as a template, when you are creating your own
      batch-runs.

:EndOfDocument

rem      ----- write a title to the log-file
echo This is a sample GeoConv-batch-file >\temp\deleteme.doc

rem      ----- initialize parameters
call geocoini.bat

rem      ----- set input-parameters
fvalue geoconv.inform=delormegpl
fvalue geoconv.infile=c:\gpsdata\delorme\sour\mytrack.gpl

rem      ----- set output-parameters
fvalue geoconv.outform=waypoint
fvalue geoconv.outfile=c:\gpsdata\waypoint\dest\mytrack.txt

rem      ----- do the actual conversion
geoconv >>\temp\deleteme.doc

rem      ----- show the result
show c:\gpsdata\waypoint\dest\mytrack.txt

rem      ----- show the log-file
show \temp\deleteme.doc

rem      ----- show the log-file using the program associated with
rem      extension .doc (now as a remark only)
rem start \temp\deleteme.doc
```

Converting track to route

The type of a coordinate file can be track, waypoint list, route or simply a list of coordinate values. GeoConv knows based on input- and output-formats and the content of the input-file, which type it should write. If GeoConv for example reads a track-file, it normally also writes a track-file.

Sometimes there is a need to change the type in the conversion. For example, you may want to convert a track-file to a route-file. In that case you need to tell the output-type to GeoConv using parameter.

Sample batch file PLT2RTE.BAT

```
REM      SAMPLE GEOCONV BATCH-RUN

goto EndOfDocument

      This sample batch-file converts an OziExplorer track-file to an
      OziExplorer route-file. At the same it reduces the track to fewer
      points.

      The name of the file (base-part) and the number of the track-points in
      the output-file are given as batch-run parameters:

      Call: PLT2RTE name number

      E.g. command "PLT2RTE snowride 30" would convert snowride.plt to
      snowride.rte and reduce the track to 30 points.

:EndOfDocument

rem      ----- write a title to the log-file
echo Convert OziExplorer track to a route >\temp\deleteme.log

rem      ----- initialize parameters
call geocoini.bat

rem      ----- set input-parameters
fvalue geoconv.inform=OZITRK
fvalue geoconv.infile=c:\gpsdata\OZI\sour\%1.plt

rem      ----- set output-parameters
fvalue geoconv.outform=OZIRTE
fvalue geoconv.reducepointcount=%2
fvalue geoconv.outfile=c:\gpsdata\OZI\dest\%1.rte

rem      ----- do the actual conversion
geoconv >>\temp\deleteme.log

rem      ----- show the result
show [[geoconv.outfile]]

rem      ----- show the log-file
show \temp\deleteme.log
```

Converting user-defined coordinate-list, geodetic coordinates

If you are converting user defined coordinate lists and the coordinate format is geodetic (latitude, longitude), the minimum information you have to give is:

- The name of the input file (INFILE)
- Definition of the input-columns (INLATCOL, INLONCOL, INHCOL etc)
- Input-datum (INDATUM)
- Input coordinate format (INCRDTYPE)

- The name of the output file (OUTFILE)
- Description of the output-line (OUTLINEFORM)
- Output-datum (OUTDATUM)
- Output coordinate format (OUTCRDTYPE)

It is not necessary to define INFORM or OUTFORM, because CRDLIST is the default value for these parameters.

Sample batch-file ETRF2KKJ.BAT

```

REM      SAMPLE GEOCONV BATCH-RUN ETRF2KKJ.BAT

goto EndOfDocument
      This run converts from ETRS89-coordinates to KKJ-coordinates

      Structure of the input-file
      ID          Latitude          Longitude          Height above ellipsoid
      ILK004,    60 23 06.38474,    19 50 53.29237,    118.3092
      ILK009,    59 55 21.90272,    20 55 35.77597,    50.4765
      ILK017,    60 02 30.00060,    22 25 42.11416,    80.8663

      Coordinates can be in D, DM or DMS format
:EndOfDocument

rem      ----- write a title to the log-file
echo ETRS89-coordinates to KKJ-coordinates >\temp\deleteme.log

rem      ----- initialize parameters
call geocoini.bat

rem      ----- set input-parameters
fvalue geoconv.infile=c:\gpsdata\crdlist\sour\etrf.dat
fvalue geoconv.inidcol=1
fvalue geoconv.inlatcol=2
fvalue geoconv.inloncol=3
fvalue geoconv.inhcol=4
fvalue geoconv.incrdtype=D
fvalue geoconv.indatum=WGS84

rem      ----- set output-parameters
fvalue geoconv.outfile=c:\gpsdata\crdlist\dest\kkj.dat
fvalue geoconv.outdatum=KKJ
fvalue geoconv.outcrdtype=DMS
fvalue geoconv.outlineform=@id@,@lat,.6@,@lon,.6@,@h,3.3@

rem      ----- do the actual conversion
geoconv >>\temp\deleteme.log

rem      ----- show the result
show c:\gpsdata\crdlist\dest\kkj.dat

rem      ----- show the log-file
show \temp\deleteme.log

```

Converting user-defined coordinate-list, projected coordinates / grid-coordinates

If you are converting grid-coordinates (INCRDTYPE or OUTCRDTYPE is grid-coordinate type), you may have to define the ID of the grid-parameter set using parameter INXYID or OUTXYID.

- For some grid-coordinate-types XYID-definition is mandatory, e.g. LCC-types or TM
- For some grid-coordinate-types XYID-definition is optional, needed only for exceptions from standard, e.g. UTM
- For some grid-coordinate-types XYID-definition isn't used at all, e.g. KKJ

Sample batch run NAD83LCC.BAT

```

REM      SAMPLE GEOCONV BATCH-RUN

goto EndOfDocument

      This batch-runs converts NAD83 geodetic coordinates to Lambert Conic
      Conformal projected coordinates using grid definitions for California,
      zone 5: SPC CA 5=NAD83,W118 00,N33 30,2000000,500000,,M,N34 02,N35 28

      Format of the input-file
      Latitude      Longitude
      N34 47 31.40345,W118 06 15.65620
      N35 45 31.52825,W115 55 39.05433

      Coordinates can be in D, DM or DMS format

:EndOfDocument

rem      ----- write a title to the log-file
echo NAD83 geodetic coordinates to LCC >\temp\deleteme.log

rem      ----- initialize parameters
call geocoini.bat

rem      ----- set input-parameters
fvalue geoconv.infile=c:\gpsdata\crdlist\sour\CA-NAD83.txt
fvalue geoconv.incrdtype=D
fvalue geoconv.indatum=NAD83
fvalue geoconv.inlatcol=1
fvalue geoconv.inloncol=2

rem      ----- set output-parameters
fvalue geoconv.outfile=c:\gpsdata\crdlist\ca-lcc5.txt
fvalue geoconv.outcrdtype=LCC2SP
fvalue geoconv.outxyid=SPC ca 5
fvalue geoconv.outlineform=@lat,.6@,@lon,.6@

rem      ----- do the actual conversion
geoconv >>\temp\deleteme.log

rem      ----- show the result
show [[geoconv.outfile]]

```

Using embedded parameter-values in the command line

If you write a Fvalue-instruction closed in double brackets in the command-line of programs GEOCONV, FVALUE, SHOW or similar, it will be replaced by its value. This can be used e.g. for

Using own favorites saved in a separate file:

```
Fvalue GeoConv.Infile=[[Myvalues.GPS-Data-Directory]]*.wpt
```

Avoiding writing same values many times:

```
Show [[GeoConv.outfile]]
```

Updating parameter-files in the batch-run

Normally the parameter-files like datum.val, ellips.val and xypara.val are updated separately before the values are used in the batch-runs. Sometimes it however is convenient to update the parameter files in the batch run just before the values are used. This method could be used e.g. for temporary values or when you want to make batch-run self-sufficient.

Sample batch file

A small section of NAD83LCC.BAT and new lines, which set California Zone 5 grid-parameters (SPC CA 5) in XYPARA.VAL prior to using those parameters in the batch-run.

There is no need to remove those parameters, but this example however demonstrates, how it could be done. (after calling GeoConv)

```
rem ----- set input-parameters
fvalue geoconv.infile=c:\gpsdata\crdlist\sour\CA-NAD83.txt
fvalue geoconv.incrdtype=D
fvalue geoconv.indatum=NAD83
fvalue geoconv.inlatcol=1
fvalue geoconv.inloncol=2

REM ----- Set California zone 5 parameters in xypara.val
FVALUE xypara.spc ca 5=NAD83,W118 00,N33 30,2000000,500000,,M,N34 02,N35 28

rem ----- set output-parameters
fvalue geoconv.outfile=c:\gpsdata\crdlist\ca-lcc5.txt
fvalue geoconv.outcrdtype=LCC2SP
fvalue geoconv.outxyid=SPC ca 5
fvalue geoconv.outlineform=@lat,.6@,@lon,.6@

rem ----- do the actual conversion
geoconv >>\temp\deleteme.log

REM ----- Remove California zone 5 parameters from xypara.val
FVALUE xypara.spc ca 5=

rem ----- show the result
show [[geoconv.outfile]]
```

Using command line parameters as input data

GeoConv is designed to be used in batch mode only and to convert files, not values given interactively by the user. If you need to do conversions or calculations interactively for a few coordinate pairs at a time, it is recommended to use some online conversion programs or similar instead of GeoConv.

This sample run however demonstrates a simple trick, which can be used to write the command line parameters to GeoConv's input-file in the batch run prior to calling GeoConv. This is **not** a recommended way of using GeoConv, but it works.

Sample batch run DISTANCE.BAT

```
goto EndOfDocument
```

This run calculates the distance between two points given in degree-format (D). In this format you can present:

- degrees
- degrees and minutes
- or degrees, minutes and seconds

providing, that one or more spaces are used as a separator between degrees, minutes and seconds.

This run assumes the coordinates to be in WGS84 datum.

If you want to use some other coordinate-format or datum, change this run respectively.

The command format is: DISTANCE LAT1 LON1 LAT2 LON2

```
:EndOfDocument
```

```
rem ----- write a title to the log-file
echo Distance between two points >\temp\deleteme.log
```

```
rem ----- initialize parameters
call geocoini.bat
```

```
rem ----- create the input file
echo %1,%2 >c:\temp\tempin.txt
echo %3,%4 >>c:\temp\tempin.txt
```

```
rem ----- set input-parameters
fvalue geoconv.inform=crdlist
fvalue geoconv.infile=c:\temp\tempin.txt
fvalue geoconv.incrdtype=D
fvalue geoconv.insep=,
fvalue geoconv.indatum=WGS84
fvalue geoconv.inlatcol=1
fvalue geoconv.inloncol=2
```

```
rem ----- set output-parameters
fvalue geoconv.outform=CRDLIST
fvalue geoconv.outcrdtype=DEG
fvalue geoconv.outlineform=@lat,.3@,@lon,.3@,@dist,.3@
fvalue geoconv.outfile=c:\temp\tempout.txt
```

```
rem ----- do the actual conversion
geoconv >>\temp\deleteme.log
```

```
rem ----- show the result
show [[geoconv.outfile]]
```

```
rem ----- (don't) show the log-file
rem show \temp\deleteme.log
```

Using binary input mask

Parameters InHeaderMask and InLineMask allow user to define binary input file formats. This sample run converts from Delorme GPL-format to OziExplorer track format..

Sample run Dlrm2Ozi.bat

```

REM      FROM DELORME TO OZIEXPLORER

goto EndOfDocument

      This sample run utilizes binary input to convert Delorme's input file
      format (below) to OZiExplorer format

          Field      Type      Length
-----
1.  Status      LONG      4
2.  Dummy1     LONG      4
3.  Lati        DOUBLE   8      radians
4.  Longi       DOUBLE   8      radians
5.  Altitude    DOUBLE   8      meters
6.  Heading     DOUBLE   8
7.  Speed       DOUBLE   8      MPH
8.  Time        LONG      4      Seconds since
9.  Dummy2     LONG      4

      Command format:
      DLRM2OZI <files basename>
      e.g.
      DLRM2OZI SkiTrip converts SkiTrip.gpl to SkiTrip.plt

:EndOfDocument

rem      ----- write a title to the log-file
echo From Delorme to OziExplorer >\temp\deleteme.log

rem      ----- initialize parameters
call geocoini.bat

rem      ----- set input-parameters
fvalue geoconv.inform=crdlist
fvalue geoconv.infile=c:\gpsdata\delorme\sour\%1.gpl
fvalue geoconv.inlinemask=LNG,LNG,DBL,DBL,DBL,DBL,DBL,LNG,LNG
fvalue geoconv.inlatcol=3
fvalue geoconv.inloncol=4
fvalue geoconv.inhcol=5
fvalue geoconv.indatecol=8,SECONDS,2440587.5

rem      ----- set output-parameters
fvalue geoconv.outform=OZITRK
fvalue geoconv.outfile=c:\gpsdata\ozi\dest\%1.plt

rem      ----- do the actual conversion
geoconv >>\temp\deleteme.log

rem      ----- show the result
show c:\gpsdata\ozi\dest\%1.plt

rem      ----- show the log-file
show \temp\deleteme.log

```