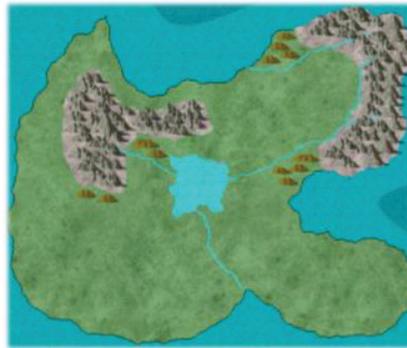


CAMPAIGN CARTOGRAPHER 3

With the rivers in place, our map is really starting to form. However, we have mountains, but no hills. I waited with these on purpose, because I like to place hills that support the path of the rivers, rather than create the hills first and create appropriate rivers. I feel this allows me greater freedom when designing the map, while still creating a realistic map. There are several places on the map that need hills, but the spots between the northern river and the north coast, as well as the area near the southern end of the eastern mountains are prime candidates.

10. Click the **Minerals/Mountains**  button, then select **CC3 Filled Mountains** from the list. Pick the **Foothills 01** symbol from the symbol catalog, and fill in the appropriate spots in the map with this symbol. As with the mountain symbols we used earlier, this hill symbol is also part of a random collection.



Right now the map looks a bit barren, so let us add some vegetation. Earlier I mentioned how the mountains served as a wall against the sea to the east, creating excellent condition for farmlands beyond them. The rivers in the area make the conditions even better. We'll also add some scrubland to the peninsula to the southeast, and some forest.

You can find all the drawing tools required for the vegetation by clicking the **Default Terrain**  button.

11. Start by using the **Terrain Default, Farmland** tool to draw the fertile farmland nestled between the mountains and rivers to the northeast.
12. Then use the **Terrain Default, Scrub** to fill the peninsula with scrubland.
13. Some wetlands would look appropriate between the lake and the bay to the east. Use the **Terrain Default, Marsh** to draw some on the south side of the river.
14. Finally, we need some trees. Use the **Terrain Default, Forest Mixed** to draw one large forest on the western side of the western mountains, and another one to the southwest of the lake, following the edge of the lake.

In addition to the dense forest, some lone trees placed around the map will indicate that there are trees all over the island, and not only in the dense forests.

Click the **Vegetation**  button, and select **CC3 Filled Vegetation**. Use the **Decid Tree 1** symbol, and place it randomly around the map. Again, this symbol is part of a random collection, ensuring that not all trees will look alike.



Rule of Man

Our island is nearing completion. All our natural features have been added to the map, but an inhabited island is far more interesting. Time to add some man made features, like towns and roads.

15. We'll start by adding some villages, towns and cities. Click the **Structures**  button and select **CC3 Filled Structures**. For this map, I used the Euro symbols. Also, the city symbols using the default symbol scale looked a bit small on this map, so I slightly increased the

Attach

The attach feature in CC3 is a helpful feature that helps you place a node exactly in relation to another object. Due to the fact that CC3 allows nearly infinite zoom, it is basically impossible to place two nodes in the exact same location by manual placement. When this is needed, we can use the attach command to do this. When we place a node with attach enabled, CC3 will check if there is an entity inside the pick cursor. If there is, the new node will snap to this entity exactly. Attach support several options, which allows us to snap the node to the nearest point on the entity, or the nearest endpoint, or the midpoint of the entity, among others. Note that attaching does not imply a permanent relation between the nodes. If you use attach to snap the end of a river to the coastline, the end of the river will not move if you later move the coastline, but will have to be repositioned manually.

Continued on next page...

DUNGEON DESIGNER 3

more paths were flipped the wrong way during the joining. The **Correct** image shows what happens when we correctly join the entities. It is also worth noticing that there appears to be a line missing in the **Correct** image. This happened because after joining, we had both the start and ending point of our path in the same spot. To avoid duplicate points, CC3 deleted the end point. This will fix itself when we create a polygon from this path, because a polygon always includes a closing line between the end point and starting point, as opposed to a path which does not have this.

To use the Combine Paths command, first select the first two paths to combine, use **[F]** and **[S]** to flip the entities to join the correct ends, then select the next path to join with the path. This completes the merging of the first two paths, and you can use **[F]/[S]** to fit the new one. Continue until all the paths have been joined, then right click to finish the command.

20. Right click the **Explode**  button, and then select the **Path to Poly** command. Select our path, then hit **[D]** to complete the command. Except for the fill, we now have a perfect floor. That is, assuming we joined our paths correctly earlier. If not, the polygon will look quite weird.

21. Use **Change Properties**  on the entity to change the fill style to **Flagstone B Bitmap**.

Now we have the floor in place. We still need the walls, but notice how the walls should be in the exact same shape as the floor. This makes that part of the job really easy.

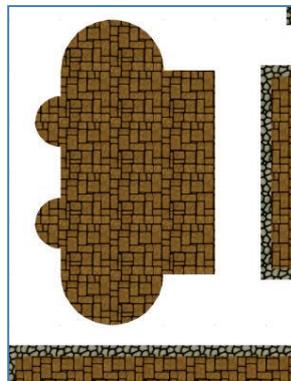
22. Click the **Copy**  button. Select the floor, hit **[D]** to complete the selection process. CC3 now asks for the source position of the copy, so enter **0,0** **[Enter]** on the command line. Now CC3 asks you to place the copy. Again, type **0,0** **[Enter]**. This will place a copy of our floor exactly on top of the existing one. Finally, right click to end the command.

23. Click **Change Properties** . However, instead of clicking on the floors to select them, hit **[P]**. This stands for **Prior**, and will automatically select the last entities you had selected, or if we copied entities, the last copy you placed. This is very helpful, since it will select the copy of the floor we just placed, but not the original. Hit **[D]** to finalize the selection process, and the Change Properties dialog should show.

Now, change the properties to the correct properties for a Wall entity which we found using the **List** command earlier. These are:

- Layer: WALLS
- Sheet: WALLS
- Width: 2
- Fill: Wall Cobble Grey Bitmap

That is it. We have created a complex room, using both circles and straight walls. We also made sure to use the correct properties for both walls and floor, so this room will work exactly like a regular dungeon room. This means that we can connect corridors to it and break the walls just as for any other room. Notice that connecting corridors to the rounded parts does work poorly however.



Prior

If you try to select the entities the normal way, you will find that when you click on the floor, both the original and the copy will be selected. Because they are in the exact same spot, it is impossible to select only one of them. Since they are copies, they are identical in every regard, except for the entity tag. So to select only one of them, you could also use list on the entities to learn their entity tags, then select by entity tag to only get one of them. Suffice to say, selecting by Prior is much faster.

CITY DESIGNER 3

Port Alice has been an important port from the earliest history of the city. So it is only natural that there is large dock district here. Additionally, as I mentioned earlier, the city outgrew its city walls. The old district consists of the parts within the city walls, except for the parts covered by the docks district. The old district contains all the military buildings from the war, the market, governmental buildings, and housing. The new district is the area outside the city walls, and consists mostly of housing and small businesses. The new district is still rather small, but it is here that city growth will happen in the future.

Mapping the City

Now that we have a plan, we are ready to start mapping the city.

Now, where to start our mapping? I prefer to start mapping a city by getting the bigger details into place, like the terrain, and let the city flow around them rather than shaping the terrain to the city.

Terrain

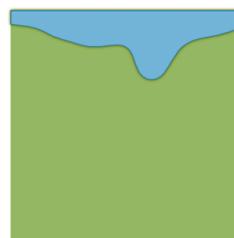
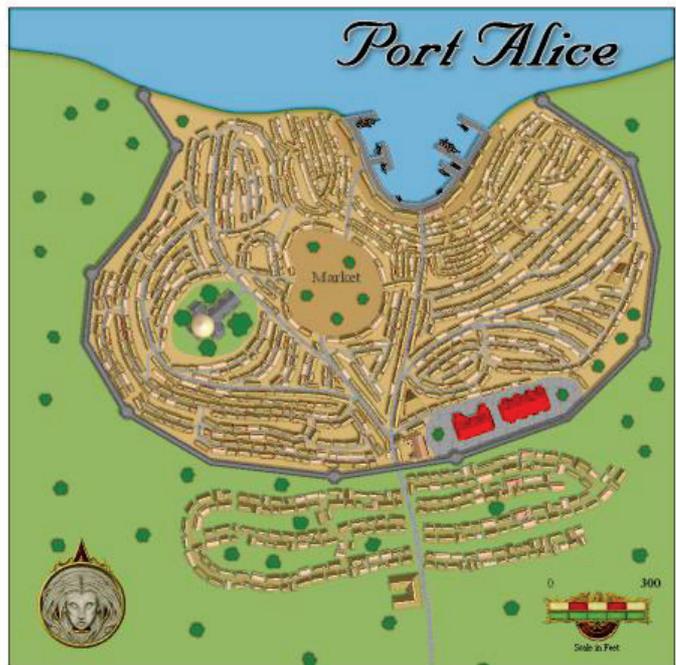
The most important terrain feature of this particular city is the coastline. We already established that the city had a natural harbor, so let us ensure that our coastline represents this.

If we look at the local map of the region, we can also see there is a river nearby, but it looks like it is a little bit too far to the east to be a natural part of our city map, so we won't include it.

1. Start a new **City** map based on the **CD3 Bitmap A** style. Use a map size of **2000×2000** feet, and use **CD3A_Grass 1** as the background fill.

Note that this style relies a bit on effects to make everything look right. The effect setting **CD3 Bitmap A** should be loaded with the template, if not, you should load this setting. Do note that this city map is much more resource demanding than any of the other maps we have drawn so far in this book, so you may wish to leave effects disabled when drawing. Additionally, if you feel things are going a bit slow, you may reduce the setting for the **Automatic bitmap quality** under **Speed Settings**. Checking the various options under **Shading** in this dialog also speeds up drawing considerably, at the expense of visual look. Just remember to reset the settings before printing or exporting the map.

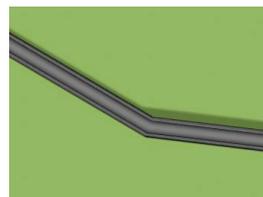
2. Use the **Water, Smooth** drawing tool to add a coastline.



Partitioning the City

From our discussion, we decided that the city should have a city wall, and that it consists of 3 districts (docks district, new district, and old district). I like to set up the area used by the city and the partitioning first, so that I know how to treat each area. Let us start with the city wall.

There is a drawing tool called **City Wall, 20'**, which is excellent for the wall itself. However, I do like to add some towers to my wall as well; something there is no drawing tool for. Fortunately, we can define our own drawing tools, so let us take care of this little issue immediately.



COSMOGRAPHER 3

DECKPLANS

Let us start our journey through Cosmographer 3 by looking at starship deckplans. These are most frequently used for drawing starship plans, but they are also well suited to draw any futuristic floor plan or battle map.

A Basic Deckplan

Let us start with the most commonly used option, a deckplan for a small starship. Before we start however, let us make sure we know what we want. Just as for other map types, planning a bit ahead greatly assists us in making the map the way we want it.

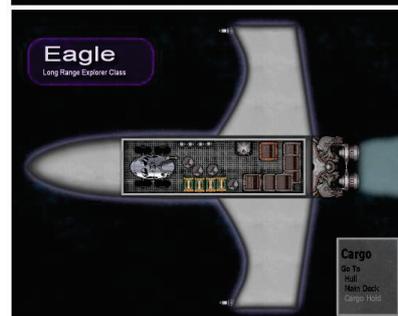
So, what do we want? I can think of plenty of possibilities off the top of my head, like a huge battleship that fights for supremacy amongst the stars, perhaps a carrier loaded with thousands of fighter crafts. A generation ship, travelling slowly the vast distance between the stars, hoping one day to arrive at a better destination where the descendants of the original crew can find a new and better place to live, and to found a new civilization. The possibilities are endless. However, the techniques needed for drawing our ship doesn't differ that much between a small and a large vessel, so to make this tutorial manageable, let us opt for something smaller.

Let us draw a long range survey/explorer ship. This is a small ship, with a small crew, which is designed to operate alone in the far regions of space for months, maybe years at a time. Space is a dangerous place, so the ship is armed with some kind of energy weapon, like laser weapons or similar. Inside the ship, there are a lot of details to consider. For example, for such a long trip, the crew will need some recreational facilities. Unless your world have some kind of instant sub-space communication systems, this ship is going to be out of contact with other beings for months at a time. Recreational facilities help the crew deal with this. Limited space means we need to keep this at a minimum though. The ship will also need stores for food, water and oxygen for the journey. The size of these stores will depend heavily on the effectiveness of the recycling technologies used. I'm assuming rather advanced technology here, meaning I can keep these small enough to hide between decks.

The images show the final plans for this ship. You can find the tutorial maps under **#Tutorials\COS3**. The files are all named starting with the name Eagle, then followed by the deck number. The completed maps are the ones without a number at the end, while the numbered ones shows progress through the tutorial as usual.

A word about effects

The deckplans of Cosmographer 3 are rather effects-heavy. This means that you most probably want to draw your maps with the effects turned off to avoid the slow redraws that effects cause. Another issue with effect-heavy maps is that they do not look very good with the effects turned off. I have configured my finished maps to always have effects on when you load them, but if you load these and turn off the effects, you will quickly see what I mean. By subtly changing some of the drawing tools, you can make the map look a bit better without



TOME OF ULTIMATE MAPPING



Ithon

This continent map is created using the Bitmap B style from Symbol Set 1: Fantasy Overland. Cartography by Stephen Manuele. The map is of a fantasy world being developed for works of fiction.

RACTAL TERRAINS 3

VIEWING WORLD INFORMATION

From what we have explored thus far, we know that FT3 can calculate and show height contours for a world. The clever little beastie does not stop at that, however.

When a world is created, FT3 will automatically determine its climate, temperature, and rainfall, as well as its general geography. While these calculations are based more on theory than any "true to life" scenario (for example, viewing the climate for your world will very likely reveal huge expanses of forestland - such factors as deforestation and axe-wielding settlers are not figured in the climate calculations), they can be very useful when it comes to adding the finishing touches. As we shall see later, any of these factors that do not suit your concept can easily be changed.

- Click **Show Altitudes**  to show your world's height contours and general geography (this is the default view).
- Click **Show Climate**  to show the climate zones FT3 has calculated for your world.
- Click **Show Temperature**  to show the temperature zones FT3 has calculated for your world.
- Click **Show Rainfall**  to show precipitation levels FT3 has calculated for your world.

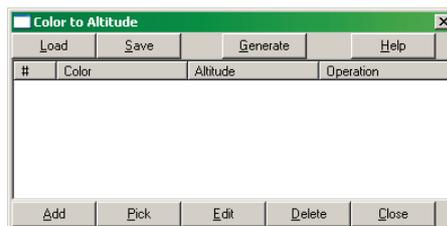
For each of these views, different colors are used to indicate the different values FT3 has calculated. The colors and their associated values are shown within the Color Key window.

When you change the view mode, the Color Key window will change accordingly. You can also measure linear distances across a world. Click **Distance** , and then click both ends of the linear distance you wish to measure. FT3 will report the measurement.

Color to Altitude Conversion

Many data sets are available on the Internet that provides color-coded altitudes. In addition, many CC3 files are created with colors representing contours. To make it easier to import that data into FT3, the color to altitude conversion tool was created. This tool allows you to define colors, associate altitudes with those colors, and then convert the colors in the displayed overlays into altitudes in the offset channel.

The first step is to create a set of colors and assign altitudes to those colors. To ease this task, FT3 provides the **Color to Altitude** window, shown here. The main portion of this dialog shows the list of color items. Double-clicking on an item has the same effect as selecting that item and clicking the Edit button.



Colors Representing Contours

Many CC3 maps use textured bitmaps for the different contours, but these are easy to change to solid colors in CC3 to be able to use the map this way.

Color to Altitude

Load will load a saved set of conversion data from disk.

Save will save the current set of conversion data to a file on disk.

Generate will perform the listed color to altitude conversions on the displayed image overlays.

Help shows the help topic for this dialog.

Add adds a color to altitude correspondence using the Color to Altitude Correspondence dialog (see below).

Pick adds a color to altitude correspondence by changing the tool to a dropper and allowing a color on the main display window to be picked. After you have clicked on the main image to pick a color, the Color to Altitude Correspondence dialog will appear to finish the add operation (see below).

Edit brings up the Color to Altitude Correspondence dialog, loaded with data for the currently-selected item.

Delete removes the currently selected item from the list.

Close dismisses this window.

Color to Altitude Window

You can find this window in the **Image Overlays** menu.