

How to make a map of your language area

This article outlines one way to make a physical map of your fieldsite without too much effort. If you know how to use specialist GIS software then this is not for you. In my experience this software is either (a) very expensive or (b) incomprehensible and usually (c) both.

I'm also assuming that your fieldsite is in a remote area, otherwise there are probably maps you can find on the Internet.

Prerequisites

- I'm assuming that you have collected some GPS co-ordinates of your language area. In fact I found having a GPS unit to be very useful in general, as it gave me a lot more independence e.g. I could go back and visit villages I'd previously gone to without needing a guide. You can get good ones (e.g. a reconditioned Garmin eTrek Vista C) for under 100 pounds on e-bay, including shipping from America.
- The free software TrailGauge www.trailgauge.co.uk. This is meant for making Ordnance Survey-style hiking maps, but it can also download very nice-looking and accurate contour maps (i.e. height data) from NASA for anywhere in the world.
- A free drawing program such as GIMP www.gimp.org. This is for editing the map drawn by TrailGauge

Procedure

- The first thing is to download your Waypoints and Tracks into the program that comes with your GPS device (e.g. Garmin MapSource)
- Save as a GPX file
- Launch TrailGauge and open the GPX file
- You'll see the Waypoints and Tracks in the Groups folder on the left-hand side. They will be in a subfolder with the name of your GPX file
- Create a new Group, call it 'fieldsite' or whatever
- The next step is to decide which waypoints and tracks you want in your final map. For each waypoint and track, select it in the tree on the left and change the value for 'Group' to be 'fieldsite'. These will now be moved into the 'fieldsite' group. Each Waypoint/Track can only belong to one Group at once.
- Once you've done this, decide on the centre point of your map. You will need the longitude and latitude of the centre point in decimal format (Google Earth has a converter between degrees/minutes and decimals if you need this). Remember if your fieldsite is West of the Greenwich Meridian or South of the equator then you need to use a negative number.
- To get an accurate map, you will need to know the appropriate map Projection (UTM zone) for your part of the world. You can find this out from the latitude/longitude from the converter at <http://home.hiwaay.net/~taylorc/toolbox/geography/geoutm.html>
- Choose Map->Generate Map from the TrailGauge menu
- For Projection, choose WGS 84 with the UTM zone you got from the converter. So for NW Nigeria, for example, this was WGS 84 / UTM zone 31N.
- For Datum, just choose WGS 84

- Enter the centre point of your map, and the total width and height you want
- In the 'other features' box, select the Group you created earlier e.g. 'fieldsite'
- For a nice-looking map keep the physical relief tick boxes ticked.
- 10m contour lines worked fine for me
- You might need to turn off Gridlines. For some reasons this never worked for me and crashed the program
- Press OK and have a cup of tea (or two, depending on how big the map is)
- You should now have a map. To save it as an image file, right-click on the Generated Map in the Maps section of the tree view and select 'Save Map Image'.

Editing the image

- The image produced by TrailGauge tends to be very high-resolution e.g. 20MB for 400 square miles. The Waypoint and track names will be very small and likely much too small to read.
- To get round this, I used a graphical editor (GIMP) to add in the names manually to the image. If you know how to use a different editor, then by all means do this.
- So before making the map, still in TrailGauge, I renamed all the Waypoints and Tracks in the 'fieldsite' Group to single character codes e.g. A, B, C, D, 1, 2, 3 etc. This means they don't take up much room on the map and are easy to write over. Remember to keep track of which code is which town!
- After the image file had been created by TrailGauge, the image file should be resized to the largest filesize you expect to use (e.g. 500K or 1MB). It is best to do the resizing before you add the text. You can resize the image using the free program IrfanView.
- Now open the resized image file in Gimp
- For each waypoint I found the tiny little character code e.g. A and added a single dot with a brush. You can resize the brush to the right size for your map, and you can use different brushes for different kinds of settlement e.g. village/town, native/non-native.
- Next to each town I used the TextTool to add the name of the place. Again you can use different fonts/sizes for different kinds of information
- Finally I added a map key using a Gimp Script (<http://registry.gimp.org/node/59> is a nice script for drawing Shapes)
- You can see the result at <http://www.cicipu.org/maps.html>

Hope this is of some use!

Best wishes,

Stuart