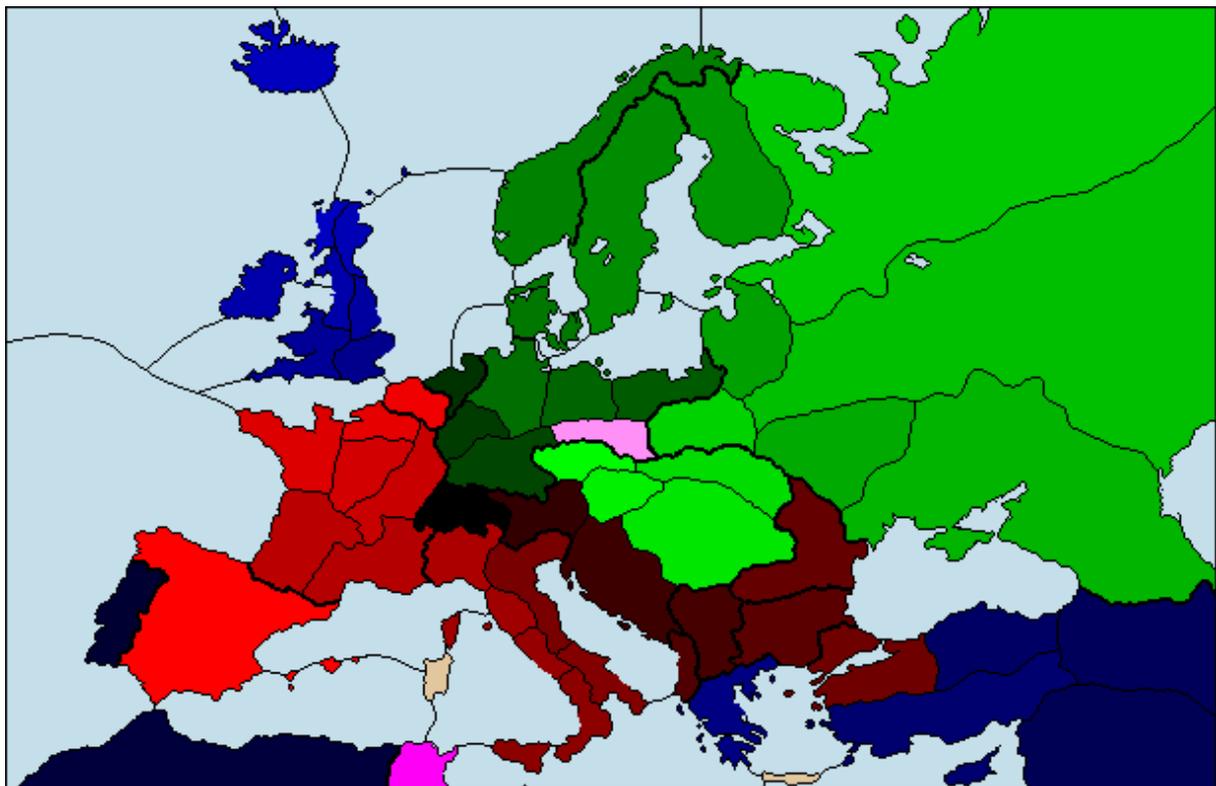
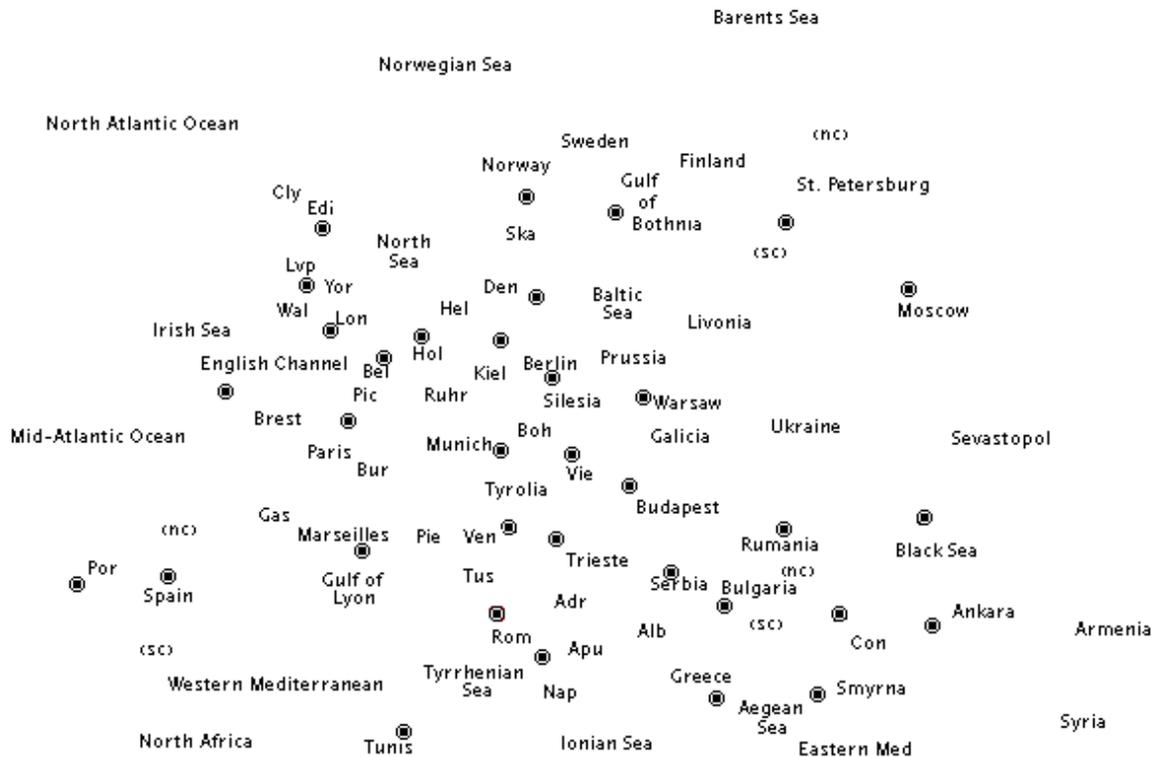


Thanks to vDiplomacy's features, variants can be developed without any knowledge of programming. This guide will help you understand the process of variant creation. The guide teaches you how to implement a variant on vDiplomacy that already exists in your head. Coming up with new variant ideas, and balancing them, is a different matter entirely.

Before we start to create our own variant, it is instructive to take a look at how other variants are composed. Click on the *Variants* page and click on any variant - for example, Classic. Then click on *View/Download code*. You will now see a bunch of variant files. Some of them are useful to look at first. These are *smallmap*, *smallmapnames*, *map* and *mapnames*, all png files and all with the tag */resources/* in front of them. Take, for example, a look at the *smallmap* and *smallmapnames* files.





The *smallmap* file is just the small map of the Classic variant, but with a few modifications. Firstly, all land and coastal territories have a uniquely different color. That is because the computer uses this file to determine which pixel belongs to which territory. For example, you can see that the island of Cyprus is colored exactly the same as the province of Smyrna. This is how the computer knows to paint Cyprus in the color of whatever country occupies Smyrna. Secondly, all the names and supply center symbols are missing on the *smallmap* file. However, the *smallmapnames* file fits perfectly on top of the *smallmap* file and contains all names and supply center symbols.

The *map* and *mapnames* file are very similar, just for the large map.

Some variants only have a *map* and *mapnames* file. These are typically large variants, such as World War IV. The reason for this is that the *smallmap* and *smallmapnames* files have a maximum size of 750x750 pixels. It would be very ugly to squeeze all territories into 750x750 pixels for the larger maps. Large variants have a large map that one can scroll through instead of a small map.

The first step in the creation of your variant is to create either a *smallmap* and *smallmapnames* file, or a *map* and *mapnames* file. If you think your variant will be too large for a small map, you start with the *map* and *mapnames* file. If you think your variant can use a small map, you can start with either, but I recommend starting with the *smallmap* and *smallmapnames* files.

Creating these files will be a lot of work. I recommend using the program *paint.net* in order to create them and will outline below how to use it.

If you are in a paint.net file, in the lower right corner you can create additional layers. Create two layers. Call one layer 'map' and another layer 'names'. Paint all of the 'names' layer white (color code: FFFFFFFF). Click on the 'names' layer, click on *Properties* (in the lower right of the lower right box), and click on *Multiplicative*. Both maps will now be shown on top of each other. Each time you write names or make supply center symbols, make sure you have selected the 'names' layer. Any other time, make sure you have selected the 'map' layer.

You can find help on google on the finer details of working with paint.net. I will give some general recommendations specifically for using it for map creation:

- Make sure that anti-aliasing is ALWAYS set OFF.
- Double-check that the color of every land or coast territory is uniquely different from the color of any other land or coast territory.
- One pixel is sufficiently thick for territory borders. You can use two pixels too, but I recommend to not use more.
- Unit icons will be added later on. Make sure that there is room for them in the territories you make, next to the names and supply center symbols.

Once you are done, you should have made a backup of your file. Then delete the 'names' layer and save your image as a png file; name it (small)map.png. Now go back and delete the 'map' layer, save your image as a png file, and name it (small)mapnames.png. You now have your two png files.

The next step in the process is to contact Oli. Tell him that you intend to create a new variant, tell him the name that you want it to have and tell him whether or not your variant has a smallmap. Oli will create the variant and give you the rights to alter it. Keep in mind, though, that Oli's time is limited, so he may not always be immediately available. Once Oli has done his work, you will see a new tab in the top of the site emerging, next to the *Variants* tab. This new tab is called *DevTools*. Click on that tab and choose your variant. You are now in the editing environment of your variant.

There are a few things that need to happen first:

- Go to the *Files* tab. Upload both of the png files that you have made, and for both, choose */resources/* as the directory. Note that you can always change the files later by deleting them and uploading new ones.
- Go to the *Base* tab and in the menu below, add all the countries that you want for your variant.

Before we go to the next step, it is again instructive to look at other variants first. Go to the *Variants* page and click on any variant - for example, Classic. Then click on *Map info*. You will now see the following:

- For Land and Coast provinces, it is important that no more than one unit is on a pixel that is in the color of that territory.
- Provinces that have multiple coasts need to have extra territories added to represent their different coasts. For example, *Spain*, *Spain (south coast)* and *Spain (north coast)* are treated as different territories with different connections here.

Once you are done with this, there are still some things that need to happen:

- Go to the *Units* tab. Here, add all the starting units of the countries.
- Go to the *Colors* tab. Here, determine all the colors of the countries.

In case your variant requires both a large map and a small map, you will need to create extra png files for that. To help you with this, there is a very handy tool in the editing environment. Click on *MapResize*, upload your (small)map file, choose a resize factor, and click on *Upload File*. You will get a lot of new files, some of which are handy to base your other map sizes on.

Every variant needs an Interactive Map, too. It is again instructive to go to the *Variants* page, click on any variant and click on *View/Download code*. Click on */interactiveMap/IA_(small)map.png*. You will see the interactive map. It only differs from the usual (small)map in that the sea territories are uniquely differently colored, too. The computer uses this map to determine what pixels correspond to which territory. You will need to make an interactive map like this. The *MapResize* tool is useful for this, too, or you can add the new colors yourself. Once you have an interactive map, name it *IA_smallmap.png* or, if your variants does not have a small map, name it *IA_map.png*. Upload it under the *Files* tab in the */interactiveMap/* directory.

Once you are satisfied with your variant, contact Oli and let him know that you'd like to see it released!

There are more advanced options possible in variant creation that this guide hasn't covered. Hopefully, though, this guide will have provided you with sufficient base knowledge to be able to create a variant.