G2Gx

User Guide

R1.0.0 January 6, 2007

www.forge43.com

Introduction

- **The problem**

  - You need to plan a trip, expecting all the support and guidance you can get from your GPS device.

  - However, most of the locations (waypoints), and most importantly, the route (path/track) itself, are not provided by your current GPS device.

- **The solution**

  - Assuming that your GPS, may be connected on a computer, and get loaded new waypoints and tracks…

  - …then, you may prepare the spatial data on your computer, store them for later use, and just before commencing your trip, load them on your GPS device.
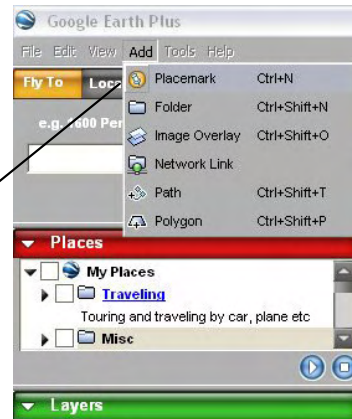
- **The process**

  - There is a rich set of alternatives, on creating waypoints and paths on your computer. By the time, this is getting more and more easy, higher accuracy, and lower or zero cost.

  - One of those alternatives, would be to use:

    - GoogleEarth Plus™ to assist you on identifying spatial information and creating the original digital information (data).

    - Your GPS manufacturer, PC-based software, to transfer your created data, onto your GPS device. In our example, this software is the MapSource™ by Garmin.
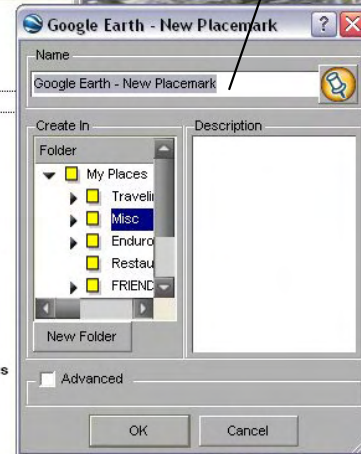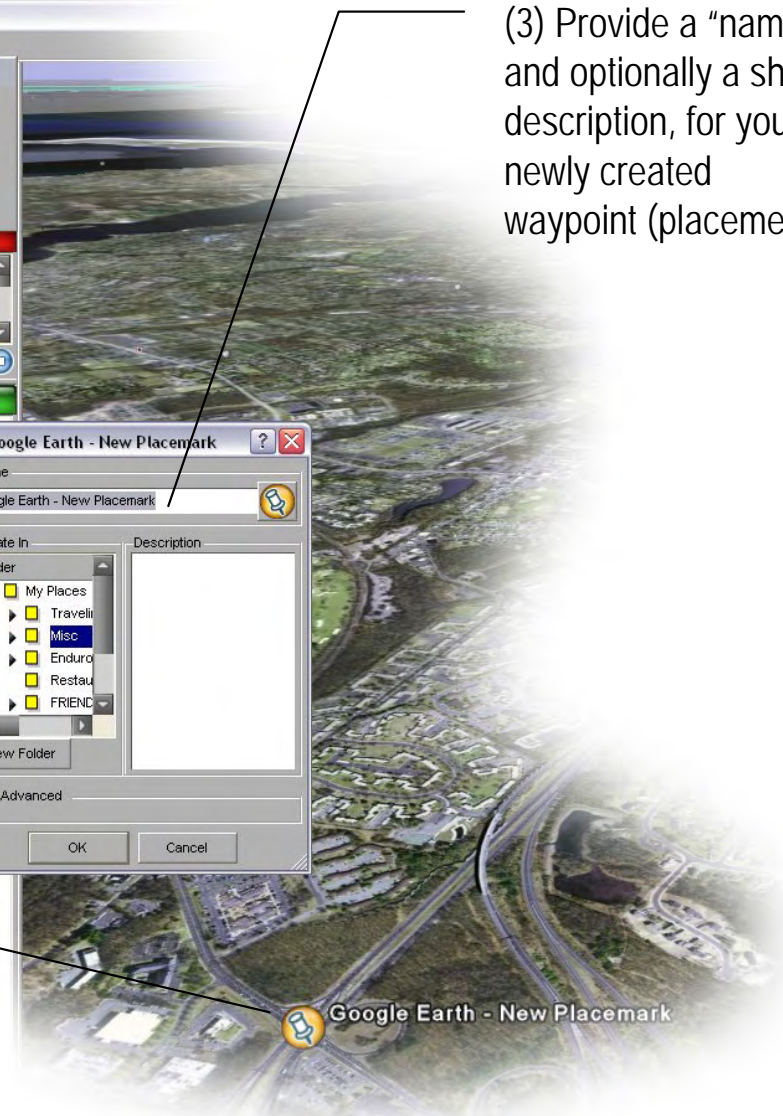
Create Waypoints in GoogleEarth

(3) Provide a "name", and optionally a short description, for your newly created waypoint (placemerk)

(1) Ask to "add" a "Placemark" (i.e. waypoint)

(2) Pin your placemark on the desire map location

Create Waypoints in GoogleEarth

Create another waypoint...

Create Waypoints in GoogleEarth

Proceed by defining all your
desired waypoints…

Create a Path in GoogleEarth

(1) Ask to "add" a "Path"
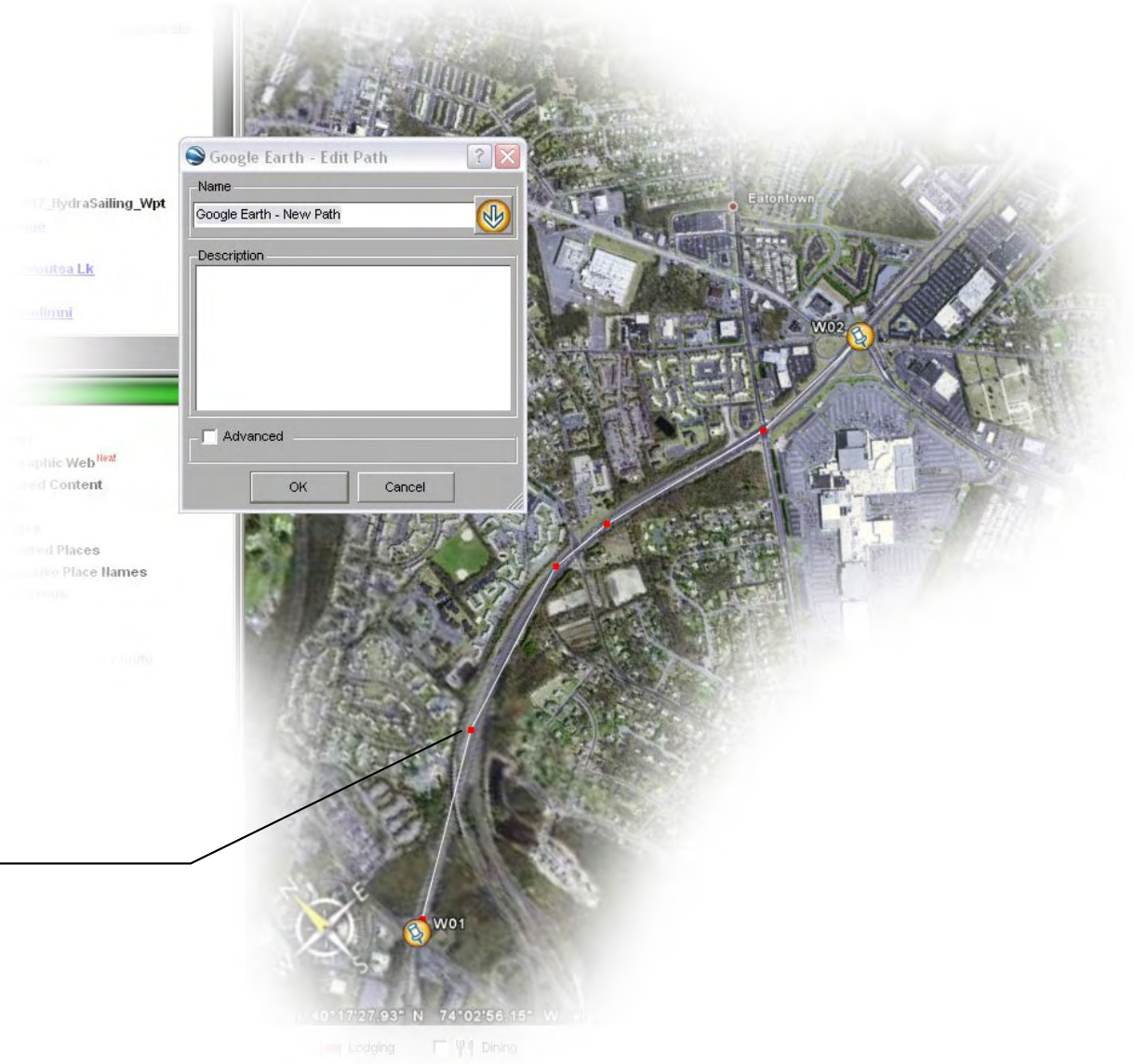(i.e. track or route)

WARNING

The free version of GoogleEarth™ does not support "path" creation. This is supported by GoogleEarth Plus™, which is a subscription-based product by Google™.

Create a Path in GoogleEarth

(1) Draw your path
(piecewise linearized)

Create a Path in GoogleEarth

(1) Provide a "name", and optionally a short description, for your newly created path.

Create a Folder in GoogleEarth

(1)   Create a folder.
This folder will be used to accommodate
your newly created waypoints
(placemeraks) and path(s).
Thus, position the cursor on "My Places",
right click and selected "Folder".

Create a Folder in GoogleEarth

Provide a "name", and optionally a short description, for your newly created folder.
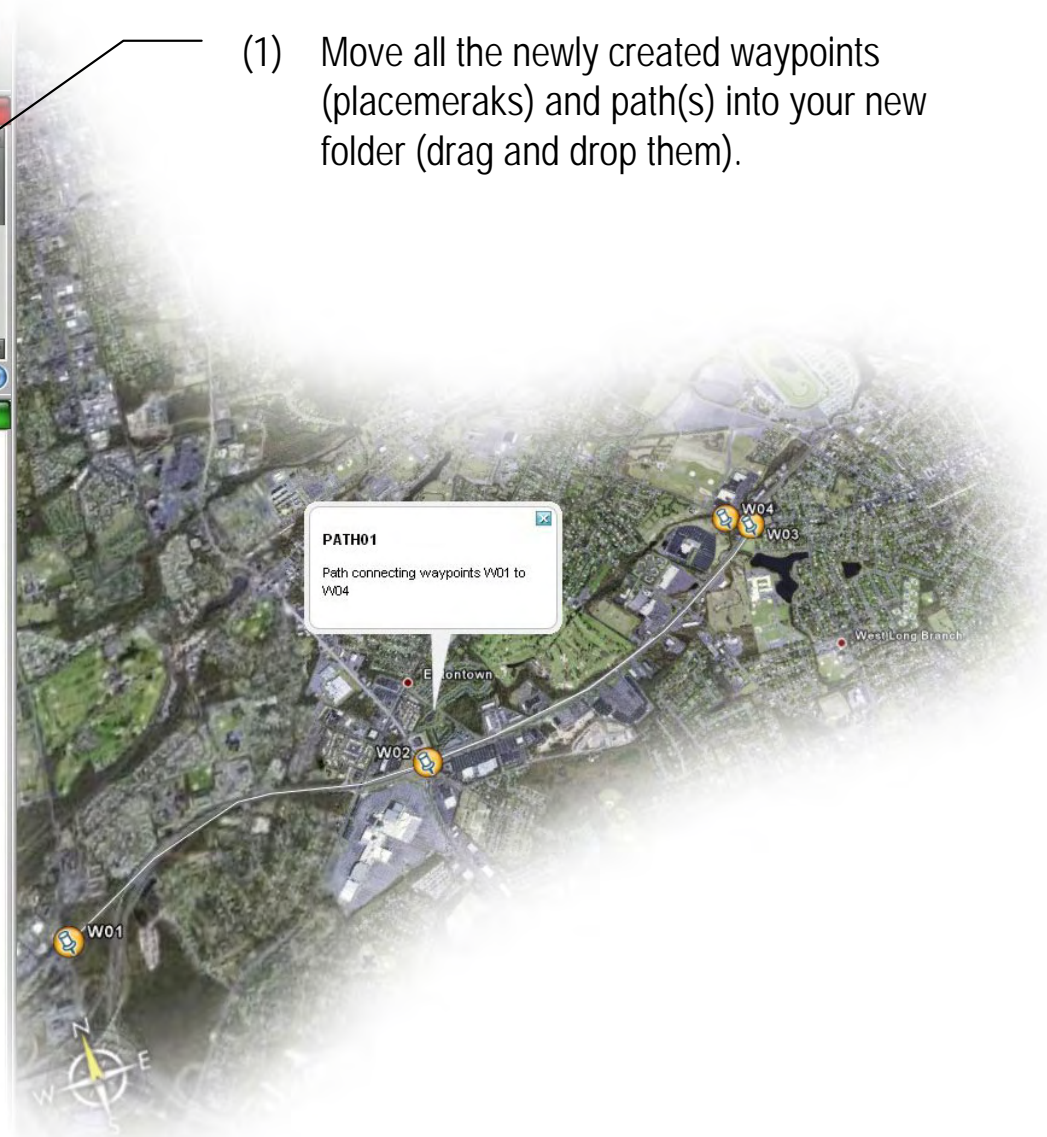
Move your spatial data in the folder

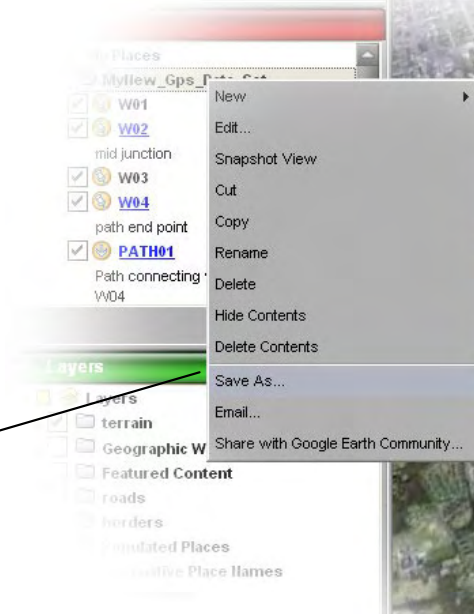

(1) Move all the newly created waypoints (placemeraks) and path(s) into your new folder (drag and drop them).

Export your data folder

New
Edit...
Snapshot View
Cut
Copy
Rename
Delete
Hide Contents
Delete Contents
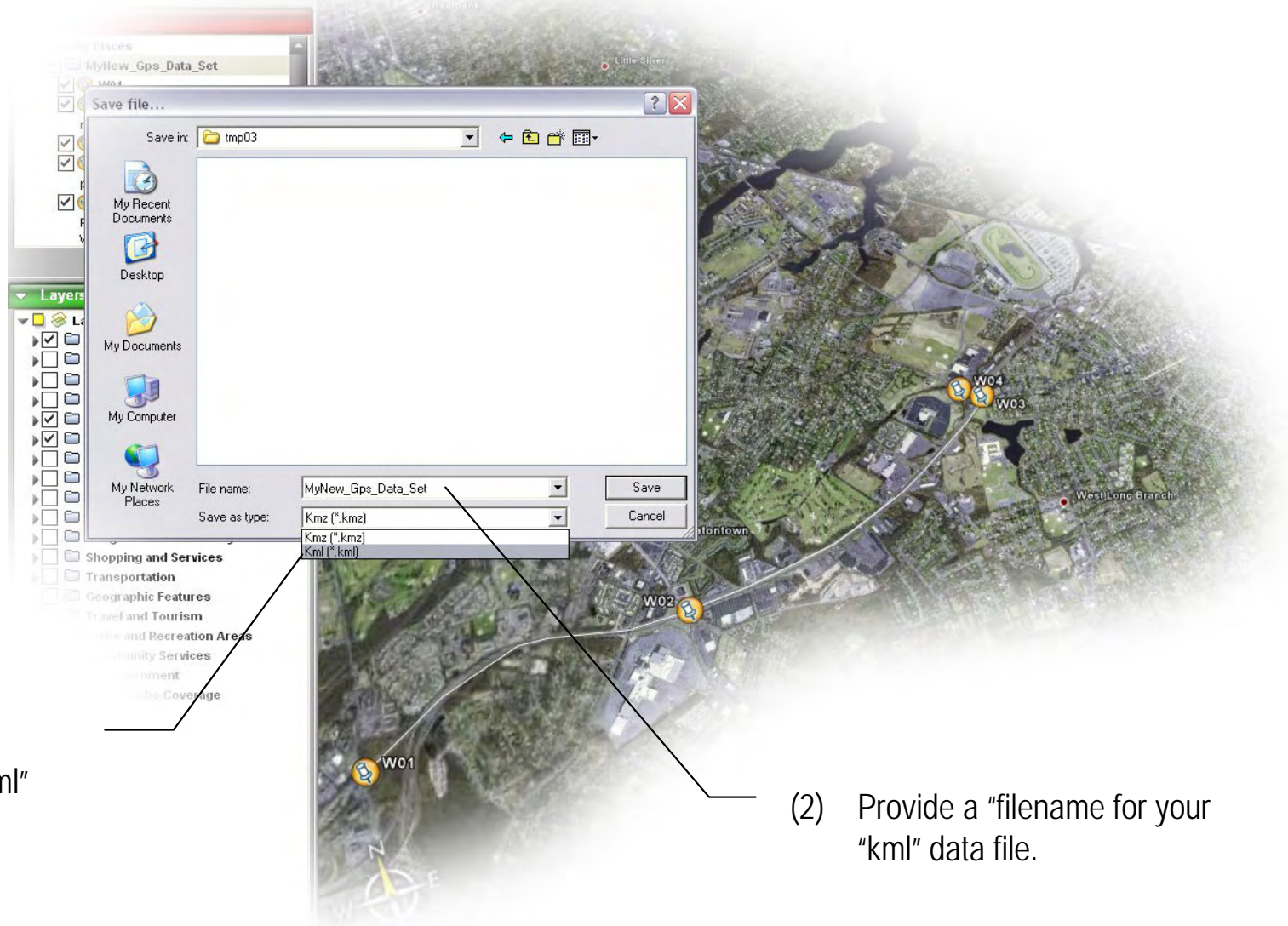Save As...
Email...
Share with Google Earth Community...

(1) Time to "export" you data.
Thus, position the cursor on your
newly created folde, right-click,
and select "Save As…"

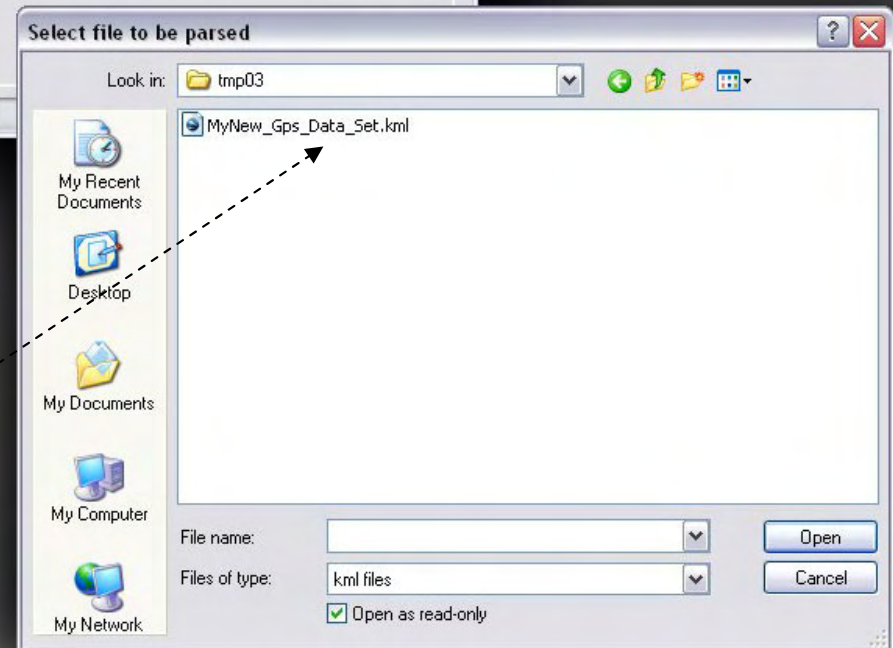# Export your data folder

(1) <u>IMPORTANT</u>:
Select output file type"kml"

(2) Provide a "filename for your "kml" data file.

Transform the GoogleEarth data file

(1) Now we need to convert the data, from the "kml" format, into the widely accepted "gpx" format. To perform this step, we run the "G2Gx" program.
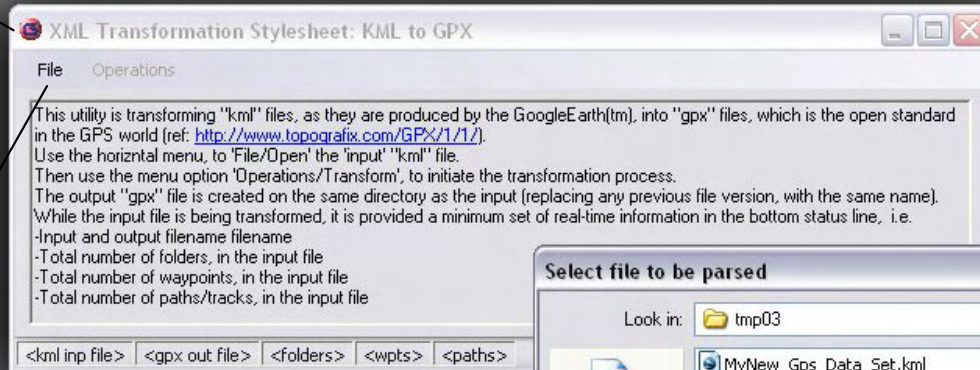
(2) We File/Open the recently created "kml" file

Transform the GoogleEarth data file

Initiate the transformation process, by selecting "Operations/Transform", from the horizontal menu.

(read the instructions, presented on the program window)

Transform the GoogleEarth data file

XML Transformation Stylesheet: KML to GPX
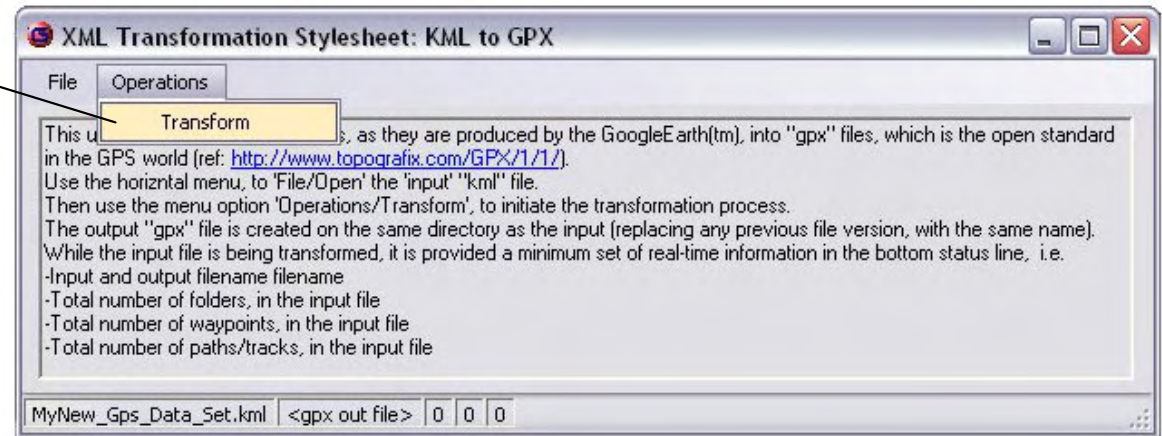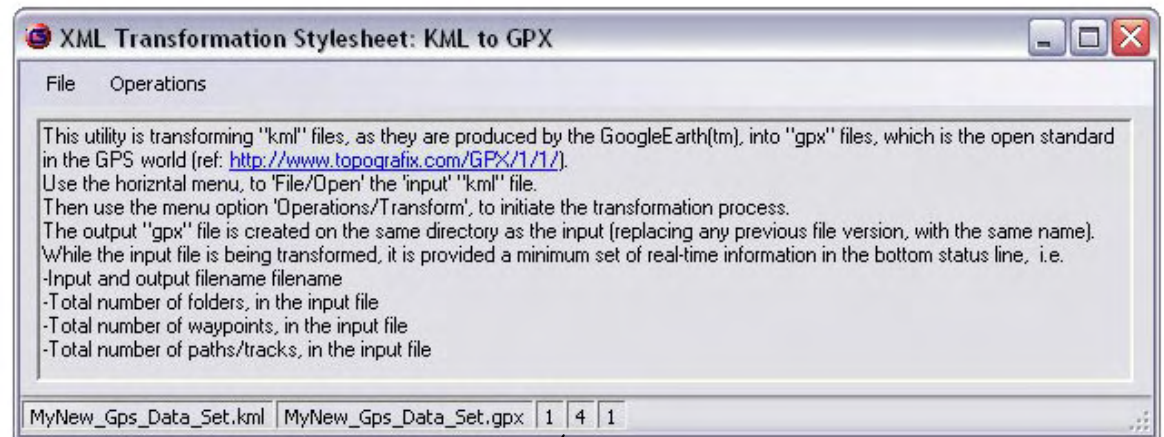
File   Operations

This utility is transforming ''kml'' files, as they are produced by the GoogleEarth(tm), into ''gpx'' files, which is the open standard in the GPS world (ref: http://www.topografix.com/GPX/1/1/).
Use the horizntal menu, to 'File/Open' the 'input' ''kml'' file.
Then use the menu option 'Operations/Transform', to initiate the transformation process.
The output ''gpx'' file is created on the same directory as the input (replacing any previous file version, with the same name).
While the input file is being transformed, it is provided a minimum set of real-time information in the bottom status line, i.e.
-Input and output filename filename
-Total number of folders, in the input file
-Total number of waypoints, in the input file
-Total number of paths/tracks, in the input file

MyNew_Gps_Data_Set.kml | MyNew_Gps_Data_Set.gpx | 1 | 4 | 1

The transformation process, is producing a "gpx" file,
on the same folder, where the input "kml" file was.

(Note: 1-4-1 in our example, means that the input "kml" file contained:
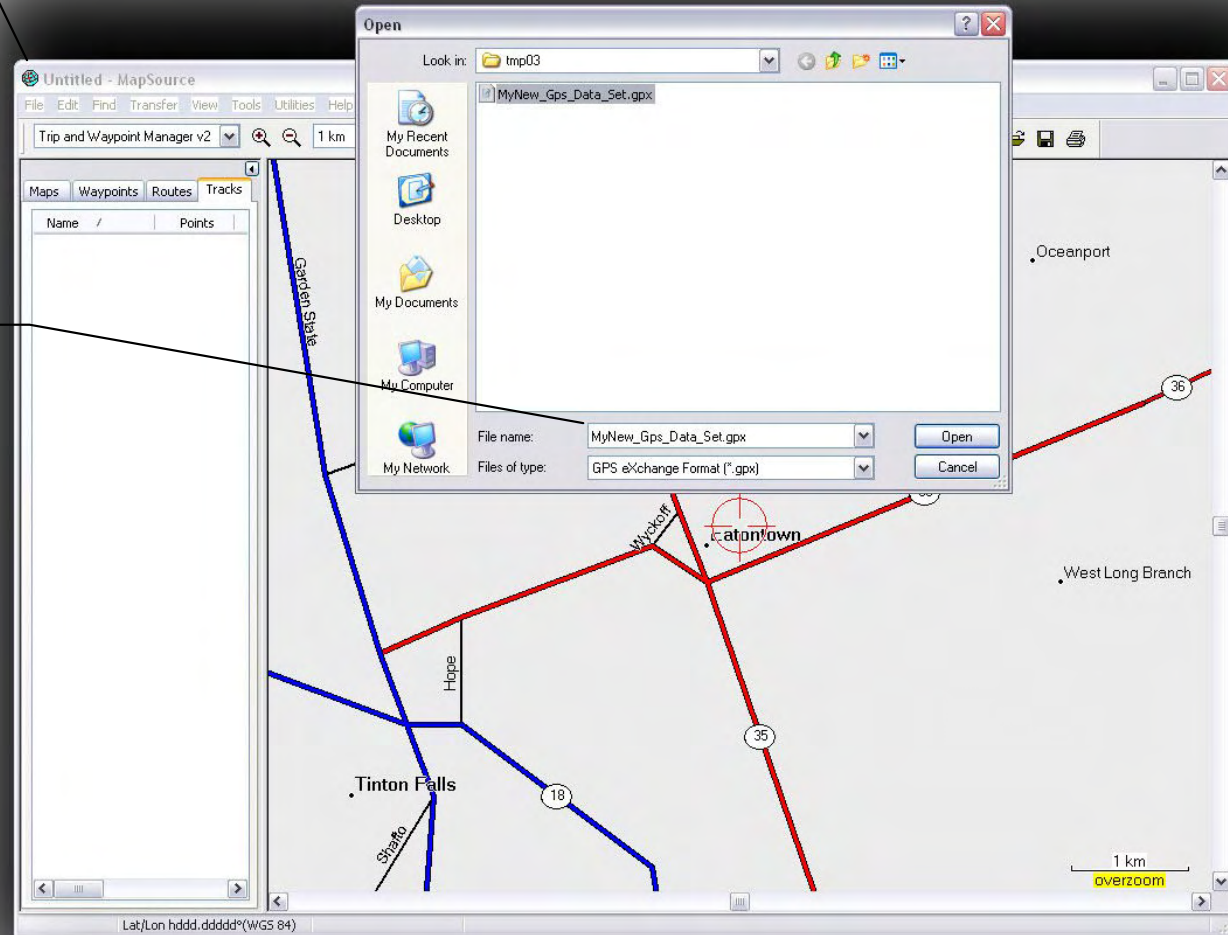*1-folder, 4-waypoints and 1-path)*

(read the instructions, presented on the program window)

Use the produced GPX data file

(1) Now we are ready, with our data in a "gpx" file. We may load the Garmin's MapSource™ utility…

(2) …select "File/Open" and get our "gpx" data loaded…

Use the produced GPX data file

(1) As we observe, the data are loaded (the "path" is under the "tab" titled "Tracks", and the waypoints, are under the "tab" titled "Waypoints".

(2) Double-clicking on the path name (in our example "PATH01", we get a window opened, depicting our path segments in detail.

(3) Last, but not least, the program map is enhanced by depicting our own path, and all waypoints.

Use the produced GPX data file

Waypoint Properties

Name: W02

Symbol: ■

Position: N40.29090 W74.05124

Altitude: 0 m ☐ Unknown

Depth: m ☑ Unknown

Proximity: km ☑ Unknown

Temperature: °C ☑ Unknown

Comment: mid junction

Display: Symbol & Name

Date Modified: Unknown

OK

Cancel

Show On Map

Fewer Details

Categories:
☐ Category 1
☐ Category 2
☐ Category 3
☐ Category 4
☐ Category 5
☐ Category 6
☐ Category 7
☐ Category 8
☐ Category 9

Link

File/URL: Browse...

MyNew_Gps_Data_Set - MapSource

File Edit Find Transfer View Tools Utilities Help

Trip and Waypoint Manager v2   1 km

Routes   Tracks(1)
Maps   Waypoints(4)

Show waypoints in category:

All Categories

Name	Symbol
W01	■
W02	■
W03	■
W04	■

1 Waypoint(s) Selected   Lat/Lon hddd.ddddd°(WGS 84)

Oceanport

West Long Branch

Eatontown

Tinton Falls

1 km
overzoom

(2)   Double-clicking on a
waypoint name (in our
example "W01", we
get a window opened,
depicting our
waypoint information
in detail.

*Note: The short description we
used, when we originally
created the waypoint, is now
depicted in the field "Comment"*

pg.20