

Gmap4

Working With Files

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For more documentation see the [Gmap4 Help page](#)

Also see the [“What is new”](#) page

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1. Introduction

Gmap4 can display the following types of files:

- GPX
- TPO
- KML and KMZ (a kmz file is simply a kml file that has been compressed)
- Google MyPlaces
- Delimited file

Files can be hosted almost anywhere online. The basic syntax for displaying a file with Gmap4 is: https://mappingsupport.com/p/gmap4.php?q=_____. Replace the underline with the full http link to your file and then enter the entire Gmap4 link into a browser bar.

If your Gmap4 link ***does not*** include a parameter specifying the map center (ll, utm, usng or mgrs) and ***does not*** include the zoom (z) parameter, then Gmap4 will automatically center and zoom the map such that all of your data is on the screen when the map opens. It will work this way on small screens like smartphones and big screens like desktops.

For more information about the delimited file format that Gmap4 can display, please visit the [Gmap4 Help page](#) and download the pdf file “Delimited Data”.

Note - Gmap4 cannot display files from your harddrive. You must first put your file online. Google Sites providers **free file hosting**. Search this pdf file on “Google Sites” for step-by-step instructions.

2. Tips for viewing files

Please start by visiting the [Gmap4 Help page](#) and downloading the pdf file “Quick Start”. Look at the table of contents and read the section that begins “Using Gmap4 to display....”.

In addition to displaying your own files you can also use Gmap4 to **display any suitable file that can be reached with a link**. For example, many governmental bodies at all levels have posted KML and KMZ files online that Gmap4 can display. This ability to display governmental data files is one of the useful but **underutilized** gems of Gmap4.

Tip: Usually when you make a Gmap4 link to display a file it is a good idea to include a ‘t’ parameter to specify the base map as well as the ‘q’ parameter to point to the file. For example, to specify the **high resolution topographic maps** (USA only) make your link like so:

https://mappingsupport.com/p/gmap4.php?t=t4&q=_____

In order for Gmap4 to read a file, the link pointing to the file must not contain a “%” character or a ‘#’ character.

It is OK for the link pointing to a file to contain spaces. However, a **much better practice** when assigning file names and folder names is to use an underscore character instead of a space.

Technically, Gmap4 really only displays two kinds of files: (1) KML files and (2) the delimited text file format. KMZ files are simply KML files that have been compressed. Google MyPlaces files are already KML files. **GPX and TPO files are converted to KML files by Gmap4 before being displayed on the map.**

If there is a problem with a delimited text file then Gmap4 displays a detailed error message.

If there is a problem with a KML file then either (1) the screen will remain mostly blank or (2) you should see an error message. If the screen remains mostly blank then the content of the file likely does not comply with the allowable syntax for KML files. You could try downloading the file to your local harddrive and then uploading it to this free tool to check for syntax errors:

<http://www.kmlvalidator.com/home.htm>

If the data in your KML/KMZ/GPX file does not appear on the map, or you see a message saying `FETCH_ERROR`, then the cause might be **slow response time** by the server hosting your file. Google will stop trying to display your file if the server hosting your file is slow. Some users hosting files on Dropbox have experienced this problem. The only solution is to find a faster host for your files. If you are having this problem, try hosting your file on Google Sites. It’s free.

Below is a list of error messages produced by Google when a KML file does not display.

DOCUMENT_TOO_LARGE

The maximum size for a KML/KMZ file is 3MB. When a KMZ file is uncompressed the resulting KML file cannot exceed 10MB.

It is fairly common to see KML/KMZ files that exceed these size limits. There is a simple and effective work-around but it has to be implemented by whoever produced the kml/kmz file. Unfortunately, the people that produce these large files are apparently unaware of both the problems caused by these large files and the simple solution.

TIMED_OUT

The KML file failed to load within about 4 seconds. Try hosting your data file on Google Sites. It is free and features fast servers. There are step-by-step instructions in this Help file showing you how to upload files to Google Sites.

LIMITS_EXCEEDED

The file has too much content. A file cannot have more than 50,000 “features”. A GPS track with many points is still only 1 “feature”. However, each waypoint counts as a feature.

FETCH_ERROR

This is likely a problem at Google’s end. Try reloading the Gmap4 link.

DOCUMENT_NOT_FOUND

If the owner of the file has deleted it then you might see this message

INVALID_DOCUMENT

The file is not a valid KML or KMZ file. If Google sees a possible malware indicator in your file then you will see this message. A user has reported that including an ampersand in a waypoint name or other fields will trigger this message and your file will not display. This caution also applies to GPX files since they are converted to KML files before Gmap4 tries to display them.

INVALID_REQUEST

This is an internal error that you will likely never see.

UNKNOWN

The file failed to load for an unknown reason.

3. Placing your files online

You can place your files online anywhere. If you are putting them online via your own website, make sure the ‘permission’ for the file lets other people read it. If you do not have your own website, then there are free options for placing your files online.

Gmap4 can read files when there are spaces in the file name. However, it is a much better practice to use an underscore character instead of a space.

a. Place your files online via Google Sites - It is free

If you do not have your own web site for hosting your files, then I recommend that you use Google Sites. It is free, easy and it works. Any of the file types that Gmap4 can read and display can be placed online by uploading them to Google Sites.

Step-by-step instructions for placing your files online via Google Sites

1. If you do not already have a Google account then sign up for one. The account is free.
<https://docs.google.com/>

2. Connect to Google Sites and login. <https://sites.google.com/>
3. Click “Create”
 - Accept the default of “Blank template”
 - Enter a name for your site
 - Site names can only use these characters: A-Z, a-z, 0-9.
 - The name for a new site cannot be the same as either the name of an existing site or the same as an existing Gmail user name.
 - Do not select a theme
 - Type in the code you see in the last box
 - Click “Create”

The site will be created and you will be looking at a blank “Home” page. Think of this home page as a virtual hard drive.

4. Make at least one folder on this virtual hard drive. You can have as many folders as you want. Google calls each folder a “page”. To make a new page (or folder) click the button with the piece-of-paper symbol near the upper right corner of your screen.
 - Enter a name for this page.
 - Click the “template” button and select “File cabinet”.
 - For the location, I prefer “Put page at the top level”.
 - Click “Create”.

The screen will change and show you the blank page you just made. Think of this page as a folder that Google is hosting online for you. You are now ready to either upload files to this page or you can make another page.

5. Click “Add file”. Browse to the file on your hard drive that you want to upload to Google Sites, then click “Open”.

6. After the file has uploaded, point to “Download”, rightclick and select “Copy link location”. You will get back a link to your file that includes a “?”. **Delete the “?” and everything after it.**

7. Replace the underline you see below with the “link location” you copied and then edited. Make sure there are not any spaces right after the “=” sign.

https://mappingsupport.com/p/gmap4.php?q=_____

8. Copy the above line (including the link to your data file) and paste it into a browser bar. Gmap4 will start and display your data file.

By default, when Gmap4 starts it will display Google’s terrain map. To override that default, add the “t” parameter to the Gmap4 link. For example:

To start Gmap4 and show high resolution topographic maps (USA only):

https://mappingsupport.com/p/gmap4.php?t=t4&q=_____

To start Gmap4 and show the Google's aerial without labels:

[https://mappingsupport.com/p/gmap4.php?t=s&q=_____](https://mappingsupport.com/p/gmap4.php?t=s&q=)

To start Gmap4 and show the Google's aerial with labels:

[https://mappingsupport.com/p/gmap4.php?t=h&q=_____](https://mappingsupport.com/p/gmap4.php?t=h&q=)

Gmap4 will automatically zoom and center the map so all of your data file is displayed.

If you want to rename things or move things around on your Google Site then click:
More (upper right corner) ==> Manage Site ==> Attachments (left sidebar)

Example using a GPX file:

https://mappingsupport.com/p/gmap4.php?q=https://sites.google.com/site/gmap4files/p/helpfile/Johnson_Ridge.gpx&t=t2

TIP: Let's say you just uploaded a file to Google Sites and then opened another browser tab and used Gmap4 to display your file. Oopsie - You spot a mistake. Edit the file and upload the revised copy. Do not change the file name. When the upload is complete then refresh the browser tab with Gmap4. You will see your revised map.

And if you work with GPX and/or TPO files then be sure to read the section "Using the 'refresh' link parameter for GPX and TPO files" further below in the pdf file.

To learn more about Google Sites:

<https://sites.google.com/support/?hl=en>

b. Place your KML files online as regular Google maps - It's free

If you do not have your own website to host your KML files, then here is another free alternative for placing your KML files online. This option works with KML files. It might work with KMZ files. It does not work with GPX files.

Beginning in late summer 2014, Google made big changes in regular Google maps. The following instructions have been updated for the new version of Google maps.

1. Get a free Google account
<https://google.com/accounts/NewAccount?service=local>
2. Start Google maps: <https://google.com/maps>
3. Click "My maps"
4. Click "Create a map" ==> "Import" ==> "Select a file from your computer"

5. Click “Browse” and select your KML file and upload it
6. Click the “Share” link (upper right corner), enter a title and description, click “Save” and copy the “Link to share”. Before leaving this screen change the access to “Public on the web”. Click Save again.
7. Paste the link you copied into Notepad or any kind of editor. Below is an example link with the **unique mid code** for this map underlined.
<https://google.com/maps/d/edit?mid=zf8JTV911VgY.k4nldpam2Qzs>
8. Find where it says: &mid= The ‘id’ code begins after the equal sign. Copy the ‘id’ code.

You are now ready to launch Gmap4 and view the data that you placed online as a Google map. Replace the underline in the following link with that id code.

https://mappingsupport.com/p/gmap4.php?q=mymap,_____

Copy the above link (with the file’s id code) and then paste it into a browser bar.

You can include this link in emails, websites, trip reports, etc.

Here is an example of the correct way to launch Gmap4 when your data is hosted online as a regular Google map:

<https://mappingsupport.com/p/gmap4.php?q=mymap,zf8JTV911VgY.k4nldpam2Qzs&t=t4>

Tech note: There is one downside to using regular Google maps to host your KML files. Assume your KML file uses the <IconStyle> tag to point to the icon image you want your map to use for GPS waypoints. But after saving your Google map you decide you want to use a different icon. You cannot (to my knowledge) edit a regular Google map and change the contents of the <IconStyle> tag. Instead you will have to edit each waypoint marker and change the icon image. This comment applies to all types of styles in your KML file. This issue does not apply if you let Google host your KML files via Google Sites.

9. **Make a GPX file, delimited file or map-in-a-link**

a. **Introduction to map making with Gmap4**

To start with, please visit the [Gmap4 Help page](#) and download the pdf file “Quick Start” and search the table of contents for the section “Use Gmap4 to make GPX files”. Also see the section that starts “Make a map-in-a-link”.

The Menu ==> “Draw and Save” feature lets you make a custom map. You can save the data for your custom map in any of three different ways:

- a. Download and save a **GPX file**
- b. Download and save a **delimited text file**

- c. Display and copy a Gmap4 link that is a **map-in-a-link** (no data file needed)

Whether you think of this tool as **trip planning** or map making, the idea is the same. You can click the map to set draggable points and draw lines. You can then download and save your work in several different ways. You can make a Gmap4 link to display your map.

Once you start playing with this feature you will quickly discover that **Gmap4 includes trip planning features not found in most other free software**. For example, with one click you can set both a waypoint and routepoint that have identical coordinates. You can also assign a GPS symbol name to each waypoint. In addition you can set a bunch of trackpoints and then go back and designate just certain ones to also be routepoints and/or waypoints.

The **first key design goal** for the Gmap4 trip planning feature was “**click once - write many**”. Most (?all?) other free online trip planning tools limit you to making only one type of GPX point (waypoint or routepoint or trackpoint) when you click the map. Some of these tools will only make routepoints and will not make trackpoints at all, or vice versa. By contrast, Gmap4 provides checkboxes for each point that you can use to identify the point as a waypoint and/or routepoint and/or trackpoint.

The **second key design goal** for the Gmap4 trip planning feature was “**stickiness**”. In other words, the next point you make should have characteristics that are similar to the prior point. For example, if you are making waypoints then the default GPS symbol name will be the same as the GPS symbol name of the prior point. If you change the GPS symbol name then that new name will be used as the default for the next waypoint you make.

The trip planning feature also supports **UTM coordinates**. If the UTM grid is displayed then when you do trip planning and edit one of your points, you will automatically see UTM coordinates. You can also manually flip between UTM and latitude, longitude when editing one of your points.

- b. Using a smartphone or other mobile device to make maps**

This map making feature also works on most **smartphones, tablets and other mobile devices**. Reminder: Gmap4 runs in your browser and the browser has to be online. After you turn on this feature then tap the map to set a draggable symbol. Tap a symbol to display a popup that includes a button that opens the ‘Action’ menu. The ‘Action’ menu lets you display or save your work. Note that it is not possible for Gmap4 to save a file on your mobile device. Instead, one option is to ‘display’ the file you made, copy it, paste the copy into an email and email it to yourself.

c. Details for map making (i.e. trip planning) interface

Key to Gmap4 trip planning symbols

| | |
|------------|---|
| Waypoint | Red paddle with black dot |
| Routepoint | A symbol with at least one red line connected to it |
| Trackpoint | A symbol with at least one black line connected to it |
| Routes | Red lines |
| Tracks | Black lines |

Each symbol can be a waypoint and/or routepoint and/or trackpoint. For example:

| | |
|---------------------------------------|-------------------------------------|
| Red paddle not on a line | Waypoint |
| Red paddle on red line | Waypoint and routepoint |
| Black circle on a red line | Routepoint |
| Black circle on a black line | Trackpoint |
| Red paddle on red line and black line | Waypoint, routepoint and trackpoint |

Any symbol can be dragged (click-hold-drag).

Every time you click a symbol, the information displayed tells you if the point is a waypoint and/or routepoint and/or trackpoint.

Key to symbol clicks

Click a symbol to see information about that point

This right click context menu has been revised.

Right click a symbol to see a context menu listing some or all of the following actions:

- Edit this point
- Delete this point
- Insert point before
- Insert point after
- Pause drawing
- Resume drawing
- Delete all drawing data

- GPX file display
- GPX file download
- Delimited file display
- Delimited file download

See all your data

- Gmap4 link - No description
- Gmap4 link - With description
- Gmap4 link open - With description

Use current center and zoom

Gmap4 link - No description

Gmap4 link - With description

Gmap4 link open - With description

When you click ‘**Edit this point**’ then different fields are displayed in the edit window depending on whether the point is a waypoint and/or a routepoint and/or a trackpoint. If you change one of the checkboxes at the top of the ‘Edit’ window, then the rest of the “Edit” window will be revised to only show you the fields that are relevant to the type of point you are editing. For example, if you are editing a point that is only a waypoint, then the ‘Edit’ window will not display the fields for route name or track name.

When you rightclick a point that is on a route and/or track, then the context menu includes choices to insert a new point either before or after the point you clicked. If you insert a point **after the last point** in a line (or **before the first point** in a line), then the new point is placed to the north and you can drag it where it needs to go.

When you insert a new point in between two existing points then the new point is formed according to the following rules:

- A. If the new point is being added to a red line, then it will be a **routepoint**
- B. If the new point is being added to a black line, then it will be a **trackpoint**
- C. If the new point is being added to a line that is both red and black, then it will be both a **routepoint and trackpoint**
- D. If the point you clicked is a waypoint, then the new point will also be a **waypoint**

There is a special case that will likely not arise very often. Assume you are inserting a point after the point you clicked. Also assume that both a route and track leave the point you clicked but go in different directions. Will the new point go on the route line (red) or on the track line (black)? Answer: The new point will go on the route line (red). You can insert a similar point on the track line (black) by clicking the next trackpoint and insert a new point before the point you clicked.

If you select “**Pause drawing**” then you can click the map without making a new point. Rightclick any point you made and select “Resume drawing” to continue making your map.

You can also display different kinds of Gmap4 links where the data for your custom map is saved right in the link itself. This is called map-in-a-link. If you use this feature then you do not need any data file at all. Anyone who clicks that Gmap4 link will see your custom map. **This is a unique feature of Gmap4.** If you save your map as a “Gmap4 link - With description” then when a user clicks a waypoint on your map they will see a popup showing the “description” (i.e. comment) you entered for that waypoint while you were making your map. For waypoints that do not have descriptions Gmap4 will automatically display the waypoint name (the default name is a sequential number) and latitude longitude in the popup.

If you select a Gmap4 link from the group “See all your data” then when the map opens it will be centered and zoomed such that all of your data is on the screen.

If you select a Gmap4 link from the group “Use current center and zoom” then when the map opens it will have the same center and zoom that you currently have on your screen.

For more information on this unique ability to save custom map data right in the Gmap4 link, please search this pdf file for the section titled “Save the data for your map as a map-in-a-link”.

Finally, when you rightclick a point to see the context menu you can select “**Delete all drawing data.**” This feature lets you start over with a new “Draw and save” operation without having to restart Gmap4. Be sure to save any important data you added to the map before deleting that data from the map.

d. Tips and tricks

Here are some examples for how you might use this trip planning tool. Each example assumes that you have (1) turned trip planning on and (2) clicked the map to set one symbol and (3) have not done anything else.

1. To make just waypoints: Uncheck the routepoint box. Click Save & close. Continue clicking the map.
2. To make just trackpoints: Check the trackpoint box and uncheck the other two boxes. Click Save & close. Continue clicking the map.
3. To make just routepoints and then make just waypoints: Uncheck the waypoint box. Make all the routepoints you want. Click the map where you want just a waypoint. Rightclick the point you just made and select "Edit this point". Uncheck the routepoint box. Check the waypoint box. Save & close. Continue clicking the map to make just waypoints.
4. To make waypoints and routepoints and trackpoints: **Wrong way:** Check the trackpoint box (all three boxes are now checked). Save & close. Continue clicking the map. The black line (track) is on top of the red line (route) on the map and while that looks cool, this is most likely not a useful thing to be doing. **Right way #1:** First make just trackpoints. When you are done making trackpoints then edit a few trackpoints and check the boxes to make them also waypoints and/or routepoints. **Right way #2:** First make just waypoints. Then click where you want to start making trackpoints. Edit that point so only the trackpoint box is checked. Make all your trackpoints. Then edit each point that you want to be on your route and add a check to the routepoint box.

e. Limitations

If you have started to make some routepoints, then you cannot make trackpoints. If you want to make routepoints and trackpoints both, then make your trackpoints first and then edit only those trackpoints that you also was to designate as routepoints.

If you are using Internet Explorer (IE) to do trip planning, then you may see a noticeable lag on your screen as you drag symbols and lines. I recommend you try the current version of Firefox or Chrome. You will likely see better performance.

f. Save the data for your map as a GPX file

To turn this feature on, click Menu ==> Draw and Save.

On the next screen it is usually best to select “waypoint and linepoint”. This choice means that each time you click the map your GPX file will have both a waypoint and routepoint. If you are making a GPX file, linepoint is a synonym for routepoint.

Garmin GPS units include many different symbols that can be displayed on the GPS screen at your waypoints. Garmin has assigned each symbol a different name. Most free trip planning software does not let you specify those symbol names as you plan your trip. As a result, all of your waypoints show the same default symbol when you view them on your GPS screen. By contrast, Gmap4 lets you edit any waypoint and provide a GPS symbol name. You might have to do a bit of research to learn the symbol names that are available on your GPS unit.

GPX under the hood

A GPX file can include up to three kinds of points. They are: waypoints, routepoints and trackpoints. **The software in your GPS and software on your computer do different things with these three different kinds of points.** What kind of points should you put in your GPX file so you get the most benefit from your GPS? Part of the answer depends on what kinds of features are provided by the software running in your GPS for these three different kinds of points. A little careful experimentation by you will quickly shed light. Gmap4’s default settings only create a linepoint (i.e. GPX routepoint) each time the map is clicked.

NOTE: Some GPS units cannot read GPX files and do not have any way for you to load a route or track into the GPS. If you need help learning about your Garmin GPS then an excellent resource is the Garmin forums: <https://forums.garmin.com>

Routes v. Tracks

Here are a couple of well-written articles describing the difference between routes and tracks.
<http://gpstracklog.com/2010/03/handheld-gps-101-routes-vs-tracks.html>
<http://www.gpsmap.net/DefiningPoints.html>

Mistakes to avoid

If you want to use Gmap4 to make a GPX file with trackpoints, then usually you want those points to **only** be trackpoints. It is almost certainly a mistake to make a waypoint and/or routepoint at each spot where you are making a trackpoint. In other words, you should probably not make every point a waypoint **and** routepoint **and** trackpoint. On the other hand, it is OK to first make all your trackpoints and then edit a few of those trackpoints to also make them into waypoints and/or routepoints.

g. Save the data for your map as a delimited text file

When you use the “Draw and Save” feature then you can save your work as two different types of files, either a GPX file or a **delimited text file**. The syntax used for the delimited files is simpler, shorter, easier to read and much more powerful than the syntax used by GPX files. You can get a feel for the difference by first doing some work to make a map and then rightclick any symbol. First display your work as a GPX file and then display your work as a delimited text file. The rightclick context menu also gives you the option to download either type of file.

For more information about the delimited file format that Gmap4 can display, including numerous examples, please visit the [Gmap4 Help page](#) and download the pdf file “Delimited Data”. If you take a moment to skim through the delimited file examples then you will quickly see the kinds of maps you can make with this type of file and how easy it is to do so.

During the “Draw and Save” process you can also rightclick any symbol and then **edit** the data for that point. The data that you enter (name, coordinates, comment) will be used in your file.

A future update to Gmap4 will provide additional menus so you can do more customizing of your delimited file during the “Draw and Save” process. For example, these future menus will let you specify line color, line width, make dashed lines and use other features of the delimited file syntax. However, at the present time if you want to take full advantage of the delimited file format you need to download that file and then tweak it with an editor.

h. Save the data for your map as a map-in-a-link No data file needed!

This is a super fast and easy way to make a map and share it.
All of your data is stored right in the Gmap4 link itself.
You do not have to bother with any data file.

The “Draw and Save” feature of Gmap4 gives you three ways to save your data. In addition to saving your data as a GPX file or delimited file (see the above two sections) you can also decide to **not use a data file at all** and instead simply store your data in the Gmap4 link. This **map-in-a-link** feature supports a default symbol (red paddle), custom symbols, line color, line width, dashed lines, multiple lines, map title, waypoint labels, clickable labels, popup symbol descriptions and more. You can adjust all these settings.

Tip: This map-in-a-link features uses the same syntax that is used by the delimited file format that Gmap4 can read. For the complete delimited syntax please visit the [Gmap4 Help page](#) and download the pdf file “Delimited Data”.

Anyone can start right now making basic Gmap4 links that include their own custom map data by following these steps:

1. Start Gmap4 and zoom/pan (or Menu ==> Search) so the screen is displaying the area where you want to make a map.

2. Click Menu ==> Draw and Save
3. Select one of the three options. Each click on the map can make a:
 - Waypoint and linepoint <== Good for GPX files
 - Linepoint <== **Good for map-in-a-link trip maps**
 - Waypoint
4. Click the map a few times
5. Right click any symbol and select “Gmap4 link - No description” or “Gmap4 link - With description”. (Mobile users - tap a symbol then select “Action menu”)

Paste that link into a new browser address bar, hit enter and your custom map appears on the screen. **It is just that easy.** Did you notice the “markers” parameter in the Gmap4 link? That parameter holds all of your data.

This map-in-a-link feature uses almost the same syntax that is used by the delimited files. Any kind of map that you can make with a delimited file, you can also make by storing that same data in the Gmap4 link. But don’t get too carried away. The usual recommendation is that **links should not exceed 2,000 characters**. After that point some browsers might not be able to correctly understand the link.

Tip: To immediately see your map in a new browser window, rightclick any symbol and select “Gmap4 link open - With description”.

If you go to the [Gmap4 Examples page](#) and scroll down to the section titled “Your map data saved in the Gmap4 link” then you will see a number of example map links that can be made by using the delimited file syntax and saving your data in the Gmap4 link. There is also some **additional text** included with the examples to help you quickly understand the map-in-a-link feature.

Here are a few ideas for using this map-in-a-link feature:

- Make a map link showing where you plan to park and hike/bike/ski/hunt/etc. Leave that link with someone who will send it to the authorities if you fail to return or at least call before some agreed upon deadline. This should be particularly useful to people who do things outdoors alone since obviously there will not be anyone in your party that can go for help if you become injured. The SAR coordinator can open your map link, print your map and pass out copies.
- Make a map link that shows the location of a trip that you plan to lead. Other people that are considering joining you will be able to make a more informed decision if they can see the general route of the trip on a high quality interactive topographic map and maybe also flip to the aerial view.
- Show this to your kids. They can make a map link that shows you where to drive the next time you have to pick up their friends and haul them to an activity. Remember, Gmap4 works in the browser on most **smartphones, tablets and other mobile devices** as long as the browser is online.

There are only two differences using this map-in-a-link method as compared to making the same map by storing your data in a delimited file. First, at the end of each 'line' you need to have **two vertical line characters** ("||"). The vertical line character is usually an upper case key near the righthand side of most keyboards. Second, if you are using custom color codes then do not include the # character in the Gmap4 link. For example, use color=ff0000 (red) instead of color=#ff0000. Here is the reason. If a browser sees the '#' character in a link then the browser does not read any part of the link after that character.

If you read the "Introduction to map making with Gmap4" (see above) then you know that (1) each time you click the map you can make a waypoint and/or routepoint and/or trackpoint and (2) that the 'edit' window has three checkboxes that control what kind of point you make with each click. This map-in-a-link feature ignores trackpoints. **This feature will connect routepoints with a line. A point that is only a waypoint (and not also a routepoint) will appear on your map as a standalone symbol.**

When you rightclick a symbol to save your map-in-a-link you can chose between "Gmap4 link - No description" or "Gmap4 link - With description". If you select "No description" then when a user clicks a waypoint on your map they **will not** see any popup. By contrast, if you select "With description" then when a user clicks a waypoint on your map they **will** see a popup. That popup will display either a description (i.e. comment) you entered for that waypoint or it will display the waypoint name (default is a sequential number) and the latitude longitude for that waypoint.

Here is the final tip. After you copy your Gmap4 link, notice that the 'll' and 'z' parameters are not included in the link. Since these parameters are **not** in the link, Gmap4 will automatically center and zoom your map such that all of your data is on the user's screen. After all, one person might look at your map with a smartphone size screen while the next person looks at your map with a desktop size screen. If you want to force your map to be centered at a certain spot and/or be zoomed to a certain level then you will have to add the ll and/or z parameters into the Gmap4 link.

A future update will include a way to apply more of the delimited file syntax from within the Gmap4 program. This will include the ability to do things like set the line width, line color and use different symbols. But for now, if you want to adjust these settings then you will need to edit the Gmap4 link.

10. Converting your GPS data into KML or GPX files

A lot of recent GPS units automatically produce GPX files. Those files can be displayed by Gmap4 as described in this pdf file without the need to do any file conversion. But if you have a GPS that does not automatically produce GPX files or if you simply want to use KML files (see below for advantages of KML files), then you will need to do a file conversion before you can view your data with Gmap4. Below are four tools that can do file conversions.

a. Software that is included with a GPS purchase

Every handheld GPS comes with some software. Take a look at that software and see if it will let you convert your GPS data into a KML or GPX file.

b. GPSTabel

This free program (<https://gpsbabel.org/>) runs on your computer and may well be the ‘gold standard’ for doing GPS-related file conversions. This program can read any GPS file format that you are likely to have and produce either a KML (recommended) or GPX file that you can then place online and view with Gmap4. You can run GPSTabel with a graphical interface or from the command line. In fact, **Gmap4 itself uses GPSTabel running on my server** to convert a GPX file to a KML file and then displays that KML file on the map.

Here are the options that Gmap4 uses when it executes GPSTabel to convert a GPX file into a KML file. If you are doing your own conversion to a KML file, then you can tweak these options to suit your needs. The option “**points=0**” will prevent each of your trackpoints from also becoming a waypoint in the KML file.

```
gpsbabel -i gpx -f path_to_gpx_file  
-o kml,points=0,line_width=5,line_color=990000ff -F path_to_kml_file
```

When Gmap4 converts a GPX file to a KML file, the same symbol is used for all the waypoints in the file. That symbol used to be a red paddle and then was changed to be a blue flag. Gmap4 is going back to using a red paddle since the blue flags were too hard to see on too many maps.

c. GPS Visualizer

This free website lets you upload your GPS data and convert it online into either a KML file (recommended) or GPX file. Here are some tips:

- Use this page to convert to a KML file:
http://gpsvisualizer.com/map_input?form=googleearth
- Under “General map parameters” change “Output file type” from kmz to kml

Tech tip: GPS Visualizer will include some tags in your KML file that mean something in Google Earth but do not mean anything in Google Maps. You can avoid this clutter by (1) using GPS Visualizer to convert your data and then (2) copying the coordinates from the resulting KML file and (3) pasting those coordinates into your own KML template file that only has the KML tags you want. Please see the Appendix to this pdf file for a basic KML template file that you can copy and use.

d. Google Earth

If you have the Google Earth software installed on your computer, then you can use that software to convert a GPX file to a KML file.

Step 1: Open your GPX file in Google Earth

Your file should be on your local drive.

File open ==> Files of type - click down arrow to open the list ==> All files ==> OK

Find your GPX file and click it to open

Step 2: Save your file as a KML file

File ==> Save ==> Save Place as ==> Set 'Save as type' to kml ==> save the file

11. Some general things you need to know if you edit your files

a. Use the right tool to edit your GPX and KML files

If you edit a GPX or KML file then it must be saved with something called "UTF-8 encoding".

Here is how to do that in Microsoft Word (2007 version):

Save as ==> Save as type, select "Plain text" ==> File name, change "txt" to "kml" ==> Save

==> Check "Other encoding" and select "UTF-8" ==> OK

Or you could do it the **much easier way** and use a tool designed to help you edit these types of files. One such tool is the freeware Notepad++ . This is *not* the Windows notepad. You can get it here: <https://notepad-plus-plus.org/>

This tool has special features to help with editing these types files. You can configure this program to automatically save your files with UTF-8 encoding.

Any editor intended for use with 'XML' files will also be much better than using Word.

b. Indentation

You should adopt the practice of using proper indentation in order to make your data files more readable. See the example KML files discussed in this 'Help' file.

c. HTML and CSS

Please do not use the characters < and > in your data file unless you are adding HTML tags to your file. If you ignore this rule then Gmap4's internet security screening might display error messages when you view your file.

In general, you should be able to use most inline HTML and CSS commands if you wish to edit your data file. Note the use of the CDATA tag. Here is an example of a two line map title that uses HTML to make the text bold text:

```
<name><![CDATA[<b>Misty Moon Lake Trail<br>Cloud Peak  
Wilderness</b>]]></name>
```

Or you could use CSS to style the font:

```
<name><![CDATA[<span style="font-weight:bold;">Misty Moon Lake Trail<br>Cloud  
Peak Wilderness</span>]]></name>
```

However, if you try something too fancy with your HTML and CSS, then Gmap4's internet security scanning might complain.

You can use inline HTML and CSS in the following places:

- The field that is used as a map name
KML file: <Document><name>
GPX file: <metadata><name>
- The 'name' for any waypoint or line
- The 'description' for any waypoint or line
- The additional 'label' field in delimited text files

d. Labels for waypoints

If a file includes some waypoints (and not just a GPS track) then you can tell Gmap4 to display all of those waypoint names as labels on the map. To tell Gmap4 to display a file with labels showing, simply add the link parameter '&label=on' to the Gmap4 link:

https://mappingsupport.com/p/gmap4.php?q=https://sites.google.com/site/gmap4files/p/delimited/delimited_03.txt&ll=47.672083,-122.200817&t=h&z=16&label=on

You can also toggle the labels by clicking Menu ==> Label.

Note - This feature does not yet work with KMZ files.

Are some of the labels covering up their symbols on your map? There is a simple solution. Each waypoint symbol has an "anchor point". The default location for a symbol's anchor point is the **middle of the bottom edge** of the symbol image. The labels are placed so that the **top left corner of the label is 20 pixels to the left of the anchor point**. If you look again at the map link just above you will see that the upper left corner of the labels is slid a bit to the left of the bottom of the waypoint symbols. This tells you that the anchor point for those symbol images is the middle of the bottom edge of the image.

By contrast, when the label covers part of the symbol, that tells you that the anchor point for that symbol **not** the middle of the bottom edge but instead is somewhere 'inside' the space the symbol image occupies on the map. This only seems to happen with certain symbol images that

are hosted by Google. To fix this problem, simply copy those symbol images and put them online yourself. No website? No problem! There are step-by-step instructions in this Help file showing you how to upload files to Google Sites. Doing so is free, easy and it works. After you put those symbol images online yourself, then their anchor point will be the middle of the bottom edge.

In case you are wondering, here is the default CSS styling that Gmap4 applies to the labels:
position:relative; left:-20px; top:0px; white-space:nowrap; border:1px solid black;
padding:2px; background-color:#FFFFCC; font-size:1em;

Do you want maximum control over the appearance of labels on your map? Then please visit the [Gmap4 Help page](#) and download the pdf file “Delimited Data”.

e. Including links in your file

Assume you want to code a waypoint description (or waypoint label, or map name) that includes a link. The best practice is to code that link so it opens in a new window. Here is the reason. If the link opens in the same window where Gmap4 is running then when the user clicks their ‘back’ button Gmap4 **reloads the original map view**. The user will lose the benefit of any panning and zooming they did before clicking that link. By contrast, if your links opens in a new window then when that new window (or tab) is closed the Gmap4 map looks exactly the same as when the user clicked the link.

f. Including clickable photo thumbnails on your map

This is soooooo easy (once you know how). Look at the following map and click each camera icon. Notice how each thumbnail fits nicely within the white info balloon.

https://mappingsupport.com/p/gmap4.php?q=https://mappingsupport.com/p/gmap4/helpfile/Stafford_Creek.kml&t=2

Here is a link that lets you download a copy of the KML file that produced the above map:

https://mappingsupport.com/p/gmap4/helpfile/Stafford_Creek.kml

Download the KML file, open it in an editor and find the section titled:

“This section has coordinates for each "Pic" icon”

Look inside the first <Placemark> ... </Placemark> tags and find the <![CDATA[...]> tags. Notice that the CDATA section includes <table> ... </table> tags. These tags help define an html table. Google uses the html tags in this table to format the data that appears in the info balloon when someone clicks this icon on your map.

Notice also that the contents of the <![CDATA[...]> tags can appear on multiple lines.

This table has 3 cells. The first cell has some text. The second cell is empty and just provides a bit of white space between your text and the photo thumbnail. The third cell holds the thumbnail (which is created automatically).

Notice that the third cell includes:

```
height="100px" width="133px"
```

This data will cause the thumbnail on the screen to be 100 pixels high by 133 pixels wide. Including both a **height and width** for each thumbnail is **essential** so that the white background of the info balloon is the right size to include both the text and the thumbnail.

You should use height and width values that maintain the aspect ratio of your photo. For example, 100 by 133 is the same aspect ratio as the 600 pixel by 800 pixel jpg that is displayed when someone clicks the thumbnail.

There are certainly other ways to write KML info balloons. But starting out, I recommend you adopt this three cell approach.

g. Using the “refresh” link parameter for GPX and TPO files

This section only applies if you are displaying your own GPX or TPO files with Gmap4. All the discussion in this section about GPX files also applies to TPO files.

Gmap4 uses the Google Maps API (Application Program Interface). Since that API cannot read GPX files, Gmap4 converts GPX files to KML files and then temporarily stores that KML file. Thus, if you revise one of your GPX files, then you have to tell Gmap4 that it needs to read the revised GPX file in order to make a new KML file. You do this with the “refresh” link parameter.

Let’s assume you are viewing one of your GPX files with Gmap4 and you decide to delete one of the waypoints from that file. Here is the recommended workflow:

1. Edit your GPX file by deleting the waypoint.
2. Upload the edited GPX file to where ever your files are hosted online.
3. Go to the browser where Gmap4 is running and add the following to the end of the command in the browser bar:

&refresh=on

Make certain that you do not let any spaces get into the command in the browser bar.

4. Press enter. Gmap4 will display your revised map.

The old syntax of &refresh=1 will also work.

After you revise your data file, you only need to use the refresh parameter **one time**. Since the &refresh parameter causes additional processing, it should not be routinely used. It only needs to be used one time after a data file has been changed. While it will not do any harm, it is still bad practice to post a link that includes the “&refresh” parameter.

Did I mention that you should only use &refresh=on **one time** after you edit a data file that you created?

NOTE: You cannot change the line width or line color of GPX files. Those values are hard-coded into the portion of Gmap4 that converts your GPX file to a KML file. If you wish to display your GPX file with a different line width and/or line color, then please first convert your GPX file to a KML file. You will then have complete control over how your map looks when displayed by Gmap4.

12. GPX files - Some details

The GPX format was initially developed by the Topografix company which describes it as follows:

“GPX (the GPS Exchange Format) is a light-weight XML data format for the interchange of GPS data (waypoints, routes, and tracks) between applications and Web services on the Internet.”

You can learn more here: <http://www.topografix.com/gpx.asp>

Many current handheld GPS units automatically save their data as GPX files. Since Gmap4 can read these files, you do not have to bother doing any file conversion unless you want the benefits that come from using KML files.

Here is a site where you can download a tool to check your GPX file and make sure it conforms to the specifications that all such files must meet:

http://www.topografix.com/gpx_validation.asp

Unless you have edited the content of your GPX file, you likely do not need to bother with this validation step.

If you want to edit the content of your GPX file, then I recommend the freeware editor Notepad++. Here is where to put a map title in a GPX file. Map titles display near the upper left screen corner:

```
<metadata><name>Put your map title here</name>
```

You can add inline HTML and CSS to your map title. Remember to wrap everything in CDATA tags:

```
<metadata><name><![CDATA[<b>Put your map title here<br />Line 2 of map  
title</b>]]></name>
```

If you are viewing your GPX files with Gmap4 and happy with the way your map looks, then there is likely little reason for you to spend any time to learn about KML files. However, while GPX files are certainly convenient if they are automatically produced by your GPS, they do have a few disadvantages as compared to KML files when using Gmap4. These include:

- You cannot change the line width or line color of your GPS track
- You cannot chose different symbol images to display for your waypoints
- You cannot display information on your map from multiple GPX files

13. TPO files - Some details

TPO files are produced by certain versions of the popular TOPO! software (now discontinued) from National Geographic. Gmap4 is on the short list of 3rd party software that can display TPO files without requiring the user to first convert their TPO file to some other file format (such as GPX).

TPO files use a non-disclosed proprietary file format and thus are creatures of mystery. If your TPO map looks weird/broken/ugly please send me a link to your tpo file or the file itself. I can't fix it if I don't know it's broken. For an email link see:

https://mappingsupport.com/p/gmap4_contact.html

Gmap4 uses GPSBabel to convert your TPO file into a KML file. It is that KML file that is used to actually produce the map that you see.

NOTE: If you display one of your TPO files with Gmap4 and then edit that TPO file, you will **not** see your edit on the map unless you use the &refresh=on link parameter. Search this pdf file (Control F) for more info about “refresh”.

For TPO version 2 files, Gmap4 will only display GPS tracks. (Waypoints in TOPO version 2 are stored in TPG files.)

For TPO version 3 and 4 files, Gmap4 will display GPS tracks and any individual waypoints you set. In addition, if you also made any (1) map notes, (2) symbols, and/or (3) text notes using the TOPO software, then those items should also be displayed on your Gmap4 map as waypoints.

14. KML files - Some details

The KML (Keyhole Markup Language) format was originally developed by Keyhole, Inc. That company was acquired by Google in 2004. Here is Google's description of what KML is all about: <https://code.google.com/apis/kml/documentation/whatiskml.html>

If you want the more flexibility for how your data is displayed by Gmap4, then you will want to use KML files instead of GPX files. By using KML files and doing a bit of editing to your KML file you can:

- Add a caption to your map
- Change line width and/or color
- Use different icons for waypoints
- Break a GPS track into two parts and assign a different color to each part
- Add clickable markers to your map that display text and/or a photo
- Link to other KML files and include their data on your map
- and more I haven't thought of offhand

a. **Easy way to make better KML files**

The Appendix to this 'Help' file contains a listing for a basic KML file that displays a GPS track. You can (1) copy that listing, (2) replace the coordinates with your own coordinates, (3) place the edited file online and (4) view your data with Gmap4. It's just that easy. As you learn a bit more about KML you will be able to enhance your basic KML files with additional features.

You can also download any KML file referenced in the Appendix, open it with an editor and use it as a template for your own maps. For example: This link will display the map produced by KML Demo #1 in the Appendix:

https://mappingsupport.com/p/gmap4.php?q=https://mappingsupport.com/p/gmap4/helpfile/Boardman_Lake.kml&t=t2

Here is the KML Demo #1 file:

https://mappingsupport.com/p/gmap4/helpfile/Boardman_Lake.kml

OK, time to 'fess up. I did not actually hike that trail and record my GPS track (although I tried to ski it once). Instead, for demonstration purposes I just very quickly snapped some waypoints with my mapping software, exported the waypoints in the proper format and pasted them into the basic KML file you see in the Appendix as Sample #1.

Guess what? You can do the same thing. All you need is a simple list of the points in your GPS track that are in the right format: **longitude,latitude or longitude,latitude,altitude** Once you have your list of points just paste them into the sample KML file that you copied from the Appendix.

As you work on formatting your coordinates and adding them to a KML file, keep these points in mind:

- In your **track** the **longitude** must come first
- Altitude is optional and will be ignored if present
- In North America longitude must have a minus sign
- Coordinates are in decimal degrees
- Coordinates must be in the WGS84 datum
- A space after each comma is OK but not required
- The coordinates can be on one looooong line in your KML file
- Coordinates must be surrounded by opening and closing tags as follows:
 <coordinates> insert list here </coordinates>
 or
 <coordinates>
 insert list here
 </coordinates>

Are you concerned whether you messed up the KML file with your edits? There are tools discussed below that will check your file.

b. Validate your KML file

If you have edited your KML file then it is likely a good idea to have your file checked by one of the validation tools in order to be sure that your file still is a valid KML file.

This validator can be used online. You simply upload your file and it will be checked.

<http://www.kmlvalidator.com/home.htm>

Here's another KML validating tool that Google has posted:

<https://googlemapsapi.blogspot.com/2007/06/validate-your-kml-online-or-offline.html>

You will likely save yourself time and grief if you validate your KML file after you make any edits and before you try to view that file with Gmap4.

c. Let Google Earth help you edit your KML files

Since your time is valuable you should use the best tool for helping you build your KML files in the least time. That tool is Google Earth (GE) since it can read your KML file from your local drive and display the contents on its earth map. You do not have to place your KML file online in order to view it with GE.

Now here's the best part. After you do another edit to your KML file you can go back to GE and do: File ==> Revert

GE will re-display your KML file with the latest edits you just made.

After you get your KML map looking right on GE, then you are ready to put it online so you can view it with Gmap4.

If you do not already have the GE software running on your computer, then consider adding it. Note that GE requires a broadband connection of some kind.

System requirements: <https://earth.google.com/support/bin/topic.py?hl=en&topic=17077>

Download: <https://earth.google.com/index.html>

If you have included a map caption in your KML file, then that feature will not be displayed by GE. But it will appear on your map after you place your KML file online and view it with Gmap4.

d. Add a caption to your map

One of the simplest edits you can make to a KML file is to add some short text that will appear at the top of your Gmap4 map. Think of this as a caption or title for your map. All that is needed is a quick edit of your KML file. Here's the recipe:

Open your KML file and find the <Document> tag near the top of the file

Add a new blank line **right under** the <Document> tag

Enter this on that blank line: <name>My caption here</name>

Replace the text “My caption here” with the text you want as a caption on your map

Would you like your caption in bold? Do it like this:

```
<Document>
  <name><![CDATA[<b>My caption here</b>]]></name>
```

How about a two line caption? No problem:

```
<Document>
  <name><![CDATA[<b>Caption line1<br>Caption line2</b>]]></name>
```

As long as you use the special CDATA statement and square brackets as shown, then most html tags are allowed with your map caption. To read more about adding html to your KML files, and the CDATA tag, please open this link and scroll down a bit:

https://code.google.com/apis/kml/documentation/kml_tut.html

Demo KML file #1 in the Appendix already has a spot for your map caption. All you have to do is change the text.

e. Resources for learning more about KML files

The KML file specification includes a number of elements (for example, <altitude>) which mean something in Google Earth (a 3D app) but are ignored in Google Maps (a 2D app) and also ignored by Gmap4. If you are building KML files for the purpose of viewing them with Gmap4, then there is no reason to include tags that will be ignored.

In general, here is the list of KML elements that Google Maps and Gmap4 understand:

Placemarks

Icons

Folders

Descriptive HTML

Polylines and polygons

Styles for polylines and polygons, including color, fill, and opacity

Network links to import data dynamically

Ground overlays and screen overlays

Think of a GPS track as a polyline and a GPS waypoint as a placemark.

Tech note: If you want the precise techie details about which KML elements are understood by Google Maps and Gmap4, you can find them here:

https://code.google.com/apis/kml/documentation/kmlelements_in_maps.html

Now you don't need to waste any time learning about a KML element that is not going to do anything when you view your file with Gmap4.

Here is the ultimate source of info for all things KML:

<https://code.google.com/apis/kml/documentation/>

15. Appendix

a. Demo KML file #1 - Basic KML file for a GPS track

You can make your own KML file by copying this file and substituting your own (1) coordinates, (2) map caption, (3) track name, and (4) track description. It's OK for the coordinates to be on one long line. **Validate your file!**

```
<?xml version="1.0" standalone="yes"?>
<kml xmlns="http://www.opengis.net/kml/2.2">
  <Document>
    <name><![CDATA[<b>Map caption here</b>]]</name>
    <!-- ===== -->
    <!-- style section -->
    <Style id="TrackColorWidth">
      <LineStyle>
        <!-- Reminder - colors defined in this order: Opacity-Blue-Green-Red -->
        <color>ff0000ff</color>
        <width>4</width>
      </LineStyle>
    </Style>
    <!-- ===== -->
    <!-- track section -->
    <Placemark>
      <name><![CDATA[<b>Track name here</b>]]</name>
      <visibility>1</visibility>
      <description><![CDATA[Track description here]]</description>
      <styleUrl>#TrackColorWidth</styleUrl>
      <LineString>
        <coordinates>
-121.685141, 48.033517
-121.684997, 48.032726
-121.683245, 48.030907
-121.683627, 48.030011
-121.684002, 48.029423
-121.684006, 48.027997
-121.684695, 48.027917
-121.684541, 48.027543
-121.686380, 48.025940
-121.686774, 48.024585
        </coordinates>
      </LineString>
    </Placemark>
  </Document>
</kml>
```

```
</Placemark>
</Document>
</kml>
```

b. Demo KML file #2 - Proposed 5 part organization

While there certainly are rules that a KML file must follow, it is also possible to write a valid KML file in several different ways and produce identical maps. Below is a link to a KML file that is divided into five parts with ample comments describing the purpose and operation of each part. If you are new to KML and have not yet adopted a method to organize and label the contents of these files, then you are encouraged to give the method in this demo file a try.

Here is the demo KML file:

https://mappingsupport.com/p/gmap4/helpfile/Stafford_Creek.kml

And here is the map produced by this demo file:

https://mappingsupport.com/p/gmap4.php?q=https://mappingsupport.com/p/gmap4/helpfile/Stafford_Creek.kml&t=t2

Please feel welcome to copy this KML file and use it as a framework for your own data. Keeping your KML files internally well-organized will speed your workflow and result in fewer mistakes with less frustration. Remember that when you are editing KML files they must be saved with UTF-8 encoding.

Also, this demo file shows how you can:

- Use **different kinds of icons on the same map**
- Use more than one color for tracks/trails

The comments in the file include links to **hundreds of icons** that are available for you to use on your maps.

c. Demo KML file #3 - Combining multiple KML files

You can produce a Gmap4 map that displays data from more than one data file. Being able to produce a map that shows data from several files is an **extremely intriguing** idea with great potential. If you experiment with this feature and make an interesting combo map, please send me a link. I would enjoy seeing how people use this ability. My contact page has an email link: https://mappingsupport.com/p/gmap4_contact.html

Here is a sample map that shows data from three different files:

https://mappingsupport.com/p/gmap4.php?q=https://mappingsupport.com/p/gmap4/helpfile/three_files.kml

Here is the KML file that produced this map:

https://mappingsupport.com/p/gmap4/helpfile/three_files.kml

In order to write a ‘master’ (I made up this word) KML file that refers to an existing **KML file**, then include the following lines in your ‘master’ KML file. Substitute the link to your KML file in place of the link that is underlined in this example:

```
<NetworkLink>
  <!-- (consider adding a comment here to help you stay organized) -->
  <Link>
    <href>https://mappingsupport.com/p/gmap4/helpfile/Teanaway_Peaks.kml</href>
  </Link>
</NetworkLink>
```

In order to write a ‘master’ KML file that refers to an existing **Google MyPlaces map file**, then include the following lines in your ‘master’ KML file. Substitute the ID code for your MyPlaces map in place of the ID code that is underlined in this example:

```
<NetworkLink>
  <!-- (consider adding a comment here to help you stay organized) -->
  <Link>
    <href>https://google.com/maps/d/kml?mid=1OpyF5LzlLnFQPDijp-V9nnDHp1w</href>
  </Link>
</NetworkLink>
```

That’s all there is to it.

The <NetworkLink> ... </NetworkLink> tags need to be inside of <Document><Folder> tags, but they should not be inside of any other tags. See the example KML file.

If you look at the ‘master’ KML data file used in this example then you will see it has three <NetworkLink> tags. Each NetworkLink section refers to a different data file. Here are links that will let you download the three data files:

<https://google.com/maps/d/kml?mid=1OpyF5LzlLnFQPDijp-V9nnDHp1w>

https://mappingsupport.com/p/gmap4/helpfile/County_Line_trail.kml

https://mappingsupport.com/p/gmap4/helpfile/Teanaway_Peaks.kml

If you want to build a KML file that has placemarks for the mountain summits in your area, or coffee shops, or whatever, just copy the “teanaway_peaks.kml” file and substitute your own data.

Remember, even if you do not have your own website you can still do all this stuff. Put your individual KML files online using **Google Sites**. Then write your ‘master’ KML file.

Tip: If you do use Google Sites to host your files then one user reported that the 'master' KML file and the individual KML files all had to be in the same folder on Google Sites in order to avoid seemingly random errors in how the data displayed.

Finally, if you hike in the Washington state Teanaway area, feel welcome to include the Teanaway_Peaks.kml file as a network link on your own maps.

Tip: If you have a KML or KMZ file that is too big for Google to display then break that file into several smaller files and use this technique to display all the smaller files.

- Enjoy -