

# Realpolitik Variants

by Don Hessong and Jim Van Verth

## Introduction

Variants are games based on Diplomacy with different maps or slightly modified rules or both. Realpolitik has the capability of running variants. Many variants are already included with the package, but Realpolitik also has a "plug-in" scheme that allows anyone to add new variants. If you know of a map variant that you want to run on Realpolitik, you can probably do it. It's not that hard.

## Variant Creation

You make your own variant by creating the necessary files and placing them in the correct sub-folder. Most of these files are text files or common graphic file formats. One file is created by the Region Tool which is an application that's included with the Realpolitik package. This manual describes the individual elements you need to create a variant. However, you don't necessarily need to create these elements from scratch. If your variant is based on a map that already exists for another variant or the standard game, it's a real snap to make it. In many cases you will only need to copy the folder (including its contents) of a variant that already exist, then change the name of the folder to the new variant and make minor changes to some of the support files within that folder.

Inside the Realpolitik folder there is a folder called "Variant Files", inside of which there is a folder for each Realpolitik variant. In each of the variant folders there is a group of files that Realpolitik needs to run that variant – even the standard Diplomacy game has a set of these files inside the "Standard" folder. Some variants make use of the files in another variant's folder. So it is very important that you do not change the names of the "Variant Files" folder, or the names of any of the variant folders inside it, or the names of any of the files inside the variant folders. It is also important that you not move these files or sub-folders to different locations. If you do these things some of the variants may stop working, including the standard game.

## The Variant Folder

As mentioned, the folder for a particular variant resides inside the "Variant Files" folder. We'll use the name "Variant" as the example throughout this manual. The name of a variant's folder can be named anything you like, but for clarity the variant folder is usually named the same name as the variant itself. Changing the names of variant folders could adversely affect other variants that share files.

The following is a description of each type of file in the variant folder and the files' contents. With one exception, each of these files needs to be edited by you the variant creator, unless the exact file needed already exists (from another variant already made). Use the previously existing Standard files as an example to help you figure things out. And be sure to use the correct naming conventions as shown in the following.

Note that for all the text files, any line starting with # is a comment and is ignored. The comments in the release variants are there for clarity, but you can put any notes you want after a #. Also, tabs and extra spaces are ignored.

## Variant.cnt

This should be a text file. This file is used to define the names of the countries in the variant and other information specific to each country.

Line by line, the .cnt file consists of:

*Version:* For now, this should be 1. If the file format changes in a future version of Realpolitik, this will be used to distinguish between the old and new formats.

*Number of Countries:* This is the number of countries in the variant.

*Country Info:* There should be one line for each country. Each line should consist of:

*<name> <adjective> <capital initial> <pattern> <color>*

where:

*name* = The name of the country (e.g. France)

*adjective* = The country adjective (e.g. French)

*capital initial* = The single capital initial character for that country (e.g. F)

*pattern* = The name of the pattern to be used for filling supply center regions.  
Available patterns are: Random, ThinDiag, Hash, Gray, Quilt, Sparse, Diag, ThinHoriz, Horiz, Vert, Stripe and Flood

*color* = The color to be used for units, orders and supply centers. Available colors are: Black, Blue, Brown, Charcoal, Crimson, Cyan, Forest, Green, Magenta, Navy, Olive, Orange, Purple, Red, Tan, Teal, White and Yellow

Note that the initial is used to pick the appropriate icon so if an icon with that initial does not exist, you'll have to create one in either the Icons file (MacOS) or the Icons folder (Win32).

## **Variant.gam**

This should be a text file. This file defines the home supply centers for each country, the starting positions and types of units, the year and season of the game's first move and other items. Note that this is the same format used by Realpolitik for its saved game (.dpy) files.

Line by line, the .gam file consists of:

*Version:* For now this should be 1. If the file format changes in a future version of Realpolitik, this will be used to distinguish between the old and new formats.

*Game Name:* What you type here is what will appear in the title bar for the map window. This will also be the default name for any saved game file of the variant. However, you can override the default by naming the game file something else in the "save dialog". Whenever the game is opened after that point, the new file name will appear in the title bar for the map window. Note that renaming the file on your computer's desktop will not affect the name in the title bar.

*Variant:* This is the variant's name. This must match exactly the name of the variant as listed in the .var file.

*Season and Year:* This gives the season and year for the game's first turn.

*Number Adjust:* The number of adjustments expected. In general this should only be 0 except in a Winter phase. It equals the total number of builds and removals expected for all countries. This can be used in variants where the first action of the game is to build units.

*Number of Countries:* Number of countries in the game.

*Country Info:* There should be one group of these per country. The groups need to be listed in the same order as the countries in the Variant.cnt file. The group consists of three lines:

*Adjustment:* This gives the number of builds/removals. It should be positive for builds and negative for removals. This is used in saved games and in variants where the first action of the game is to build or remove units (see Chaos for an

example of the latter).

*Supply Centers*: This is a series of 3-character space abbreviations, separated by spaces and representing the supply centers owned by this country at the beginning of the game.

*Units*: This is a series of unit types and space abbreviations, separated by spaces. It represents the units owned by this country and the provinces they start in at the beginning of the game.

*Number of Dislodges*: The total number of dislodged units. For a new variant, this should be 0, unless you want to handle dislodges as the first move of the game.

*Dislodges*: In a new variant, there are generally no dislodges. However, if there are dislodges, there should be a string of the following format per dislodge.

`<country name> <unitID> <spaceID> [<coast>] <retreatspaces>`

where UnitID is 'A' or 'F'. The retreat spaces are just a string of 3-character spaceIDs for those spaces the unit can retreat to.

*History*: Lines following this store history information for saved games. For a new variant, this should be -1. Information on history data will included in a later version of this manual. However, most variant creators should be able to get by without this section.

## Variant.map

This should be a text file. This file defines the layout of the map. It tells Realpolitik which spaces are adjacent to which and where armies and fleets can move. This is the hardest file for the variant creator to make - actually it's not hard - it's tedious. But if your variant is based on a map that's already used by another variant, then you're home free. This file follows a very structured syntax. It is the same format used by the Diplomacy judges (servers used to run games over the internet automatically). So if you download a judge .map file, you should be able to plug it right into Realpolitik. Besides being used by Realpolitik, the Region Tool uses this file to create the Variant.rgn file.

Tip: When working with this file, you may find it useful to use a mono-spaced font so that everything lines up nice and straight.

This file consists of three sections separated by -1 on a line by itself.

The first section defines the spaces on the map. For each region there should be one line consisting of

`<name>, <letter(s)> <abbreviations>`

where

*name* = The full name of the region (e.g. Norway)

*letter* = The (generally) single letter that is used to define what type of region it is - where:

l = land

w = water. This letter can also be appended to land provinces, or home or neutral supply centers, to indicate a coastal space that can be used by fleets to convoy (for example, Balears in Ancient Med), e.g. lw or Aw or xw

<capital initial> = home supply center (assumed to be land) for a given power using the capital initial defined for that power in the Variant.cnt file

x = supply center that starts the game neutral (assumed to be land)

v = ice (used in some rule variants, for example Loeb9)

*abbreviations* = The accepted abbreviations for the region, separated by single spaces if there is more than one (e.g. nwy nor norw)

Note there can be any number of spaces between the comma and the initial, but only one space between the initial and the abbreviations.

The second section defines space adjacencies. Each line consists of either a set of adjacencies for a fleet in a space or a set of adjacencies for an army in a space in the following format:

*<abbreviation>-<type of adjacency>: <adjacencies>*

where:

*abbreviation* = The accepted abbreviation, as defined in the first section of this file, for the region whose adjacencies are being defined.

*type of adjacency* = determines which type of unit is involved in defining the adjacency  
where:

mv = adjacencies only for armies in that space

xc = adjacencies only for fleets in that space

nc, sc, ec, wc = adjacencies for specific coasts in bi-coastal spaces (it's assumed that the unit involved is a fleet)

mx = adjacencies for armies moving with one less support (used in some rule variants, for example Loeb9)

*adjacencies* = The accepted abbreviations, as defined in the first section of this file, separated by single spaces, for all the regions adjacent to the region whose adjacencies are being defined (only considering the type of unit involved). For bi-coastal spaces, /nc, /sc, /ec, /wc is added to the abbreviation to define specifically which coast a fleet can move to.

Note that the "-" between the abbreviation and the type of adjacency must be there, and that there is a space between the colon and the first adjacency.

The last section is the supply center order for summary report. This is not used by Realpolitik.

## **Variant.rgn**

This should be a text file. This file tells Realpolitik where all the spaces are on the map, so that when you click in Berlin, Realpolitik knows that that was Berlin. The file consists of a list of the spaces and a series of numbers that defines the spaces' physical locations on the map. They are stored in scanline format - think of drawing a set of lines that fill a polygon. This file is not made by you, the variant creator. The Region Tool creates this file for you. In general, it's not a good idea to edit the contents of this file.

Just for your information, line by line, the Variant.rgn file consists of:

Variant <name> (ignored by Realpolitik - only there for information)

For each space on the map, in order of the Variant.map file:

# <spacename> (ignored by Realpolitik - only there for information)

Unit position <x, y> location of unit in this space

Name position <x, y> location of name label in this space

Region Data - description of region in the following format:

<# *scanlines*> number of horizontal scanlines in region

<*x1*> <*y1*> <*length1*> scanline 1

<*x2*> <*y2*> <*length2*> scanline 2

.

.

.

<*xn*> <*yn*> <*lengthn*> scanline n

If the space has two coasts, then there are additional location and region data sections for coast1 and coast2.

### **Variant.txt**

This is the text displayed in the Info window for the variant. You can use this file to convey any information about the variant you wish - such as rules, design notes, web page, etc.

The info window will do line wrapping for you, so you can just end paragraphs with two carriage returns. There is, however, a 2048 character limit for a given paragraph. If you wish to do your own line-wrapping, the window is 78 characters wide, so don't exceed that in your lines or you will get some very odd formatting.

### **About the Graphics Files**

Care must be taken to make sure the graphics files all represent the identical map. The borders of the spaces on the various maps should line up perfectly. All three images need to be the same size at the outer edges to ensure this alignment. The best approach is to start with a base map, then copy the file to use to create the other two maps, modifying them accordingly, but taking care not to change the boundaries between the spaces or the coast lines or the outer dimensions of the map.

### **Variant.pct or Variant.bmp**

This is a graphics file in the proper graphics format. For Windows it can be an 8-bit (256 color) BMP or compressed BMP. For Macintosh it can be 8-bit BMP, compressed BMP or PICT. The PICT can be a vector-based PICT (e.g. through Freehand) or a bitmap-based PICT (e.g. through Photoshop). You can use any graphics editing software to create this file, as long as it can save it in the correct format.

This is the physical map that you see when you are using Realpolitik. Besides being used by Realpolitik, the Region Tool uses this file to help you create the Variant.rgn file.

The 256-color palette you use must include the colors necessary to draw the icons, orders, and supply centers. The easiest way to do this is to use the standard Macintosh 256-color system palette on the Mac side and the Windows standard 256-color palette on the Windows side. To guarantee this, save the file as an 8-bit indexed image — most graphics programs will allow you to select the appropriate system palette. It will be very clear if you haven't done this correctly — the map will still display in Realpolitik, but the colors will be wrong in 256-color mode.

If the file does not contain a 256-color palette — e.g. if you are using a 16-bit or 24-bit PICT, or a PICT in vector format — Realpolitik will use the standard Macintosh system palette. Due to this, you may see some dithering effects.

### **VariantBW.pct or VariantBW.bmp**

This is a graphics file in the proper graphics format. For Windows it can be an 8-bit (256 color) BMP or compressed BMP. For Macintosh it can be 8-bit BMP, compressed BMP or PICT. The PICT can be a vector-based PICT (e.g. through Freehand) or a bitmap-based PICT (e.g. through Photoshop). You can use any graphics editing software to create this file, as long as it can save it in the correct format.

This is the physical map that you see when you are using Realpolitik if you have no color. This file is used as the map when printing on a black and white printer.

This file should be monochrome (black and white).

### **Variant-Borders.pct or Variant-Borders.bmp**

This is a graphics file in the proper graphics format. For Windows it can be an 8-bit (256 color) BMP or compressed BMP. For Macintosh it can be 8-bit BMP, compressed BMP or PICT. The PICT can be a vector-based PICT (e.g. through Freehand) or a bitmap-based PICT (e.g. through Photoshop). You can use any graphics editing software to create this file, as long as it can save it in the correct format.

The Region Tool uses this file to help you create the Variant.rgn file. Once this has been accomplished, this file may be discarded; Realpolitik doesn't actually use this file.

For best results, this file should be monochrome.

### **Variant.var**

This should be a text file. This file is the head honcho of all the variant support files, and pulls everything together for a given variant. It defines what the other files are and in some cases where they are located (if not in the variant's own folder). This is the one file that will always be unique to a given variant.

Line by line, the Variant.var file consists of:

*Version:* For now this should be 1. If the file format changes in a future version of Realpolitik, this will be used to distinguish between the old and new formats.

*Name:* The name of the variant. This is used by Realpolitik as the name displayed for the variant in the "Variants" menu.

*MapData:* This tells Realpolitik which Variant.map file is the one to use for this variant.

*Countries:* This tells Realpolitik which Variant.cnt file is the one to use for this variant.

*Game:* This tells Realpolitik which Variant.gam file is the one to use for this variant.

*BWMap:* This tells Realpolitik which VariantBW.{pct,bmp} file is the one to use for this variant. Do not include the file extension (.pct, .pic, or .bmp) in this file name. Realpolitik will append the appropriate one for the operating system.

*ColorMap:* This tells Realpolitik which Variant.{pct,bmp} file is the one to use for this variant. Do not include the file extension (.pct, .pic, or .bmp) in this file name. Realpolitik will append the appropriate one for the operating system.

*Regions:* This tells Realpolitik which Variant.rgn file is the one to use for this variant.

*Info:* This tells Realpolitik which Variant.txt file is the one to use for this variant.

*Build:* This tells Realpolitik which build rule to use for this variant. It can be one of three options:

Standard - a player may only build on her vacant home centers

Aberration - a player may build on any supply center he owns which is vacant as long as he still owns at least one of his original home centers

Chaos - a player may build on any supply center that she owns that is vacant

*Centers:* This is an integer that tells Realpolitik how many supply centers are needed to win the game for the variant. If this is 0, then the number of supply centers needed to win is assumed to be a simple majority. This is calculated by taking the total number of supply centers, divided by two, rounded down, plus one. So for a variant with 35 supply centers: 35 divided by 2 is 17.5, rounded down is 17, plus one is 18.

*Flags:* This should be 0. It will be used for future variant extensions.

## **Making the Variant.var File Work With Shared Files**

As you can see, the information on most of the lines of the Variant.var file is generally the name of another file which Realpolitik uses to run the variant. Assuming that the referenced file is in the same variant folder as the Variant.var file nothing more is needed. But the Variant.var file can also reference files that are in other folders and are used by different variants (and therefore have different names).

For example, the variant "1898" uses the same map as the standard game, but each country starts with only one unit. The only files that are different than the standard game are the 1898.var, the 1898.gam and the 1898.txt files. The 1898.var file must be located in the 1898 folder. All the other files could be located in any other folder. But in the case of the 1898.gam and 1898.txt files, it doesn't really make sense to place it anywhere other than the 1898 folder.

So if you were creating 1898 from scratch, the first approach you could use is to make copies of all the files from the Standard folder, place them in the 1898 folder, and change all their names from "Standard.xxx" to "1898.xxx". Then you would open the 1898.var file (which used to be the Standard.var file) and replace every occurrence of "Standard" with "1898". You would then open the 1898.gam file (which used to be the Standard.gam file) and edit it appropriately, and the same for the 1898.txt file.

Or you could use another approach. Rather than copying all those "Standard" files to the 1898 folder, you could use the 1898.var file to refer to the needed files in their locations in the Standard folder. For example, the MapData line in the 1898.var file would read:

MapData: Standard/Standard.map

The "Standard" before the slash is telling Realpolitik to look in the Standard folder. The "Standard.map" after the slash is telling Realpolitik what file to use. But even using this approach, the 1898.var file still needs to be in the 1898 folder, and 1898.gam and 1898.txt files might as well be in the 1898 folder.

Sharing files is generally a good idea. First of all, if there is an error in a file, such as a Variant.map file which is used by many variants, it can be fixed in one place. Secondly, it saves space.

## **The Region Tool**

The Region Tool is a program included with Realpolitik that you use to create the Variant.rgn file, which is used by Realpolitik to know where you are when you click on the map. To use this, you need a Variant.map file, a Variant.pct/Variant.bmp file and a Variant-Borders.pct/Variant-Borders.bmp file and they all need to be located in the same folder.

The Variant-Borders.pct/bmp file will be used in the background to show the Region Tool where the borders are for each space, and the Variant.pct/bmp file will be used to show you what the map will look like in Realpolitik as you work. The Variant-Borders.pct/bmp file has to be an exact replica of the Variant.pct/bmp file but with all the color and extra stuff removed. In other words, the Variant-Borders.pct/bmp file should show nothing but the borders and these borders have to line up exactly with the borders of the Variant.pct/bmp file. You also need to make sure there are no gaps in your borders or

the Region Tool will treat two spaces connected by a gap, as one space. Be sure that the spaces in the Variant-Borders.pct/bmp file have a white background or fill. If you use "no fill" as opposed to a white fill, The Region Tool will not be able to scan the spaces. If you have bi-coastal spaces, you will need to draw a line down the middle of the space in the Variant-Borders.pct/bmp file to represent the split between the two coastal areas for fleet placement. The Region Tool will automatically join the two coastal areas to create the entire space. Note that the line between the two coastal areas must be only one pixel wide for this to work properly.

When you open the Region Tool, you will get the "open file" dialog box. Find and open the Variant.map file. The two graphic files will be opened by the Region Tool automatically assuming they are in their correct location which is in the same folder as the Variant.map file.

In the lower left-hand corner of the window, it will ask you to click on a space. Click anywhere within the correct space on the map to identify it. The space will highlight briefly and then the lower left-hand corner will ask you to click on the location where you want the space's name to be. A label with the name will appear showing the permanent location of the name. Then the left-hand corner will ask you to click on the location where you want the unit in that space to be. A unit will appear showing the permanent location for the unit in that space. It will then ask you to click on the next space. Take advantage of the undo feature if you click in the wrong space or if you don't like your initial placement of units or names.

When you are done with all the spaces, the text box will clear, and you will be able to save the Variant.rgn file. Remember to place it in the same variant folder with the rest of the files for that variant.

## Icons

You can modify unit icons to your heart's content. The icons are the standard icon file formats used by the respective computer platforms. Windows uses files with the .ico extension and Macs use files with icon resources contained within. You can edit these icons with the normal icon editing tools widely available for each platform.

There are two ways to modify icons in Realpolitik.

*Global icons:* Realpolitik comes with a set of icons that is used for any variant that does not have specific icons within the variant's folder (including the Standard game). On the Mac the global "Icons" file must be located in the Realpolitik folder itself. The icons contained this file must keep the same resource names as in the original. On the PC the global "Icon Files" folder must also be located in the Realpolitik folder. Similarly, the files in this folder must keep the same names.

Global icons consist of three parts: a color version for each unit type (e.g. "RedArmy", "RedFleet", "BlueArmy", etc.), a black and white (or patterned) version for each unit (e.g. "RandomArmy", "RandomFleet", "QuiltArmy", etc.), and a letter that can be stamped on either of the previous two. Realpolitik combines these to create the proper icon for a given set of parameters that apply to countries differently in different variants. For example, since England is blue in Standard the icons will be blue and have the letter "E" stamped on them. Since Japan is green in Colonial the icons will be green and have the letter "J" stamped on them. The patterned icons are similarly used for black and white displays and printers. Considering all the possible combinations of colors and letters (not to mention patterns) this allows Realpolitik to store a much smaller number of actual icons. When combining icon layers to make the final unit icon, Realpolitik uses the "color", "pattern" and "initial" information from the Variant.cnt file.

You may edit the supplied global icons. Note that the letter icons are optional, so if you wish you may delete them if they don't fit with your new icons (however, the Chaos variant may be a little confusing). Of course it's always a good idea to work on copies of the icon files until you are sure you like the results.

*Variant specific icons:* If you have icons that you want to use only for a certain variant, you would place those icon files in the sub-folder for that variant.

For Macs, the file containing the icon resources would be named "Icons". The icon resources themselves all have to be named correctly as above: "RedArmy", "RedFleet", "BlueArmy", etc. The colors used must correspond to the colors defined for the countries in the Variant.cnt file. If you wish the icons to appear



under black and white environments (i.e. on a black and white printer, or a grayscale screen), you may want to consider making icons for the appropriate patterns as well, however, they aren't required.. The letter icons aren't needed unless you wish to make a variant with more countries than colors — for example, Chaos.

For PCs all the icon files (one file for each icon) would be contained within a folder named "Icon Files". This folder is placed in the sub-folder for that variant. The individual icon files should be named "RedArmy.ico", "RedFleet.ico", "BlueArmy.ico", etc. Again, the colors and patterns (if any) used must correspond to the colors defined for the countries in the Variant.cnt file. Letters, as before, are optional.

## Testing Your Variant

If you're lucky your variant is based on a Variant.map file that already exists. Otherwise you are faced with the prospect of creating this file by hand. As mentioned, not a difficult process (once you understand the syntax), but still a tedious one and you are likely to make errors. Once you have completed your Variant.map file, you will want to test it, but this can be a daunting task considering all the possible moves to adjacent spaces for each space on the map. But there is a somewhat painless way to test the Variant.map file. It's worth the time spent, especially if you did create the file by hand.

Once your variant is done, start a game in RP. Then use the map edit mode to remove all the units of all but one country. Also remove the ownership of all the supply centers except the ones owned by the remaining country. Then take one army from the remaining country and move it around the whole board, one space at a time, testing all the adjacent spaces in both directions for each space. Then do the same thing with a fleet. You should even make sure that fleets can not move into adjacent land-locked spaces nor armies into adjacent sea spaces.

Once all the home supply centers of the country being "played" are occupied with idle units, you won't even have to concern yourself with doing builds, so the testing progresses fairly quickly. This could take an hour or two, but that's not too bad considering the benefit of finding any errors.

The only thing that does not get checked using this method is unintentional distant adjacencies. For example, if the Black Sea were accidentally made adjacent to Rome then you won't find such an error. But checking all those possible combinations for something that's not likely to happen anyway, goes beyond the point of diminishing returns.

If your variant is not based on a Variant.map file that already exists, you still don't necessarily have to create this file by hand. David Norman has created a software tool (for Windows machines only) which can help. MapMaker is a program that allows you to graphically lay out your variant's map. It will then output its data to a file in the correct syntax for use with Realpolitik (and the judges). I have no experience with this tool but I will assume that it works correctly and will therefore save you much of the tedium and errors of making the Variant.map file by hand. But you may have to do some small amount of manual tweaking to make sure there are no extraneous headers and so forth. Remember to use the variant files that come with Realpolitik as a guide. The MapMaker homepage is:

<http://www.ellought.demon.co.uk/mapmaker.htm>