

Gabmap exercise II

Measuring dialect variation in Ivory Coast

USB version

Introduction

In this exercise we will learn how to edit a map. Given the outline of Ivory Coast we will learn how to add locations to the map. Next, we will use this map in Gabmap, a computer program which has been developed by Peter Kleiweg (University of Groningen, Faculty of Arts, Humanities Computing).

1. Loading the outline in GpsPrune

Start GpsPrune and make the window as large as possible. Choose 'File' and subsequently 'Open'. Set 'File of Type' to 'KML files'. Browse to the folder /Gabmap/datasets/, choose 'Ivory Coast.kml' and click on 'Open'.

You will get a map with the outline of Ivory Coast and nine locations. Unfortunately, three locations are missing! It is your task to add the three missing locations. You need to add the following locations with their coordinates:

	Lattitude north-south dimension	Longitude east-west dimension
Komma	7.81	-5.94
Banabo	6.70	-4.29
Korhogo	9.46	-5.63

Choose 'Points' and subsequently 'Enter new coordinates'. You will get the following window:

Enter or paste the coordinates here

Coordinates

Altitude units **Meters** ▼

Waypoint name

OK Cancel

Let us add Komma. In the field 'Coordinates' fill out the coordinates '7.81,-5.94' and in the field Waypoint name fill out the name of the location: 'Komma':

Enter or paste the coordinates here

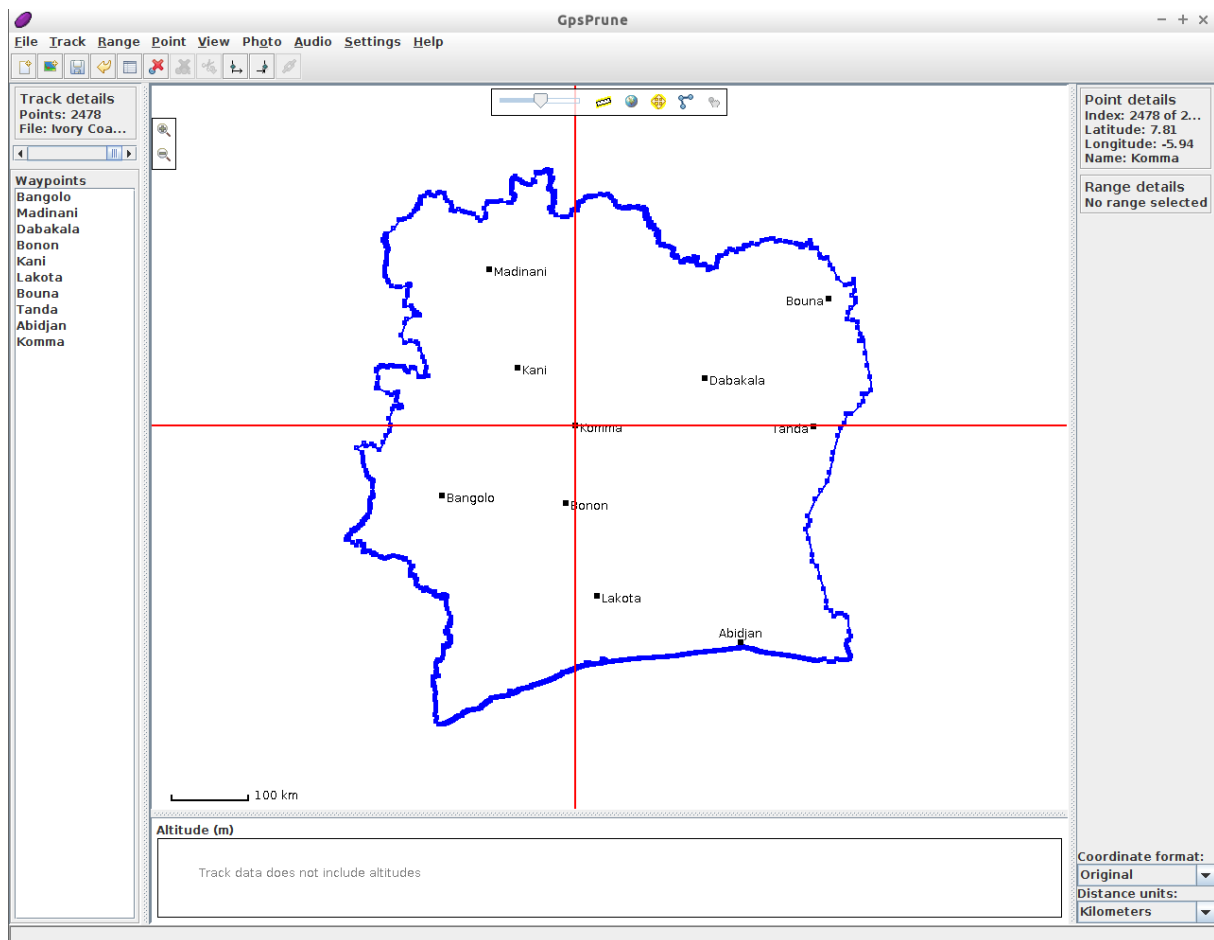
Coordinates

Altitude units **Meters** ▼

Waypoint name

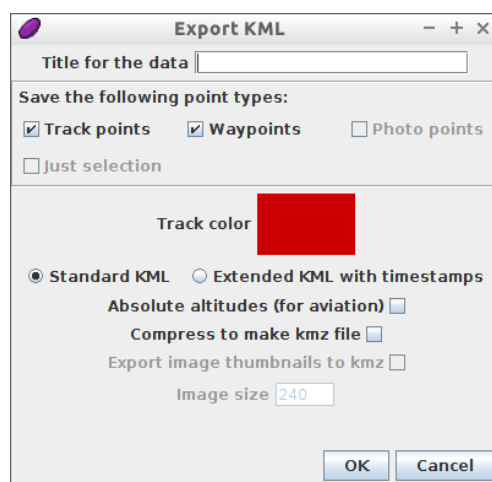
OK Cancel

Now click on OK. You will get the following result:

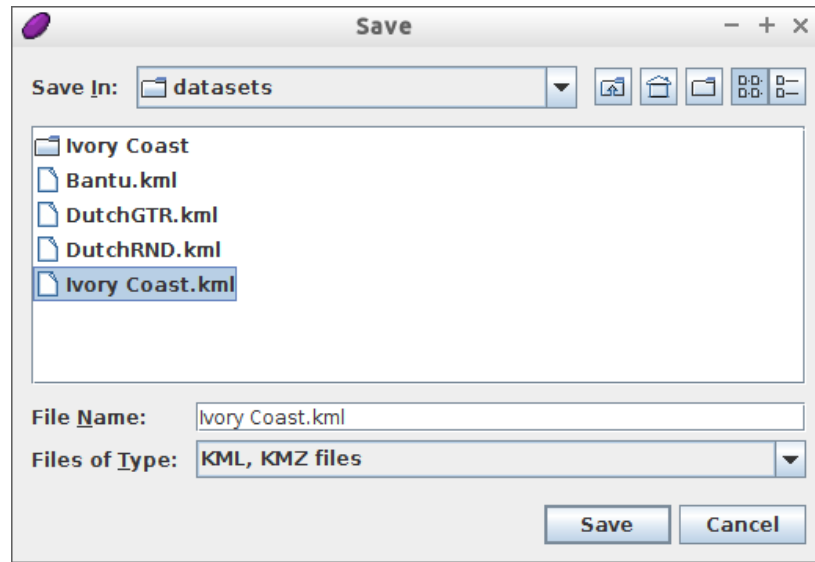


Note that the new location 'Komma' is marked with the big red cross.

Now add Bonabo and Korhoge in a similar way. When you are finished, choose 'File' and 'Export KML'. In the field 'Title for the data' fill out 'Ivory Coast'.



Click on OK, and give a filename. You can replace the current file, so just choose 'Ivory Coast.kml':



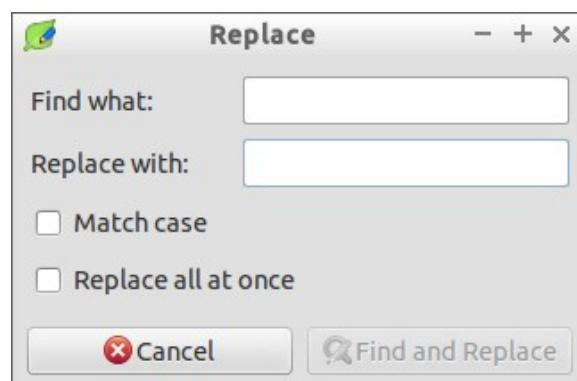
In case you want to keep the original file instead, give a new name, for example 'Ivory Coast2.kml'.

Click on 'Save'.

2. Postprocessing of the .kml filename

Load your .kml file in Leafpad. Leafpad can be found on the desktop, and the .kml file is found in /Gabmap/datasets/.

Choose 'Search' and subsequently 'Replace'. You will get the following window:



In the field 'Find what' fill out '<LineString>' and in the field 'Replace with' fill out '<Polygon><outerBoundaryIs><LinearRing>'. Check 'Replace all at once'!!! Click on OK. Now replace all occurrences of '</LineString>' by '</LinearRing></outerBoundaryIs></Polygon>' in a similar way.

Choose 'File' and subsequently 'Save'. Leave the program by choosing 'File' and next 'Quit'.

3. Visualisation in Gabmap.pdf

Switch to Firefox by clicking on the Firefox tab in the taskbar at the bottom of your screen. Nearly on top of your screen you find 'Your project'. Enter a title under 'Description'. Under 'Map' upload the .kml file that you edited in Sections 1 and 2 (likely 'Ivory Coast.kml') from the folder /Gabmap/datasets/.

Under 'Data' upload a data table file 'Ivory Coast.csv' from the folder /Gabmap/datasets/. This file contains categorical data for seven items: tree, house, car, bird, table, shop, flower. This table is complete fake (!), so do not take the results hereafter seriously. If you want you can view this table in LibreOffice Calc.

Choose under 'Type of data' for 'categorical data'. Choosing this causes an extra option to appear: 'Type of processing'. Keep the default 'binary comparison' which we referred to in the lecture as *relative difference value*. Alternatively you can choose 'Gewichteter Identitätswert' (this is a German term) which we referred to in the lecture as *weighted difference value*.

Click on 'Create project' at the bottom of the screen.

4. Inspecting the map

Choose 'Places' behind 'Index'. You will find two maps. Do the two maps look ok? Can all of the twelve locations be found on the map?

5. Linguistic distances

Click after 'Differences' on 'statistics and difference maps'. You get a page which shows several statistics (Cronbach's Alpha and Local incoherence).

Below those two statistics you find two options for downloading the distance tables. The second option is most useful:

download differences (table format)

Click on this option. The browser shows you a table. Rightclick on the table and choose 'Save Page As...' . Store the file on your USB stick. You can view this table in LibreOffice (recommended!)

When scrolling down a bit you find a bar graph, and when scrolling down even further, you will find two maps, in which the twelve locations are connected to each other by lines. Locations which are similar (i.e. which have small pronunciation distances) are connected by darker lines, and linguistically distant locations are connected by lighter lines. In the first map only neighbouring locations are connected, in the second map geographically more distant locations are connected by lines too.