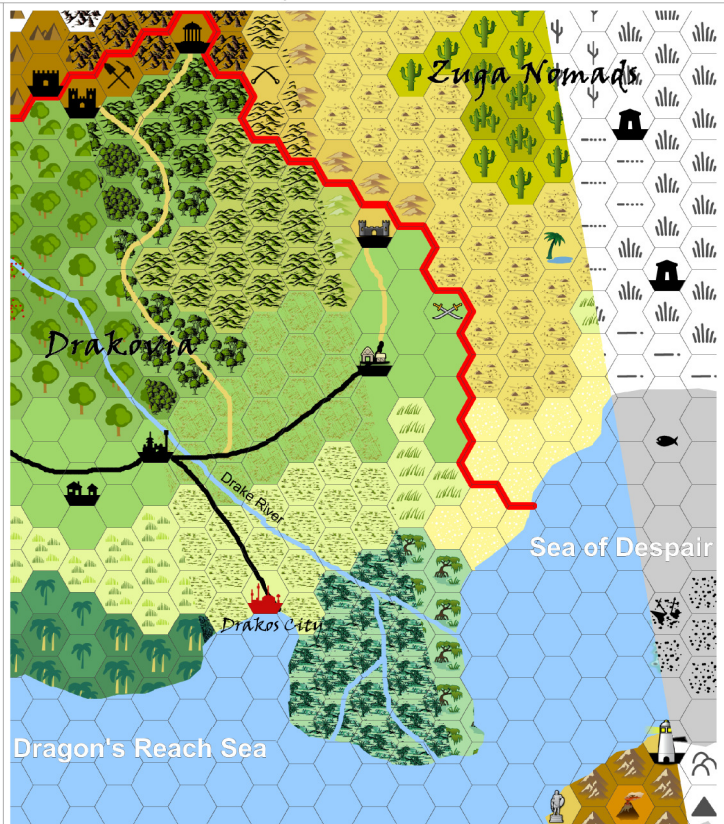


# Hexographer Pro Quickstart

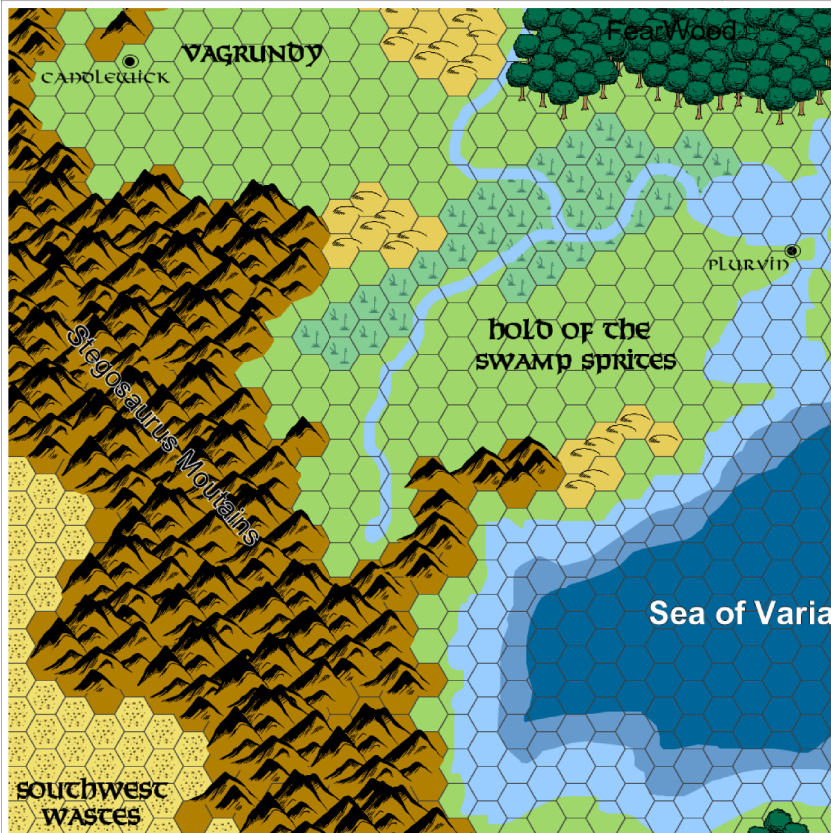
Quickstart by Michael Tassano and Joe Wetzel



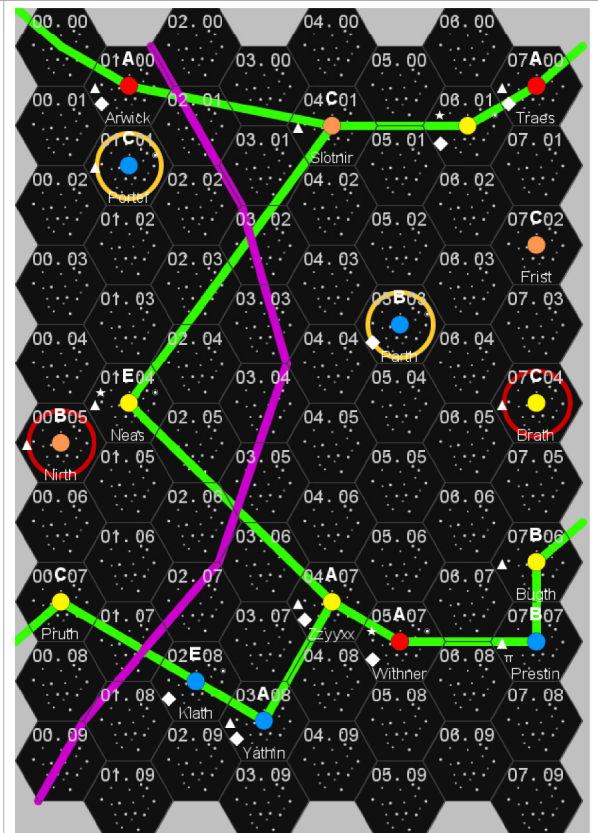
A map created in Hexographer using the default icons and settings.



The same map with four different icon sets. (See the Hexographer website's "Extra Icon Sets" page.)



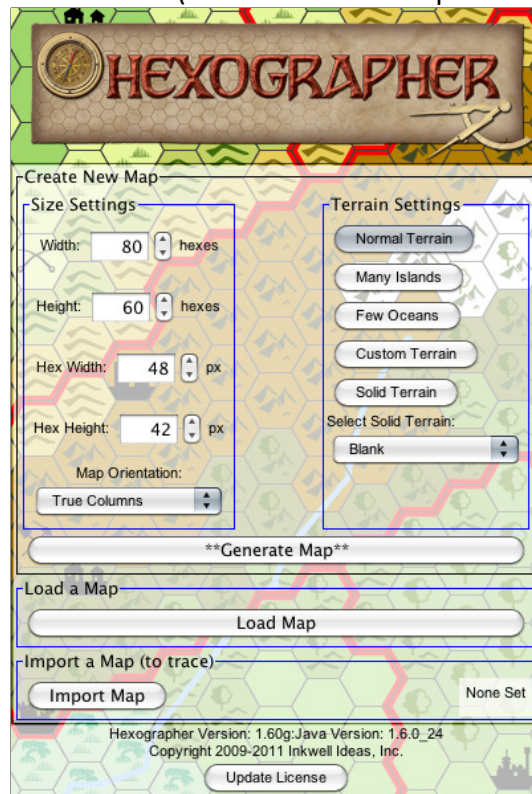
A "1<sup>st</sup> edition World" map.



A subsector star-map.

## Getting Started

Go to [http://www.inkwellideas.com/hexographer\\_releases](http://www.inkwellideas.com/hexographer_releases) to download the latest version of Hexographer. Installation instructions and screenshots are shown there. The inside back cover of this booklet has a license code. Once installed, you should see a window (known as the “setup” or “splash” screen) like this:



The first thing you'll want to do is click the **Update License** button. A prompt will appear asking for your license number. *Again, it should be on the inside back cover of this booklet.* Enter the number, click “OK” and now you've got a Pro version of the software!

The quickest way to start a map is to just click the **Generate Map** button. This will create a random map based on the default **Normal Terrain** settings.

However if you'd like to tweak the map-to-be, you can alter the size with the controls in the upper left. You can change the map's number of hexes wide or high and you can change the width and height (in pixels) of each individual hex using the matching control. *Note: You can always easily change the width and height of each hex as these just control the “view” of the map, not the model of the map.* Adding/removing hexes is also possible in the pro version. The **Map Orientation** selector sets the map to “true rows” or “true columns.”

The upper right controls dictate what values are used for creating a map. **Normal Terrain** results in a map that is appropriate for a region/portion of a continent. **Many Islands** will create a map that is exactly that. **Few Oceans** will result in a map that is mostly land with just a few smaller areas of water. **Custom Terrain** will open a new window with a matrix of values. The window includes an **Instructions** button with detailed info. The window also has a **Generate Terrain** button to create a map or you may close the window and click the **Generate Map** button on the screen above as long as the **Custom Terrain** button is selected to use your custom settings. **Solid Terrain** creates a map with all hexes set to the terrain chosen in the adjacent list. To create a blank map, choose **Solid Terrain**, set the terrain to “Blank” and then click **Generate Map**.

**Load Map** will load a map in Hexographer's “.hxm” file format. **Import Map** allows you to trace a PNG image (for example, another version of the map.) See pages 18 & 19 for details.

### Install/Uninstall Note

Hexographer is built on top of Java. Java installs on your computer and Hexographer is installed within Java's control on your computer. To Uninstall Hexographer or add/fix shortcuts to it, go to a command prompt and type: **javaws -viewer** (Note the space before the dash, but none after it.)



## General Map Creation Process

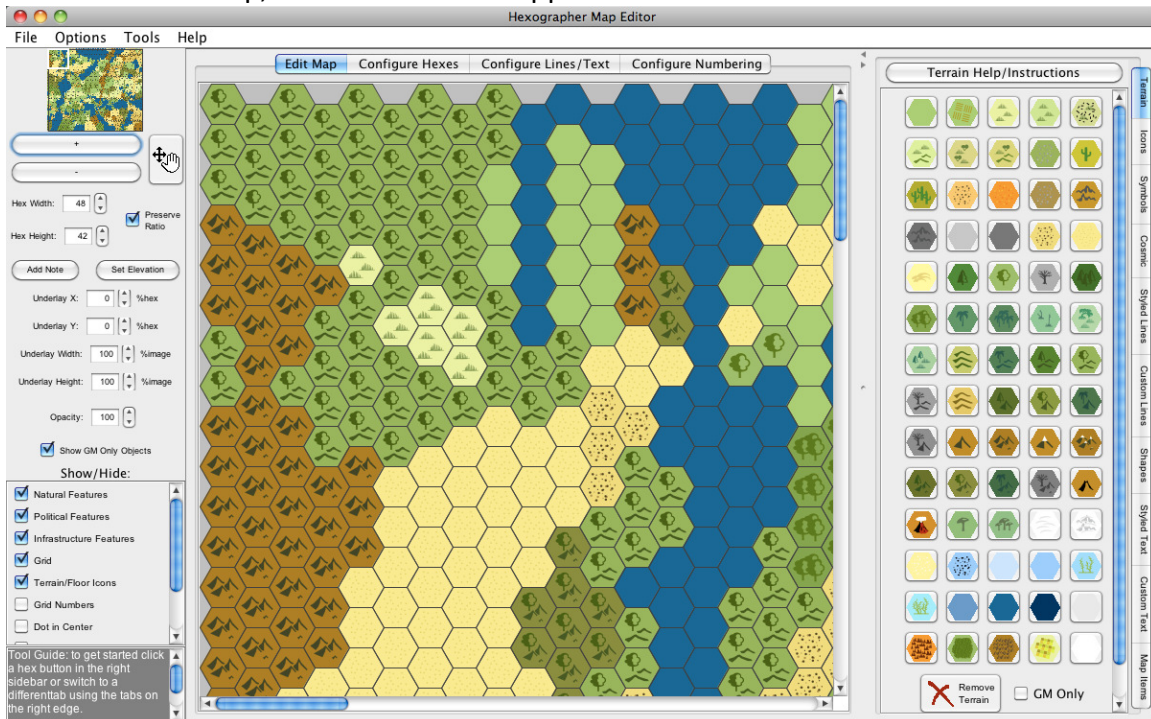
This is the approach most people find easy, but you can always jump around or go back to make corrections.

1. Create a blank or randomly generated map.
2. Place terrain (page 4) to flesh out your map. Optionally sketch it and run the Terrain Wizard (page 16.)
3. Add Icons/Features/Symbols (page 5) for cities, villages, castles, shipwrecks, ruins, etc., as desired.
4. Draw lines (page 7) for roads, rivers, coasts, etc. Or use shapes (page 12) for coasts & other half-hexes.
5. Place text (page 10) for map labels.
6. Add map items (page 6) for special things (a compass rose, 3D/perspective icons, etc.)

Note: Hexographer has many other options and features described in this manual.

## Main Map Edit Window

Once you create or load a map, a window like this appears:



At the top of the window are a number of menus. See page 14 for details. The center area is your map view/edit area. It is in a scrollpane (note the scroll bars just below and just to the left of the map.) Just above the map are tabs to let you configure your map's icons, lines, text styles, etc. They are detailed later.

To the right of the map are a large number of buttons with different terrain buttons. Click one to set that terrain type, then click a hex and the hex will now have the chosen terrain type. You may also click and drag over several hexes to change each to the selected type.

On the far right are a number of tabs. (These may look different or have a different layout depending on your computer operating system.) The tabs let you switch from editing terrain to placing icons (a.k.a. features like cities, castles, ruins, etc.) to drawing lines, placing text, etc.

To the left of the map are a number of checkboxes and controls. These are detailed starting on page 18.

**Show GM Only Objects** (in the left sidebar) is an important checkbox. Most things (terrain, features/icons, lines, etc.) can be set as "GM Only". If so, they only appear if this is checked. This feature makes having a player's and GM's version of the same map very easy.

Note that right-clicking a hex allows you to toggle its GM-Only state. If the hex has an Icon (a.k.a. features like cities, castles, ruins, etc.) you may also add a feature decoration to the hex by right-clicking. These are letters, symbols, or numbers placed in the hex at various clock positions. See page 24 for details.

## Placing Terrain

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The general process for map editing is to select an item from one of the tabs along the right side of the window, then place the item in one or more hexagons of the map. This is done by a combination of clicks and, in the case of terrain elements, also by a click-drag painting process.

- **Terrain Name Hint**

Hold the pointer over a terrain button to see the terrain name.

### Terrain

The major task of map creation (and perhaps the most enjoyable part) is placing terrain. Hexographer provides more than 70 customizable terrain types. If any custom terrain types are added (paid version only), they appear at the end of the list.

Click on the desired terrain, then on a hexagon in the map (under the **Edit Map** tab). The terrain appears on the map and will become part of the map after the next **File | Save**.

Removing terrain is done one hexagon at a time. Select the **Remove Terrain** button (below) and click near the center of the desired hexagon.



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### Remove Terrain icon

**GM Only** — Many of the features added to a map are intended to be seen only by the game master (GM). When checked, terrain items added are visible only when the **Show GM Only Objects** box (left sidebar) is checked. You may also right-click a hex to turn GM Only on or off through a pop-up menu.

**Crop Graphics to Hex** — The terrain type's icon may be larger than the boundary of the hexagon. If so, checking this box limits the terrain graphic to the bounds of the hexagon. If unchecked, the graphic can overflow the hex.

## Placing Icons (a.k.a. Features) & Symbols

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Icons are the graphical elements of a map that are independent of terrain. An icon, for instance, might be a castle, a city, an airbase, or a section of railroad. These are also referred to as “Features.”

**Use Custom Color** — Checking this box overrides the defined color for the icon and uses the custom color instead. Clicking the painter's palette opens a window allowing you to set the color. The bottom portion of the palette icon is the current/selected color.

- **Two-color Icons**

Don't use custom colors on two-color icons. Some icons fill the entire shape when custom color is selected.

**Show Hex's Terrain Icon** — This checkbox prevents the icon from replacing the foreground portion of a terrain hexagon. If unchecked, the selected feature icon graphic erases the terrain making the icon easier to see.

**Fill Bottom of Hex** — When checked, the icon is placed and the bottom 30% of the hexagon is filled with a solid color. Enable **Use Custom Color** to change the fill color.

**GM Only** — When checked, all subsequent additions are marked “GM Only”. Visibility is controlled by the **Show GM Only Objects** check box.

**Override icon scaling** — The mapmaker may override the default size of the icon foreground by checking this box. Set the desired scale in the text field. Subsequent icons are drawn at the desired scale.

**Rotation** — To rotate an icon graphic within a hexagon, enter the desired degrees of rotation in the text field. Positive values rotate the icon counter-clockwise. The default is vertical or zero degrees.

**Remove Feature** — Remove an icon by selecting the Remove Feature button. Clicking on an icon with the button selected removes the icon from the map.

### Symbols

The **Symbols** tab offers the mapmaker several icons for placement on the map. A symbol differs from an icon in that it is a simpler graphic and is not tied to a specific hexagon. Instead, a symbol is associated with a map coordinate. That is, symbols are not necessarily placed in the center of a hexagon. They are often used for cities, capitals, etc.

**Use Custom Color:** — Change the symbol color by checking the **Use Custom Color** box and clicking on the painter's palette icon. The bottom of the palette shows the current/selected color.

**GM Only** — Symbols may be placed as visible only to game masters by checking the **GM Only** box before placing them on the map.

**Remove Symbol** — Click this icon, then find and click on a symbol to remove it from the map.

## Placing Map Items

The **Map Items** tab holds a variety of additional features that may greatly enhance the look of a map. For instance, a selection of predefined buildings (with customizable colors, textures, and sizes) lets the mapmaker build a village, town, or even a city. Other icons provide alternate forest styles, ruins, and entire villages. The building buttons briefly describe their general shape. These buildings may be scaled and rotated using the **Width**, **Height**, and **Rotation** fields below.

An array of artistic terrain icons follows the building buttons. Hold the mouse motionless over an icon for a few seconds to see the feature label.

**Width, Height** — These two fields control the scaling of new map items as they are added. These values are expressed as percentages and work independently of each other. *Width and height are percentages relative to the current hexagon size.*

**Rotation** — A map item may be rotated within the hexagon. The selected item is rotated by setting a value in this field. The value is in degrees, counter-clockwise from horizontal and rotating about the select square at the lower left of the item.

**Show Roofline** — Building rectangles have optional lines that simulate the ridges of a roof. Checking this box displays those lines and improves the appearance.

**Snap to Grid Quadrant** — By default, map items are placed exactly where the mouse click places them. Checking this box shifts the placed item to the nearest of the hexagon center, a vertex, or the center of a hexagon side.

**Texture** — Hexographer can “paint” the roof of a building shape with a variety of textures such as ceramic, thatched, or wood. See also **Solid** below.

**Solid** — The fill and outline colors of a building shape may be selected manually by checking this option and using the two selectors. The first shows the fill color, the second the outline color.

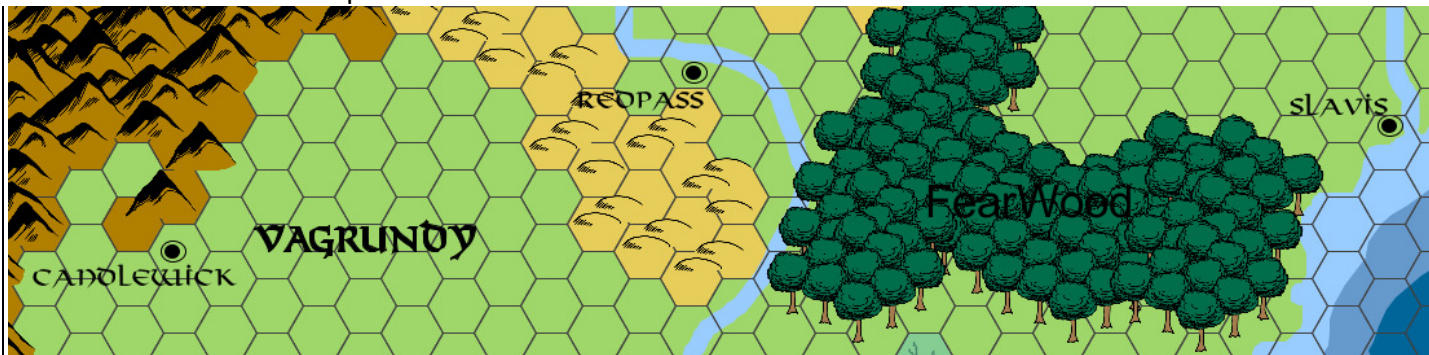
**Select Map Item** — Change or delete an existing item by selecting it. Click the **Select Map Item** button and all items in the window display a small yellow selection box; click on a particular item and its box turns blue. The item is now selected and its information (width, texture, etc.) displayed in the appropriate areas of the tab. The **Select Map Item** button remains selected. Quickly remove multiple items (while the button is gray) by clicking the item, clicking **Delete Selected**, and repeating as often as desired.

**New Map Item** — Clicking this ensures that changes to item settings only apply to new items.

**Import Custom Map Item (\$\$\$ Pro Version, Limit 10 Items in free version)** — This feature allows the import of PNG graphics that may be placed and scaled as other, built-in, map items. Click the button and enter a short name for the item being imported. Use the Browse button to select the desired file. Click the **Save** button to finish. Further files may be imported with the **Browse** button, and **Close** dismisses the window. Once imported, the icon appears at the bottom of the tab.

**Remove Custom Map Item (\$\$\$ Pro Version)** — If custom items are added, clicking this button opens a window with a menu list of all custom items. Selecting one and clicking **OK** removes it.

**Move Selected to Front/Back** — Multiple items may be placed in a hexagon, and items may be scaled to exceed the hexagon dimensions. These two buttons allow simple rearrangement of the stacking order, putting the selected item at the top or bottom of the stack.



Map Items such as mountains and various forests make 1<sup>st</sup> Edition World Style maps easy. How-to:

<http://inkwellideas.com/2010/12/making-1st-edition-world-of-greyhawk-style-maps-in-hexographer/>

## Drawing Lines

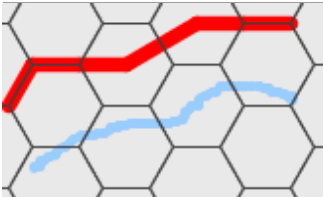
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### Styled Lines

In addition to geographic terrain elements, a useful map also contains boundaries, roads, and rivers. These elements are best represented by **Styled Lines**. There are two categories of line available in Hexographer, depending on how they are drawn: freehand and snap-to-vertex.

Freehand lines are not tied to hexagon vertices and most closely resemble lines drawn with a pencil or pen. They do, however, create a great number of entries in the database that stores map information.

Snap-to-vertex lines are tied to a hexagon vertex, the center of a hexagon, or the center of a hexagon face. The vertices need not be next to one another.



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### Snap-to-vertex versus freehand lines

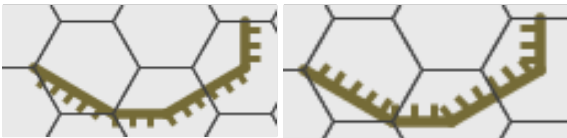
In the example above, a red Major Border has been drawn between several (5 in this case) vertices. The freehand river below it consists of perhaps 100 points.

Select the desired line type and click on the map to draw lines. Individual vertices may be moved using a secondary (right-click) drag of the vertex.

**GM Only** — Boundaries, roads, and in fact any and all lines may be drawn with the **GM Only** box checked. Lines added with this box checked are visible only when enabled in the Show/Hide box.

**Invert Hashes** — Detailed maps often include an indication of elevation changes. Hexographer does this by drawing a solid line and adding small “hash” marks to one side. These smaller lines traditionally indicate the downhill side of the line. Since Hexographer can’t tell which side is downhill, an **Invert Hashes** button is provided.

Select the desired line (**Select Line**, below), and click on **Invert Hashes**.



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### Before and after Invert Hashes

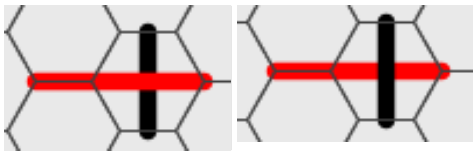
**New Line** — When drawing a line, each click of the mouse (or click-drag for freehand) adds another point to the line. Clicking **New Line** indicates to Hexographer that the current line is complete and a new line will begin.

**Remove Last Point** — While a line is selected (see below), clicking the **Remove Last Point** icon deletes the last point of the line. This icon may be clicked as often as necessary. Consider redrawing the line (**Select Line**, then **Delete Selected Line**) if many points need removal.

**Select Line** — Select a line by clicking on the **Select Line** icon, then clicking on the desired line on the map. The line may be removed, moved to the front or back of the drawing stack, or the last point removed. A line must also be selected to edit a vertex.

**Move Selected to Front/Back** — When two lines intersect, the mapmaker may change the stacking or drawing order of the two lines. The order determines which is in front (on top.)

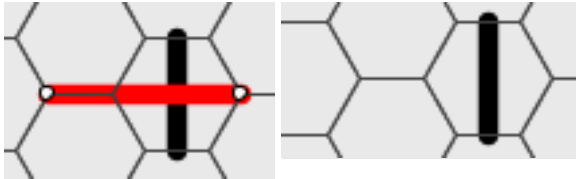




### Move to Front or Back

In the example above, the red Major Border is in front in the left image, in back in the right.

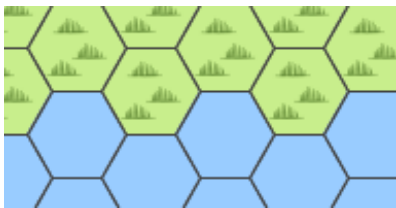
**Delete Selected Line** — Remove lines by clicking **Select Line**, choosing the line, then clicking **Delete Selected Line**.



### Selected and deleted line

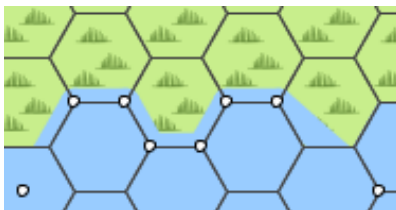
In the example above, a Major Border is selected and then deleted.

**Sea Fill and Coastline** — When the map's design stabilizes, one can add smoother coastlines. Hexographer has two special lines (in both freehand and snap-to-vertex) that draw thicker than the others. These may be used to move the apparent boundaries away from the hexes' edges.



### Water on hexagon boundaries

After drawing a snap-to-vertex coastline between selected points, a new coast is painted. In the example below, the line is left selected to illustrate the process.



### Water with coastline added

## Custom Lines

The **Custom Lines** tab provides additional line tools for the mapmaker. This tab includes the same **New Line**, **Remove Last Point**, **Select Line**, **Move Selected to Front/Back**, and **Delete Selected Line** icons as in the **Styled Lines** tab. This tab, however, features custom line width, line type, and colors as well as offering multiple **Type**: tags to categorize the new lines.

**Freehand, Snap to Vertex** — These two icons determine how the new line is drawn. Freehand is very flexible but adds a great many points to the database; snap-to-vertex is very economical but far less flexible.

**Color:** — New lines are drawn in the current color. See Color Picker below for details on selecting custom colors.

**Width:** — Lines are drawn at the width (or thickness) specified in this field. As usual, a value may be entered



directly or reached by clicking the up and down arrows.

**Line Type** — The type of line drawn (solid, dashed, dotted, or hashed) is determined by the choice in the menu.

**Type:** — Lines added in this tab may be associated with one or more of the types listed (or none at all). Each of the types has a matching show/hide checkbox on the other side of the Hexographer window. The types suggest possible uses of the lines (natural, political, infrastructure, GM only) for the mapmaker, but the only real difference is the show/hide checkbox to which they are assigned.

### Line Editing

To edit a line, first select it by clicking the Select Line button then clicking on the line. If selected, the line's points will appear as dots.

**Extend Line** — Click an end point and then click or drag to add more points.

**Remove Point** — Right-click the point.

**Add Point** — Shift-click at the new point's desired location. It is added to the line between the line's two closest already existing points.

**Move Point** — Right-press on the point (don't right-click as that removes the point) and drag it to the desired spot.

## Placing Text

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### Styled Text

A good map needs labels that identify both the physical and the political aspects of the terrain. Hexographer provides for this need in the **Stylized Text** tab.

This tab should be considered in conjunction with the **Configure Line/Text** tab above the main map window.

This tab (**Stylized Text**) lets the mapmaker select a label category and enter the actual text; the **Configure Line/Text** tab (see page 21) controls how that category of text is displayed on the map.

Changing the settings for a style changes the appearance of every instance of that style on the map. For example, changing the size of “Nation” (in **Configure Line/Text**) changes every “political nation” label on the map.

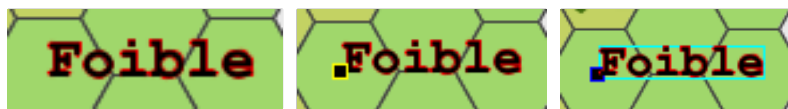
In general, the procedure for adding a text label is this:

1. Select the label category.
2. Type the text.
3. Click on the map to place the text.
4. Click on **Save** to deselect the label.

The styled text buttons assign labels to one of the following general categories: title, natural, political, and infrastructure. The display of these categories is controlled by the **Show/Hide** checkboxes.

The text may be moved about the map (while selected) by a click-drag on the dark square at the lower-left of the text field.

**Select Text** — Change an existing text by selecting it. Click the **Select Text** button and all text fields in the window get a small selection box; click on a particular text and the box fills and the text is surrounded by a thin outline. This indicates that the text is selected.



**Text labels: normal, available, selected**

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The example above shows a label as it might appear on a map. The second image is the same label immediately after clicking the **Select Text** button, indicating that it is available for selection. A selected label is shown on the right.

Once the label is selected, it may be moved by a click-drag on the solid square (lower left of the label) and the content changed by editing the text in the field beside the **Save** button.

#### ● Styles

Styles with “natural”, “political”, and “infrastructure” in their labels are automatically assigned to the appropriate Show/Hide category. Using the show/hide checkboxes to the left of the map allows you to have a geographical-only map, or a map without political bounds, etc.

**Rotate** — If the mapmaker desires, a label may be rotated to better align with the terrain element to which it is associated. To rotate a label, select it and set a value in this text field. The value is in degrees, clockwise from horizontal and rotating about the select square at the lower left of the label.

**Delete Selected** — Once a label is selected, clicking on the **Delete Selected** icon removes it from the map.

### Custom Text

In addition to the built-in text styles, Hexographer allows the mapmaker to insert text with custom styles applied.

Select the **Custom Text** tab, click **Start New Text** and enter the desired label in the **Text:** field. Click on the map to place the label. The label may be modified for color, size, style, and font. The text may be outlined in the selected color, rotated, and/or assigned to one or more of four categories. Click **Save** or **Start New Text** when

satisfied.

**Start New Text** — Clicking this button deselects any active text and prepares Hexographer to place a new one.

**Delete Text** — A selected text (one showing the active-block and an outline) is removed from the map.

**Color:** — Select a fill color (foreground color) for the active text. The painter's palette opens a color selector dialog. The color on the bottom of the palette is the currently selected color.

**Size:** — This field determines the point size of the text. This size applies to the current zoom level and the text will appear smaller as the mapmaker zooms out.

**Style:** — Depending on the styles available to the selected font, optional styles may include bold, italic, etc.

**Font:** — The range of fonts available for new text depends upon the system configuration. The choices appear when the menu button is selected. The current font name is displayed in the menu button.

**Outline:** — This color selection works in conjunction with the **Size:** field beside it. The color selected outlines the placed text if the size is not zero.

**Text:** — The Text field holds the actual text placed when the mapmaker clicks on the map. The text may be changed at any time and while the map text is active, the content on the map will change to match. The mapmaker must click on **Start New Text** or **Save** to deselect the field.

**Save** — The Save button deselects the currently active text field. The **Text** field may then be changed without effect on the map.

**Type:** — If any of these boxes are checked, the active text is attached to the appropriate Show/Hide category. If no box is selected, the text is visible regardless of the Show/Hide boxes.

**Rotate** — If the mapmaker desires, a text label may be rotated to better align with the terrain element to which it is associated. To rotate, select the text and set a value in this field. The value is in degrees, clockwise from horizontal and rotating about the select square at the lower left of the text.

**Select Text** — Change an existing text by selecting it. Click the **Select Text** button and all text fields in the window get a small selection box; click on a particular text and the box fills and the text is surrounded by a thin outline. This indicates that the text is selected.

**Delete Selected** — Once a text field is selected, clicking on the **Delete Selected** icon removes it from the map.



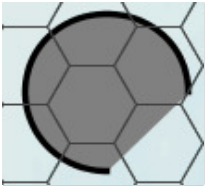
## Drawing Shapes

Large shapes are placed on the map using the **Shapes** tab. These shapes are separate from the terrain and may be placed either above or below the terrain by choosing the appropriate option. See the Layers Diagram for more information.

Shapes are divided into two categories: Polygon and Oval. Polygonal shapes are constructed of line segments, the vertices set by clicking the mouse. Oval shapes are described by a starting angle and the number of degrees (counter-clockwise) they extend from that starting point. Ovals also have a choice of **Closure** styles.

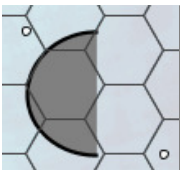
**Start Angle:** — A start angle of  $0^\circ$  is interpreted to be 3:00 on a clock face.

**Angle Extent:** — This field specifies the number of sweep degrees over which an oval is drawn, beginning with the Start Angle and extending counter-clockwise.



**Start Angle:  $0^\circ$ , Angle Extent  $270^\circ$**

The example above is an oval that begins at **Start Angle** of  $0^\circ$  and has an **Angle Extent** of  $270^\circ$ . It has a **Color Fill** of dark gray and a **Color Border** of black.

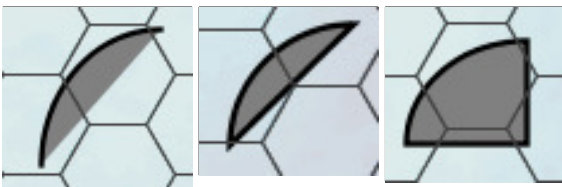


**Start Angle:  $90^\circ$ , Angle Extent  $180^\circ$**

This example begins at  $90^\circ$  and sweeps through  $180^\circ$ .

Dragging the corner of the rectangle that contains the oval allows the creation of non-circular shapes, although the major and minor axes of the oval remain vertical and horizontal.

**Closure:** — The closure style of the oval (assuming the extent is less than  $360^\circ$ ) may be chosen from Open (no border drawn), Chord (line between beginning and end), and Pie (straight lines from start to center to end). See below for examples.

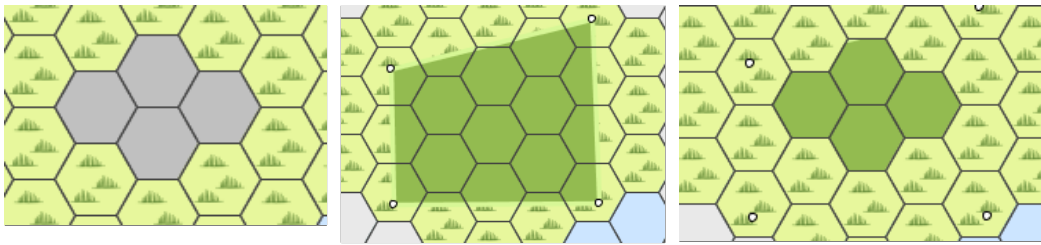


**Start Angle  $90^\circ$ , Angle Extent  $90^\circ$ : Open, Chord, Pie closures**

All other options and controls for shapes are the same whether **Polygon** or **Oval** is selected.

**Place Above/Below Terrain** — Both Polygon and Oval shapes are placed either above the terrain hexagons or below them. Shapes placed below the terrain are visible only through empty hexagons although they may be partially visible if the map opacity (see above) is below 100%.

For example, in the first map segment below the grassland hexagons surround four empty hexagons. A green polygon with a light green border is added above the terrain in the first example, and below the terrain in the second.



**Grassland surrounding empty hexes; Polygon above and below the terrain, seen through empty hexagons**

Polygon shapes may also be used to improve the appearance of coastlines. For instance, in the map section below, a coastline is drawn with “Ocean” as the fill and the border of a polygon.



**Coastline before, during, and after improvement with a polygon**

**Color Border:** — A shape has a border unless the width is set to 0 (zero). The border itself may be selected using the **Color Border** icon or by selecting one of the **Texture Border** choices from the menu. The width of the border is set in the **Border Width** field with a 0 turning the border off.

**Texture Border:** — This option draws a border around the shape in the color determined by the popup menu. The width of the border is set in the **Border Width** field with a 0 turning the border off.

**Border Width:** — The **Border Width** field determines the thickness in pixels of the line drawn around a shape. Set this value to zero if no border is desired.

**No Fill** — A shape may have **No Fill** and be a border only. It may have a solid **Color Fill** chosen via the Color Picker (see below) or have a **Texture Fill** chosen from the menu. The opacity is set by the **Fill Opacity** field. Set to 100, the filling completely blocks the terrain; setting the opacity to a lower number allows some amount of the terrain to be visible through the fill.

**Color Fill:** — A shape may be filled with a solid color by checking this option and using the **Color Picker** to select the fill color. See also **Fill Opacity** below.

**Fill Opacity:** — Shapes with a fill enabled may also control the opacity of the fill. The default is 100%, with any terrain below the shape being completely masked. Settings below 100 allow increasing amounts of the terrain to show through.

**Select Shape** — To delete a shape or change its border or fill components, click **Select Shape** then click on the target polygon or oval shape.

**Remove Last Pt** — Once a shape is selected, this button removes the last point of the shape. This is most useful when working on a polygon. Ovals are determined by only two points.

**Delete Selected Shape** — A selected shape is removed by clicking this button. If no shape is selected, it has no effect.

**Move Shape to Front/Back** — Within the shape layer, the stacking order determines how overlapping shapes are displayed. Moving the shape to the front places it on top of all other shapes; moving it to the back puts it behind the others. See **Styled Lines** for an example.

**Save** — The **Save** button, as in other tabs, is a way to indicate to Hexographer that the mapmaker has finished working on a particular shape. It may be thought of as a “deselect” button.

## Menu Bar

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Some special features are accessible only from the menus at the top of the window.

### File Menu

The File Menu deals with saving or exporting the map in various ways.

- **Save** — The map file is updated with the latest changes.
- **Save As...** — The mapmaker is offered the chance to rename the map file or save it to a new location.
- **Export Current Size as PNG Image** — The entire map is converted to a PNG image at the default size.
- **Resize and Export as PNG Image** — The entire map is converted to a PNG image after the mapmaker selects both the desired number of hexagons per inch and the resolution (in DPI) of the image.
- **Select Area, Resize and Export as PNG Image** — After selecting this option, the mapmaker may drag a selection box across the map (and the map may be panned and zoomed) to save a portion of the current map. Both the desired number of hexagons per inch and the resolution (in DPI) may be selected.
- **Export Notes as basic HTML** — All notes associated with map hexes are extracted and placed into a simple HTML file. See below for help adding notes to the map. Notes are available only in the licensed version.
- **Print** — The entire map is printed after the mapmaker selects both the desired number of hexagons per inch and the resolution (in DPI) of the output.
- **Select and Print Area** — As with the export option above, an area of the map is selected for printing and both the desired number of hexagons per inch and the resolution (in DPI) of the output.

### Options Menu

The Options Menu offers some alternative methods of placing terrain and features.

- **Terrain Placement** — Terrain Placement determines how a terrain type is placed within a hexagon. The default is **One-to-One** which aligns the entire terrain with a hexagon's bounds.  
**Freeform** allows the entire terrain piece to be placed in any location:



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Cactus placed over Sandy Desert

**Freeform Icon Only** places the icon of the terrain in any location:



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Five Light Jungle Icons placed over Sandy Desert

- **Feature Placement** — As with Terrain Placement above, Feature Placement determines how the feature is placed within a hexagon. The default is **One-to-One**, aligning each feature with a hex's center.  
**Snap to Even Spots** places the feature on restricted coordinates of the map.



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Camel features placed on Even Spots

**Freeform** allows complete freedom placing the feature.



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Camel features placed Freeform

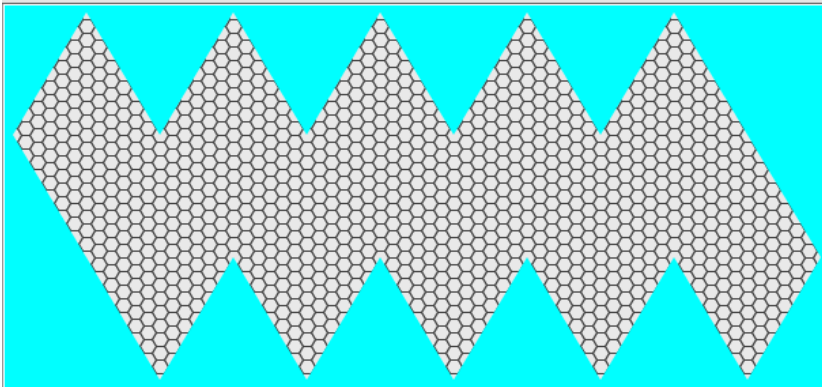


- **Draw Large Area Terrain** — This option effectively broadens the brush used to “paint” terrain into a three-hexagon circle. In other words the hex beneath the mouse and the six adjoining hexagons are selected.
- **Use Icosahedral Template** — Selecting this option instructs Hexographer to mask a portion of the map, displaying only those hexagons that fall within the twenty equilateral triangles that form the icosahedral projection.  
An icosahedral map using the default **True Columns** should be created 68x32 hexes in size. A **True Rows** map should be 56x32 hexes.  
Terrain outside the icosahedron is not lost but is masked from sight.

## ● Icosahedral Maps

An Icosahedral map is a map projection popularized by Buckminster Fuller as “Dymaxion” and familiar to gamers as a “Traveller” map. Constructed of 20 equilateral triangles to represent a sphere, the icosahedral map gives accurate measurements of distances along the edges of each triangle. This is in contrast to the familiar Mercator projection (popular in schools) that gives little useful measurement of distance, direction, or area.

Beginning with a blank map of 68x32 hexes, select **Options | Use Icosahedral Template**. The result is shown below.



## Icosahedral Map

- **Make New Line Widths independent of Hex Size** — When checked, new lines are scaled in thickness to match the scale of the hexagon. That is, zooming in makes new lines appear thicker. Unchecked, new lines are drawn at the same thickness regardless of scale.
- **Hex Orientation** — This option determines the orientation of the hexagons in the map. For more information, see the note about “True Columns” and “True Rows” in **Size Settings**, above. Changing an existing map requires that the ratio of width to height be changed manually. Uncheck the “Preserve Ratio” box and change the hexagon dimensions.

## ● Changing hexagon orientation

Changing the hexagon orientation should be done before adding any lines or text to the map. They are located by absolute coordinates rather than hexagon boundaries and will appear to move in relation to the hexagons when the orientation is changed.

## Tools Menu

The Tools Menu provides methods to alter the map under construction, add map keys, and make subsidiary maps. The menu choices are:

**Expand/Shrink Number of Hexes... (\$\$\$ Pro Version)** — This menu item lets the mapmaker change the hexagon dimensions of the map under construction. Data in row and columns will be lost if deleted,

and additional rows and columns will be filled with the type selected from the menu choice. Use care as many of the choices are not terrain types but features.

**Configure Map Key... (\$\$\$ Pro Version)** — A key is a small table that lists the terrain types used on the map.

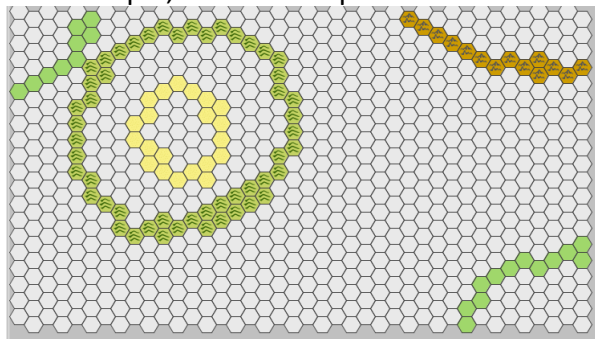
The window that pops up after selecting the “Configure Map Key” provides a text field for the map scale, each line type, and each terrain type entry. The mapmaker may edit the field explanations and provide the intended map scale, such as “1 Hex = 50 miles”.

**Make Child Map (\$\$\$ Pro Version)** — Mapmakers that want to “zoom in” on an area of their map will find the “Make Child Map” feature useful. Select this option and draw a selection block around an area of the map. Each hexagon in the selection will be divided into smaller hexes, from 4 to 30 hexagons, determined by the button menu choice.

Save your map before making a child map!

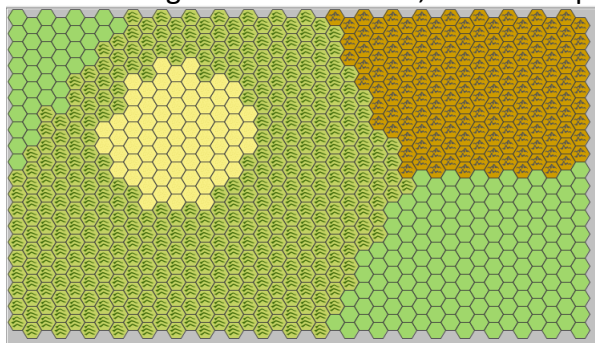
- **Run Terrain Wizard** — The Hexographer terrain wizard speeds map creation by taking “hints” from the mapmaker and filling blank hexagons with terrain. A blank hexagon with a filled neighbor receives the terrain of its neighbor. This process is repeated until there are no more blank hexagons.

For example, here is a map with a few areas drawn:



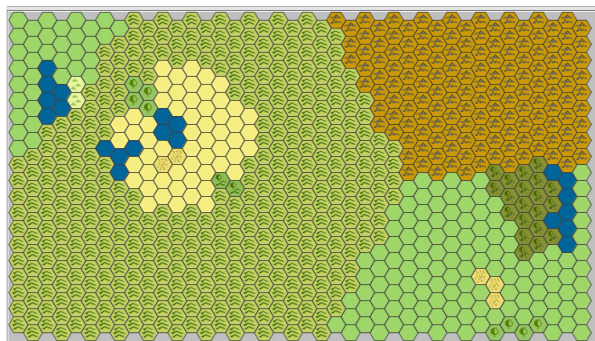
**Map before Terrain Wizard**

After running the terrain wizard, the blank spaces are filled.



**Map after Terrain Wizard**

- **Run Terrain Wizard w/Randomness** —The terrain wizard with randomness added runs in the same manner as without but occasionally adds a hexagon of a random type. This results in small areas of terrain not specified by the mapmaker. For example, the same initial map above gives this map when randomness is added:



- **Undo/Redo Last Terrain Wizard** — The terrain wizard is a powerful tool but there is no guarantee that the results will suit the mapmaker. This menu option returns the map to the previous state.
- **Add Random Features...** — Features from the list of all possible features (cities, forts, etc.) are sprinkled at random throughout the map but only when the mapmaker is ready. The mapmaker selects the desired features and sets the likelihood (percent chance) of the feature appearing in any given hexagon.

This window remains until closed so a new selection of features can be made with a different likelihood selected without needing to re-open the window to add each set of features.

### Help Menu

The Help Menu provides useful information about Hexographer.

- **About** — The version number and build date are shown here as well as contact and copyright information.
- **Display Java Version** — Hexographer is a Java application. The version of Java currently running on the mapmaker's computer is shown here as well as tips on getting the latest version.
- **Report a Bug** — This option displays the email address used to report bugs in Hexographer as well as some tips on how best to describe any problems encountered.



## Left-side Controls

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### Scroll Window/Overview Map/Mini-Map

The Scroll Window gives the mapmaker a graphic representation of area in the editor window versus the total map. Click-drag the rectangle to view other portions of the map. See also the Scroll/Pan button (below.)

### + and – (aka “Zoom”) Buttons

The magnification of the map portion displayed in the editor window may be changed in easy steps with these buttons. The “+” button zooms in, the “-” button zooms out. Zooming out is set to 10 pixels per hexagon.

### Scroll/Pan

Selecting the “pan” button (  ) changes the click-drag action in the editor window from the default terrain

editing function to a scroll pointer. Click-drag to slide the display around the map.

### Hexagon Size Control

The width and height of a hexagon in the edit window is normally under the control of Hexographer. These values change as the mapmaker zooms in and out. There are occasions, however, when the mapmaker may wish to take direct control over these dimensions. For instance, if the map is changed from True Column to True Row (or vice versa), the hexagon dimensions (the aspect ratio) may need to be changed. Uncheck the “Preserve Ratio” box to edit the individual dimensions. *Neither the width nor height may be made less than 10.*

### Add Note (\$\$\$ Pro Version)

Notes may be added to any particular hexagon. Once created, these notes may be extracted as an HTML file by selecting “File | Export Notes as HTML”.

To add a note to a hex, select the **Add Note** button and click on the target hexagon. A window appears with text fields for entry of a title and description for that hexagon. Click on **Save** to assign the note to the hexagon. Hexagons with notes attached are identified by a small yellow square. Clicking one of these squares with **Add Note** selected allows the mapmaker to view and edit the associated note.

### Set Elevation

Some mapmakers add elevation data to their maps. Hexographer uses a default elevation (set in the **Configure Hexes** tab in the edit window) but the information is hidden by default. To display elevation information, check the **Show Elevation** box in the Show/Hide panel. Shading near hex edges indicates relative elevation. Changing the elevation of particular hexagons requires mouse-clicks on each hexagon. A left-click raises the elevation and a right-click lowers it.

#### ● Macintosh Right-Click

Using a 1-button Macintosh mouse, a right-click may be done by holding down the control key and clicking. For laptops using a trackpad, enable “secondary click” in the system preferences. This allows a two-finger click to become the equivalent of a right-click.

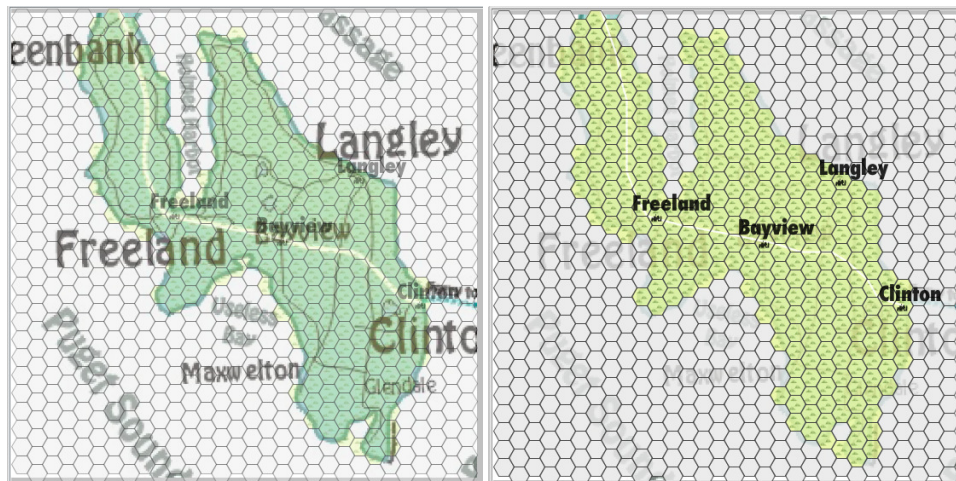
### Underlay and Opacity

Hexographer allows mapmakers to load a PNG image as a background (or “underlay”). This is useful for tracing another image of the map. (Hand-drawn, scanned, from another program, etc.)

- **Underlay X & Y** — Controls the upper-left corner of the underlay image. Each value is a percentage of a hex. For example, if you want the image's upper left corner to be 3 hexes from the left and 5.25 hexes from the top, Underlay-X should be 300% and Underlay-Y should be 525%.
- **Underlay Width & Height** — This is the overall width and height of underlay/background graphic as a percentage of the original image's size. Some trial and error should get you the desired size.

- **Opacity** — Opacity setting controls how visible the background image is during edits.

Map exports will normally be done with opacity set to 100%. Otherwise, portions of the background image will “show through” the Hexographer map when it is exported. For example:




Hexographer Map at 45% and 85% Opacity

### Show GM Only Objects

Mapmakers have the option of marking any map element as visible to the “GM Only”. Checking this box on the left panel of Hexographer displays those items. A Game Master (GM) would presumably desire a map with all the elements visible. A map for players can be produced by unchecking this box before export.

### Show/Hide Features

A series of check boxes in this section determine which map elements are displayed. As with “GM Only”, the **Show/Hide** check boxes control the display of a variety of features.

- **Natural, Political, and Infrastructure Features** — Select elements (added in **Custom Text** and **Custom Line** tabs below) may be displayed or hidden by category.
- **Grid** — This box controls the drawing of the hexagon outlines. The color of the grid is selected in the **Configure Lines/Text** tab by clicking on the color choice icon (  ) in the Miscellaneous section. (Be sure to click on **Apply** after making a change).
- **Terrain/Floor Icons** — Toggles whether terrain icons are displayed.
- **Grid Numbers** — Turns hex coordinates on and off with this checkbox. The grid numbers are configured in the **Configure Numbering** tab, detailed further below.
- **Dot in Center** — A centered dot may be displayed in each hexagon by checking this box. The color is the same as the selected grid color.
- **Show Elevation** — This option controls visibility of the hexagon shading lines that indicate elevation.
- **Notes on Map (\$\$\$ Pro Version)** — The mapmaker may attach notes to particular hexagons. This checkbox controls the visibility of the mark that indicates a note is present.
- **Map Traced/Underlay** — Toggle the background/underlay map's visibility.

## Edit Window Tabs

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The **Edit Map** tab is the default when Hexographer is opened since all changes to a map are done here. All of the remaining tabs either configure or customize elements of the map that are to be added in this tab. The functions of the other tabs are detailed below:

### Configure Hexes

Hexographer gives the mapmaker full control over the terrain and feature elements used to construct a map in the **Configure Hexes** tab.

**Terrain (\$\$\$ Pro Version)** — The **Terrain** sub-tab shows that each terrain type is assigned a background color, a foreground icon (pattern), a setting that determines how much of the hexagon is filled by the icon, and a default elevation to assign the terrain type when it is placed onto the map.

The mapmaker may also substitute a custom icon or foreground for any terrain type by selecting **Browse**, navigating to the desired file (PNG format) and loading it. After clicking the **Apply** button, the new graphic is substituted for the default icon on the map.

The icon may be turned off or on with the **Use Icon** box. Turning the icon off results in a solid color for that type of hexagon.

A feature, in Hexographer terms, is a map icon or marker that represents some non-terrain aspect of the land. Features might be a city, town, or oasis marker on a land map. They might be a space station, a ringed planet, or a jump gate on a star map. In fact, a feature may be almost anything the mapmaker desires.

**Features (\$\$\$ Pro Version)** — The **Features** sub-tab provides many of the same customization tools for map features as the **Terrain** sub-tab above. Since background color and default elevation do not apply to features, being instead elements of terrain, those options are not available to features.

Loading and applying a custom icon for a feature is the same as for a terrain element: click **Browse**, select the new PNG file, and **Apply** the new icon.

**Import, Export Settings (\$\$\$ Pro Version)** — Once the terrain hexagons have been configured as desired, save the settings for use in later sessions. Click on the **Export Settings** button and use the system navigation window that appears to designate a settings file. Load a saved settings file by clicking on **Import Settings** and selecting the desired file.

Careful use of the import and export feature allows the mapmaker to display one map in a variety of styles.

**Add/Remove/Edit Custom (\$\$\$ Pro Version)** — Paid versions of Hexographer allow the addition of custom terrain, feature, and icons. Clicking this button launches a secondary window with menu options to Add, Remove, and Edit those items.

Click the **Select Action** menu button and choose one of the options:

### Add

Add a custom element in the **Add** window. Be sure to select at least one of **Use Background** or **Use Icon**, otherwise the element will not appear on the map. Save the element when ready, then select Close to dismiss the window.

**Name:** — Give the element a short name, to identify it when the mouse pointer rolls over it.

**Terrain or Feature?** — This menu (which defaults to “Terrain”) allows the mapmaker to place the new element into one of two categories. Terrain elements reside on the base layer of the map and are always visible and may be selected from the Terrain tab of the map. A feature element sits on top of the terrain and usually indicates something man-made such as a city or mine. It may also be used to indicate smaller natural features such as an oasis. Custom Features may be selected from the **Icons** tab of the map.

**Category:** — This menu offers a selection of categories under which to place the new element: Forests, Rough Land, Other Land, Other, Hex Fill, and Water. This feature is not currently used by Hexographer.

**Use Background:** — This checkbox enables the filling of a hexagon with the background color, selected below. Unchecking this box leaves a hexagon background unchanged.

**Background Color:** — This icon launches the Hexographer Color Picker. Reminder: the oval in the lower portion of the icon indicates the currently active color.

**Use Icon:** — This checkbox enables the display of the element foreground, if any. Checking this box displays



and not the **Use Background** box is the ideal combination for a floating feature if the icon file has a transparent background.

**Icon File:** — The text field points to the PNG file used for the element. A **Browse** button launches a standard system file navigator.

**Scale Icon:** — The scale of an icon determines how much of a hexagon is filled with the pattern. The background color (if any) will always fill the hexagon to the edges, but the foreground (the “icon” portion) may be adjusted for best appearance. The default is 80% and is a good beginning, but it may be necessary to apply a sample on the map and return to the **Edit** (detailed below) to adjust the scale.

**Default Elevation:** — Mapmakers using (displaying) map elevations may use this window to assign a default elevation to the custom element being created. Specific instances on the map may be raised or lowered in elevation as desired (if a Terrain element).

### Remove

Selecting the Remove option from the **Select Action** menu repaints the window with a menu listing all custom elements. Select the desired element and click **Remove**. Click **Close** to dismiss the window.

### Edit

Once a custom element is created, make changes by selecting **Edit** from the **Select Action** menu. When the window repaints, select the desired element from the menu.

Once the desired element is selected, any or all aspects may be changed. For detailed explanations of the various fields, see the Add section above.

Click **Save** to apply the changes or **Close** to dismiss the window.

**Apply** — The last button of the **Configure Hexes** tab is the **Apply** button. Changes made to terrain and features require making changes to their definitions in the database. The mapmaker must click on the **Apply** button to commit these changes.

### Configure Lines/Text

A useful map includes labels and boundaries. Though the default definitions in Hexographer work well for most maps, a mapmaker may wish to change the font or color of the text or the width or color of the lines and boundaries. Selecting **Configure Lines/Text** provides access to these definitions.

**Border Color** — The hexagons drawn on the map may be turned on or off (see **Show/Hide** above) but a compromise might be to change the color of the hexagon borders. The color-select icon labeled **Border Color** in the **Miscellaneous** section gives the mapmaker control of the border color.

**Customize Text** — Each text category (title, continent, ocean, etc.) may be customized to suit the needs of the mapmaker. Remember to click on the **Apply** button to make the changes visible.

The typeface for a text category is chosen (from those available) in a popup menu. Choose the primary text color by clicking the familiar color selection icon. If the face has alternate weights (e.g. bold or italic), they are available in the popup menu. The size of the text (here labeled ‘**Width:**’) is entered in the text field.

If desired, the mapmaker may specify a text outline. The color and width of the outline are chosen in the same manner as the primary text color and weight. To disable the text outline, set the width to ‘0’.

**Customize Lines** — Lines in Hexographer are used not only for boundaries and roads but also for such things as coastlines, elevation, and railroads. Each line type available is listed in the Customize Lines section. Each line has a color choice icon and a text field labeled “**Width:**” that controls the thickness of the line.

In addition to line thickness and color, Hexographer offers a selection of useful line types or strokes. Two of them, “hashed line” and “rail line” are special purpose lines. The first is used when drawing slope and elevation lines. The second is, of course, used to draw train tracks across the terrain.

### Configure Numbering

Numbering, as used by Hexographer, refers to the optional coordinate labels that indicate row and column position of a hexagon within the map. Enable the display of the labels by checking the **Grid Numbers** box in the **Show/Hide** section.

**Font Settings** — Grid numbers are generally quite small. This makes the font selection crucial. Select an easy-

to-read typeface and a color that contrasts well with the majority of the map. A weight (plain, bold, italic) is selected with a menu.

The size of the text for grid numbering is determined by choosing a percentage of the hexagon height rather than a fixed size as in other areas. This is because the size must be scaled up and down as the view is zoomed in and out.

**Position Settings** — Choices for numbering position are limited to either top or bottom of the hexagon. In this section the mapmaker may also choose between listing the row or the column first when numbering is enabled.

**Sequence Settings** — Hexographer recognizes that the map being edited may be one of a series rather than a standalone. To accommodate this, the row and column numbers may be started with a number other than zero (the default).

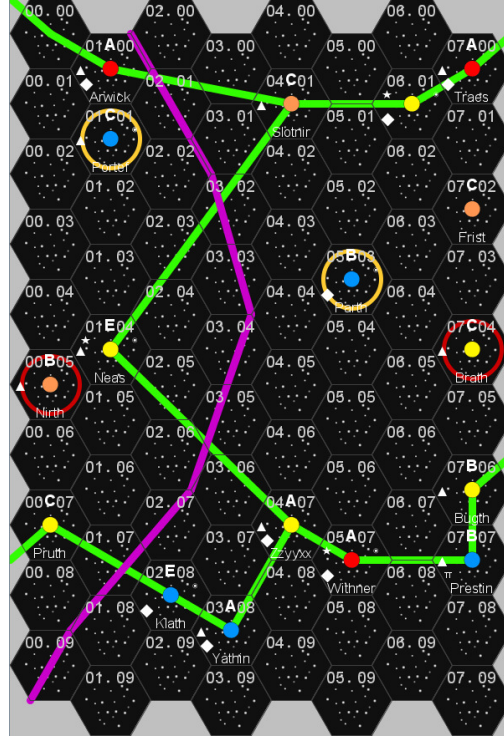
To make reading the row and column numbers easier, a separator character may be entered in the

**Row/Column separator** field. If the field is empty, no separator is used. Multiple characters may be entered in this field and they will appear, but there is limited space available in the hexagons.

The last sequence setting, Pre-pad #'s, determines the padding displayed in front of the low numbered hexagons. For instance: hexagon "row 2, column 2" would appear as "2.2", "02.02", or "002.002" with "No", "0", or "00" selected, respectively.

## Cosmic Maps

Not all maps are mountains, plains, and oceans; some maps include the vacuum of space and sparkle of star systems. The **Cosmic** tab provides the science fiction mapmaker with features needed to populate a star map. An array of hexagonal patterns are provided: stars (blank background), asteroids, planets, and jump gates, etc. They are placed as terrain: click on the desired pattern then click or click-drag on the map.



A sample subsector map. See <http://inkwellideas.com/2011/01/creating-traveller-style-sub-sector-maps-in-hexographer/> for a mini-tutorial

**Ringed** — An optional checkbox allows a cosmic item to include a “ring”. This should not be confused with the “Ringed Planet” icon. On many science fiction maps, a ring indicates something special about the star, planet, or base.



Star, Star with Ring, Ringed Planet

The ring color defaults to white. Clicking the Custom Color icon allows the mapmaker to change the ring color; see Color Picker below.

**Use Custom Color** — Checking this box overrides the icon color, changing it to the color selected. See Color Picker below for details on selecting colors.

**GM Only** — Cosmic map elements are displayed for the GM only when placed with this box checked.

**Feature Decorations** — Additional indicators may be drawn in the map hexagon by checking the appropriate box. Each item is drawn beside the primary icon. The location is selected with a menu choice of twelve clock-face positions. For extra meaning or visibility, click the Color Picker icon and choose an alternate color. The default is white.

**Remove Terrain** — Select this icon/button then click on a hexagon on the cosmic map. The background (stars) terrain is removed and replaced with a solid gray color.

If the mapmaker’s aim is a mostly-blank map, see the section on Map Basics below.

**Remove Feature** — Elements are removed from the map by selecting the Remove Feature icon, then clicking on individual features or elements. The hexagon is returned to “stars”, the background terrain.

## Top 12 Overlooked Features

1. **Feature Decorations** – *This functionality allows you to play an entire hex map based wargame using Hexographer. “Feature Decorations” are symbols, numbers and letters placed along the edges of the hex at different clock positions. (1:00, 2:00, 3:00, etc.)*

So one may place a knight symbol to signify a group of soldiers. (Remember features can have their colors over-ridden by the checkbox and color selector on the “Icons” tab.) Then right-click on any hex with a Feature and choose the pop-up's “Add Feature Decoration” to give it feature decorations.



Red forces (a group of soldiers and catapults) attack purple's castle. Numbers/letters/symbols may be placed at any clock position and may mean number of units, strength, powers, etc.

2. **GM Only** – This feature isn't necessarily overlooked, but its significance is often underestimated. Using the GM Only checkbox on the Terrain, Icons, Lines, Text, Shapes, and Map Items tabs allows the GM to create player's and GM's versions of the same map. Add Terrain that hasn't been explored as GM-Only. (Once explored right-click it to toggle GM-only off.) Caves, dungeons, ruins, etc. can also be placed as GM Only as well as unknown trails or other objects. Labels related to these can also be to GM Only.
3. **Show/Hide Checkboxes** – the political, infrastructure, and natural checkboxes allow you to create geographical only map versions, maps without political features, etc.
4. **Styled Text/Lines** – Many people miss the power behind placing lines and text using the Styled Lines/Text instead of Custom Lines/Text. Using the “Configure Lines/Text” tab (see page 21) a user can later decide to change the fonts of any particular label type and all the labels already placed will change to the new font. Likewise a user may decide to make roads gray instead of black and with just a couple of clicks all the roads will be gray.
5. **Notes** – Notes are a feature in the Pro version of Hexographer that allow you to enter as much text as you wish about a hex. List which module is set there, enter a random monster chart for the hex, type up a small encounter, provide stats for a city, etc. See page 18 for details.
6. **Child Maps** – If you create a continent or region level map, use this feature to create the beginnings of a lower scale map (a smaller region or province map.) See page 16 for more.
7. **Map Items** – Even for a classic/basic edition hex map, map items come in handy to let you place a compass rose on the map. There are also icons for 3D/perspective castles, cities, ruins, etc., and functionality to place individual buildings. Just note that the sizing is based on hex width and height, so to get a square (or truly circular) object you'll likely need to make the hex height larger than the width (or vice-versa if using the “true rows” map orientation.) See page 6 for detailed instructions.
8. **Changing Icon Sets** – Hexographer already has a few different icon sets available. There are “Calligraphy” and “Black & White” sets for free on the Hexographer web site's “Samples” page. Also on the website is an “Alternate Classic” set with more modern versions of the classic hex map symbols. Go to the “Customize Hexes” tab's “Import Settings” button to load them. See page 20 for details.
9. **Advanced Grid Numbering** – Page 22 has details on setting the font, starting numbers, etc.
10. **Large Size Printing** – Make a poster of your map! No matter what size you've made your map, all icons and line points are created to make 1” hexes possible at high resolution. Go to the File Menu's “Resize and Export as PNG Image” and set the file to make a 1 hex/inch or 2 hexes /inch at 300dpi. Touch it up in an image editor (if you want) and take it to a printing store or upload it to an online printer.
11. **Terrain Wizard** – Just roughly sketch in your map and then run the terrain wizard to fill it in, then touch it up. See pages 16-17 for details.
12. **Updated Often** – Hexographer is updated often throughout the year. New features large and small are added in addition to bug fixes.