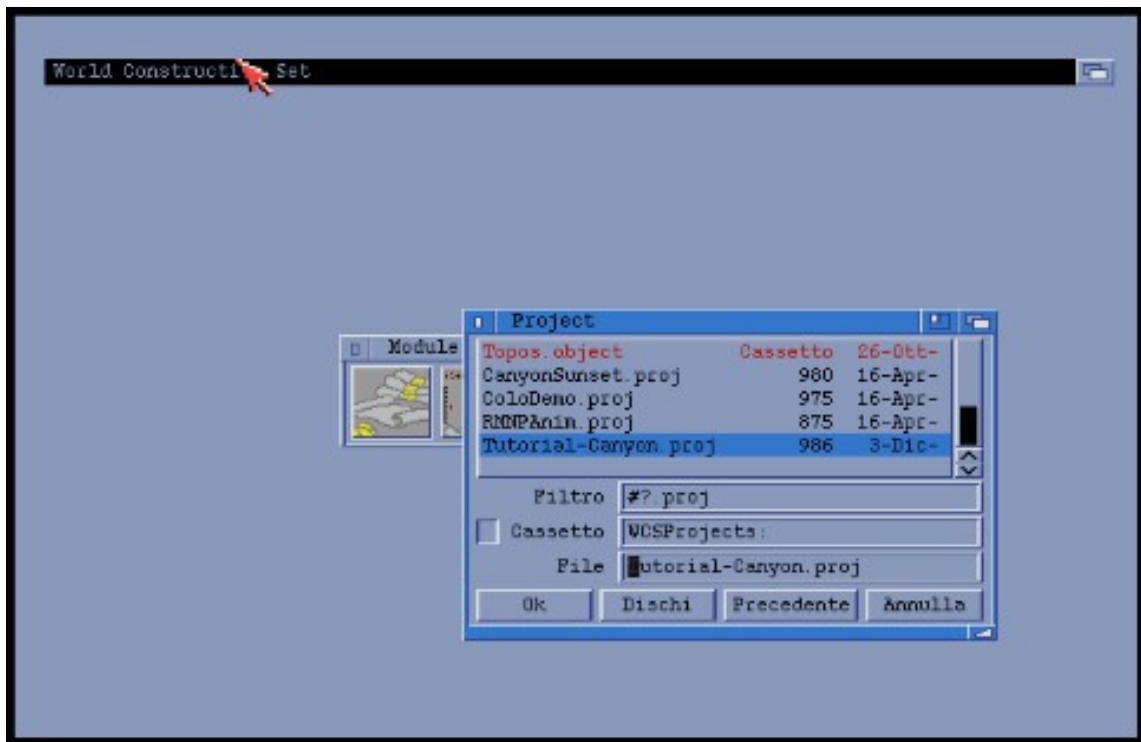
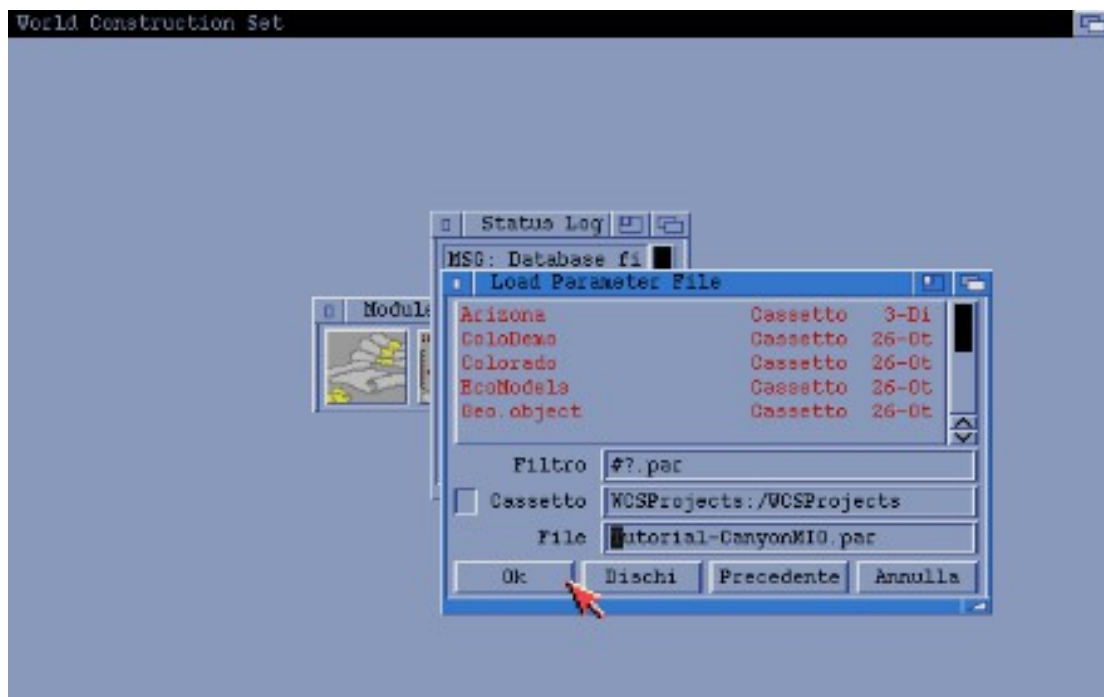


Work with the already built file Tutorial-Canyon.project, Then I open with drop-down menu: Project/Open, then WCSProject:Tutorial-Canyon.proj



Which allows you to use DEM altimetric files already included

Load scene parameters Tutoria-CanyonMIO.par



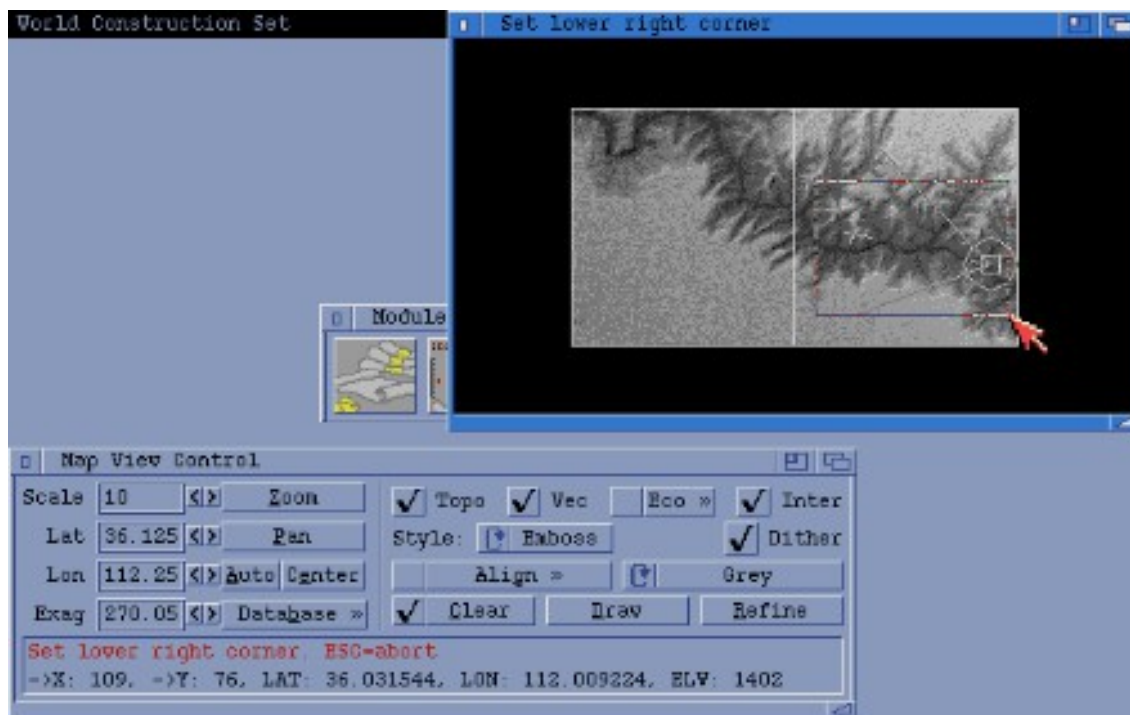
Once this is done, I save everything with a new name to start working exclusively on my project. Then drop-down menu and Save As selection (I indicate a .proj name), then drop-down menu at apro parameter and select Save All(also here I indicate a .par name)

The MapView window



You will notice that if you select this window and simply move the pointer over various points on the map you will see latitude and longitude values change, along with the height. Drop-down menu and Modules and then select MapView and change the width of the window with the map to arrange it in the best way on the screen. With the Auto button the center. Window that then displays the contents of my DEM file, in this case the Grand Canyon. MapView allows you to observe the conformation of the landscape from above

ZOOM button



I press the Zoom key and then with the pointer I position myself on a point on the map, I press the left mouse button and then I move to the opposite corner to circumscribe the chosen area and press the left mouse button again, then we will see the enlarged area selected on the map. I add that there is a box next to the Zoom key that allows the direct insertion of a value that the larger the magnification, the more the magnification is reduced and the smaller the value the stronger the magnification. At each numerical change you will need to press the DRAW button to update the vision.

PAN button

Under Zoom you will find the PAN button that allows you to move the map at will in all directions for the amount you want. This is done by drawing a line in one direction, then press PAN and point with the pointer to an area of the map and press the left mouse button. Now leave it and move the pointer in one direction by drawing a line and press the left mouse button again to trigger the movement of the map on the screen (origin and end points). Do some experiments and then use the Auto button immediately below to recenter everything. There are parameters such as TOPO, VEC to be left ticked and immediately below one that allows different views of the map with the Style command (Single, Multi, Surface, Emboss, Slope, Contour), each with its own peculiarities to highlight different details.

At this point you will have the first basics to manage your project visually on the map. Now close the MapView window and let's go further...

Let's start working on ECOSYSTEMS

If we select Emboss from the MapView Style command then we will have a clear idea of how the landscape looks, realizing that it is a predominantly deserted region of our planet. Therefore we will begin to act on the vegetation that may be present and the appearance of the landscape.

With WCS, therefore, we will begin to break down the elements of the landscape by assigning defined characteristics. Therefore it will be necessary to determine the classes of the ecosystem (Class) with parameters of Elevation Line (maximum altitude), Relative Elevation (arrangement on conches or convexity with respectively positive or negative parameters), again Min Slope and Max Slope (slope). WCS provides the ability to coexist ecosystems on the same terrain with the UnderEco function, setting a Density value.



Let's open it from Modules, then Ecosys Editor. Find in the left pane the list of ecosystems in reference to the files in our project. It will be necessary to clean up that box to leave only the Water and Snow landscapes and a few other fixed ones. We can do this by selecting the items and pressing the Remove button (attention not for all elements the button is activated, so they are not all deletable).

Once this is done, we can start adding new ecosystems. Scroll through the various Unused and as soon as the entry at the top Name is activated allowing you to write, type the name of your ecosystem, adding the necessary parameters.

Ecosystem1: Name: RockBase Class: Rock Density: 80 MinSlope: 15 UnderEco: Terrain
 Ecosystem2: Name: RockIncl Clss: Rock Density: 80 MinSlope: 30 UnderEco: Terrain
 Ecosystem3: Name: Grass Class Low Veg Density: 50 Height: 1 Elevati Line: 1500 Rel El Eff: 5
 Max Slope: 10 ? Min Slope: 0 UnderEco: Terrain
 Ecosystem4: Name: Shrubs Class: Low Veg Density: 40 Height: 8 Elevati Line: 3000
 Rel El Eff: -2 Max Slope: 20 min Slope: 5 UnderEco: Terrain
 Ecosystem5: Name: Soil Class: Ground Density: 100 UnderEco: Soil

Now we need to identify an intermediate ecosystem that guarantees a smooth passage between all, so we will select as Understory Ecosystem the one called Terrain in all ecosystems, except Snow and Water.

Now we will have to 'emerge' the Colorado River in the Canyon and we can do it by raising the sea level to 900 (Sea Level) in the Ecosystem called Water.

Beware that the order of the list of ecosystems provides a priority over those that come after. Quindi la nostra lista dovrà avere il seguente ordine: Water, Snow, Arbusti, RocciaIncl, RocciaBase, Terreno. Sarà possibile effettuare tutti gli spostamenti con il pulsante Swap in basso. Per mettere ordine è possibile premere anche Short List. Premete Keep, per confermare tutto il lavoro fatto fino ad ora con Ecosystem Editor.

Ricordate ogni tanto di salvare sia il Progetto 'Modules/Save' e 'Parameter/Save All'

Color Editor



Now it's time to define the colors of our scene and we can do it by going to Modules and then Color Editor. In the list we will focus on our ecosystems, created before.

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We go to the bottom of the list and select the first white space, assigning the name of 'empty1'.

We assign a color that we like and then we will find this element on other environments ... It can serve as an example for other situations!

Then we move to 'grass' that already exists and assign the following colors: R 60 G 70 B50

'shrubs': R 60 G 80 B 30

'RockIncl' R 110 G 65 B 60

'RockBase' R 110 G 80 B 80

'Land' R 150 g 30 B 30

Now we can work on pre-existing colors

'SunLight' R 150 G 130 B 130

'Haze and Fog' R 190 G 170 B 170

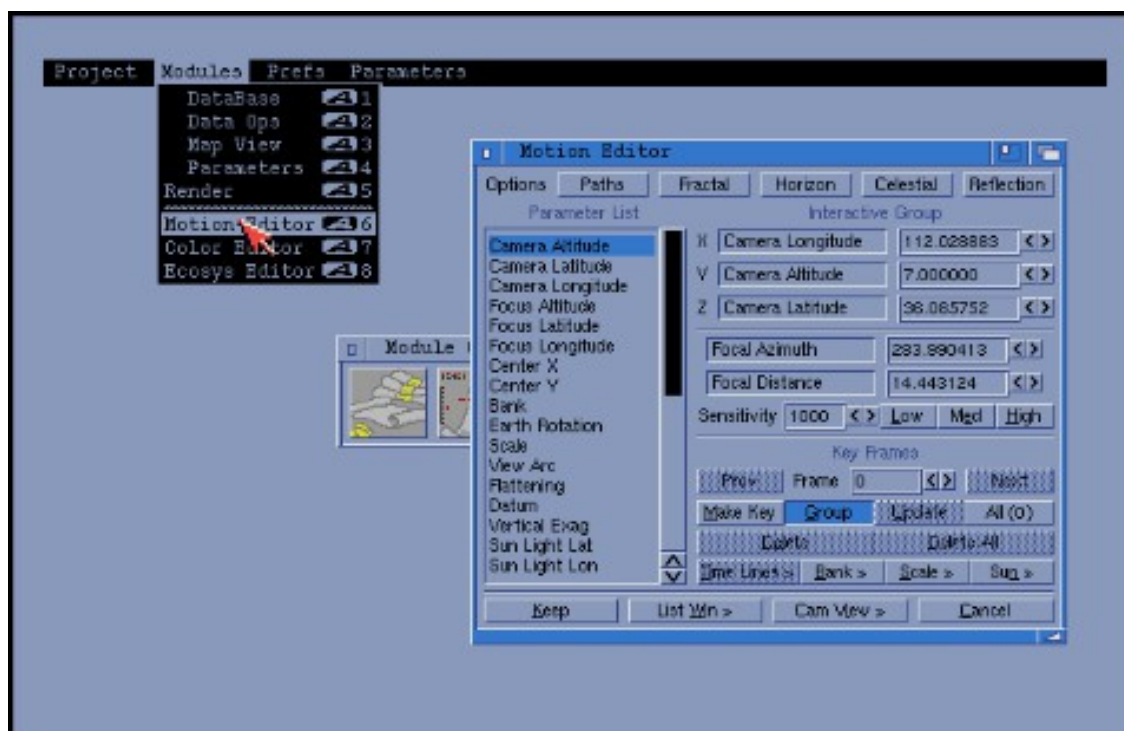
'Horizon' R 209 G 185 B 190

'Zenith' R 140 G 150 B 200,'Water' R 90 G 125 B 170,Ambient R 0 G 0 B 0

So don't forget to close Color Editor by pressing Keep.

Go once again to Ecosystem Editor and assign each environment the corresponding color by selecting it through the Ecosystem Color button. Press it several times until the exact one appears. Then save project and parameters again, as you did previously.

Motion Editor



Now it's time to take care of the framing, so let's go to Modules and then to Motion Editor. An extremely feature-rich window will open. Below is the list of parameters regarding the Chamber, location and other characteristics:

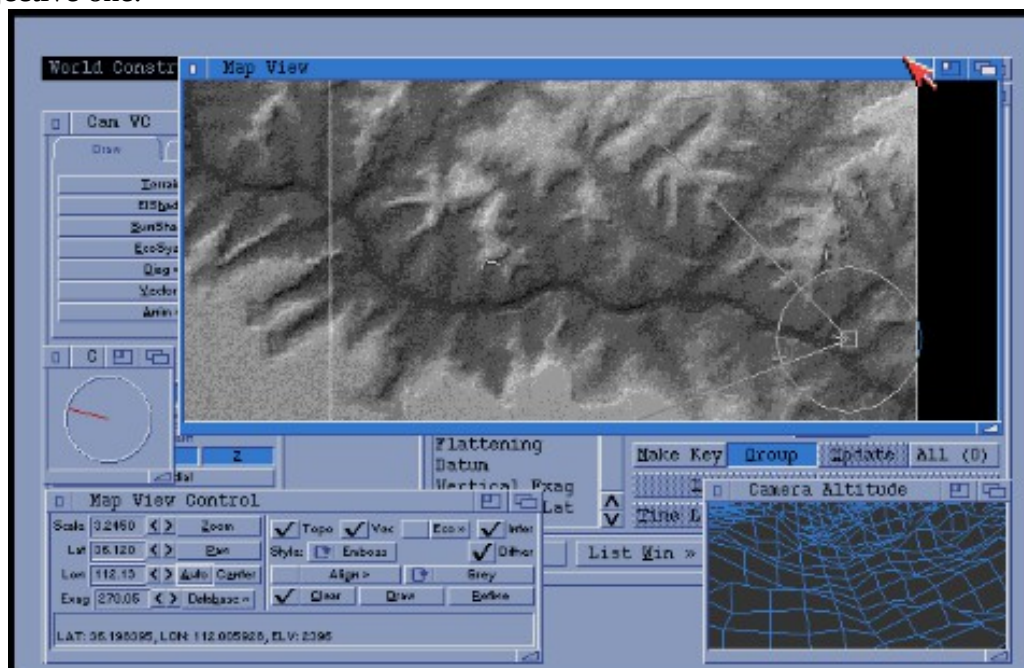
- Room Altitude: 7.0,-Latitude Room: 36,075
- Room Longitude: 112,133,-Focus Attitude: -2.0
- Latitude Focus: 36,275,-Focus Longitude: 112.386
- Room X: 512 ? rendering window
- Room Y: 384 ? rendering window
- View Arc: 80 ? Degree Width of View
- Sun Longitude: 172,-Sun Latitude: -0.9
- Haze Start: 3.8,-Haze Range: 78.5

As soon as you have changed the values shown in the relative sliders, we will be ready to open the CamView window to observe the preview in wireframe reticulated (framing). We do not consider all the controls that will appear.

Well from the Motion Editor if you have selected Camera Altitude and open the CamView panel, you can change the height of the camera by holding down the right mouse button and moving the mouse up and down. To refresh the view, press the Terrain button in the window next to it.

As soon as you are convinced of the position, confirm again with Keep. You can do the same work with the other features of the room, such as Focus Altitude...

Now let's see the next step of positioning on the Camera map, but let's leave the CamView preview window open while we go to Modules to open the MapView window at the same time. We will thus be able to take advantage of the view from the other together with a subjective one.

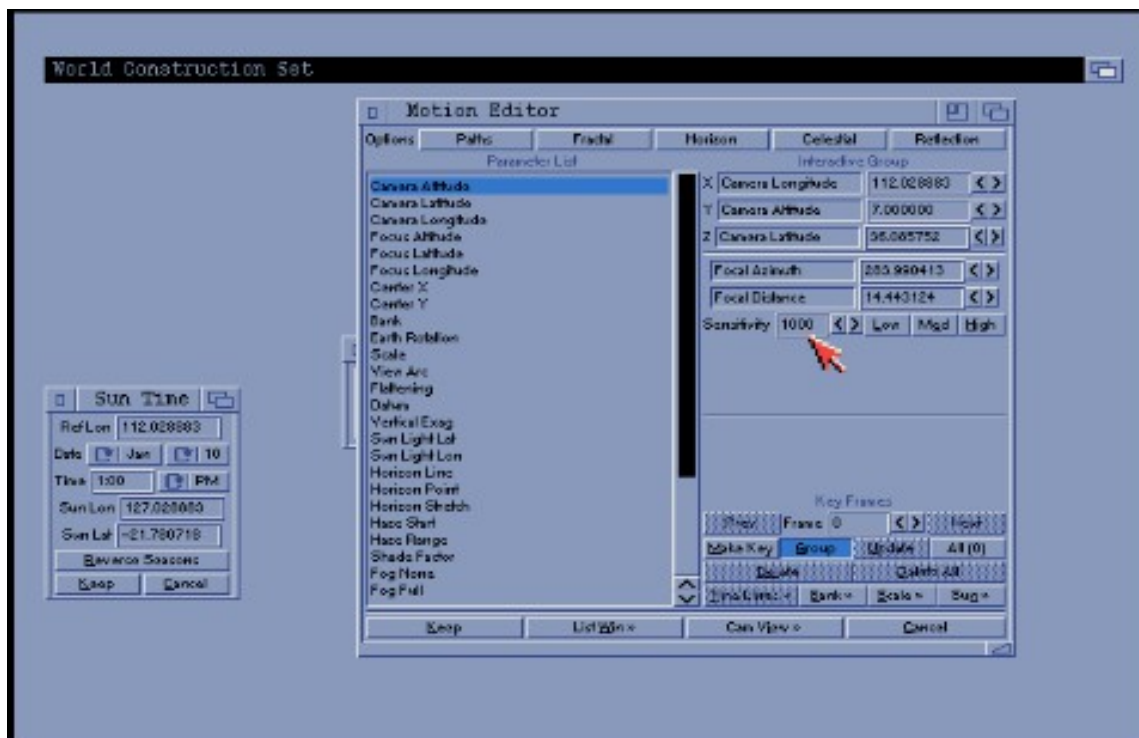


From the MapView window select with the left mouse button and while it is pressed move the Camera at will. To update the preview in subjective always click on Terrain.

While with the same procedure you can intervene on the direction of the camera lens, selecting the cross and with the left button pressed you can choose the desired view. So with Terrain's pressure I update the Preview. Eventually I can zoom in or out of the Map View through the Zoom button, for greater precision.

I still write that the circle around the camera indicates the beginning of the haze, there are two types (haze and fog) related to altitude. I would also add that the height of the camera can be changed through the Motion Editor panel.

The Sun

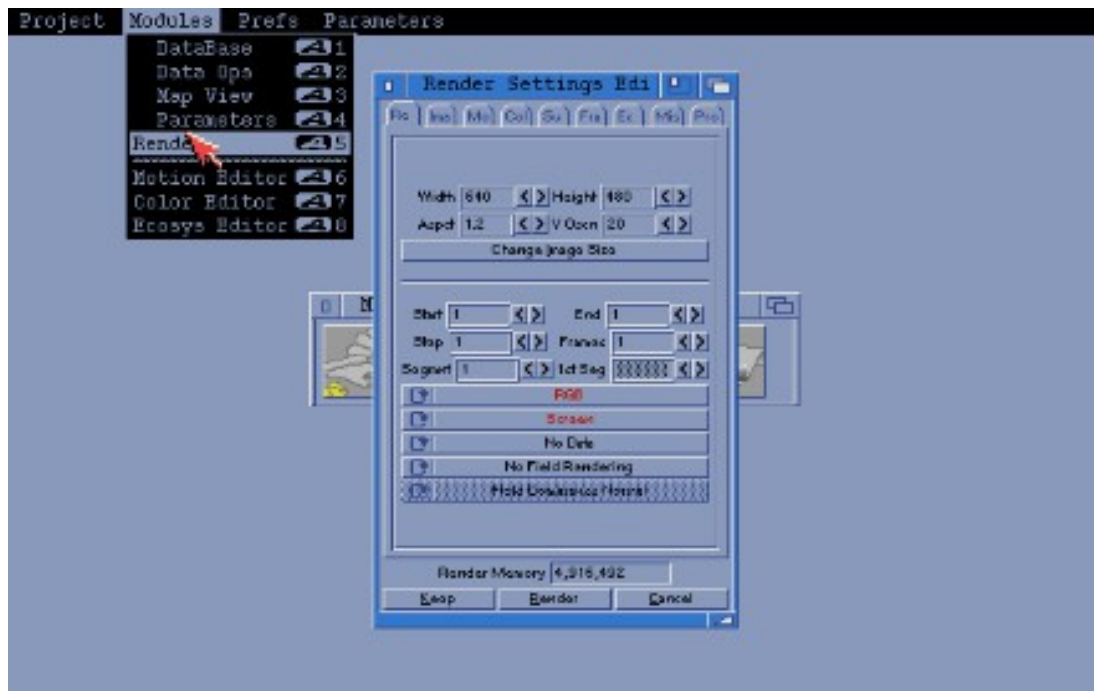


We see that change the position of the sun from the Motion Editor. I press the SUN button at the bottom right and set the time I want and the date. Longitude and latitude are automatically derived from the program. I always open the View Arc command from the Motion Editor panel, an item in the Parameter List pane.

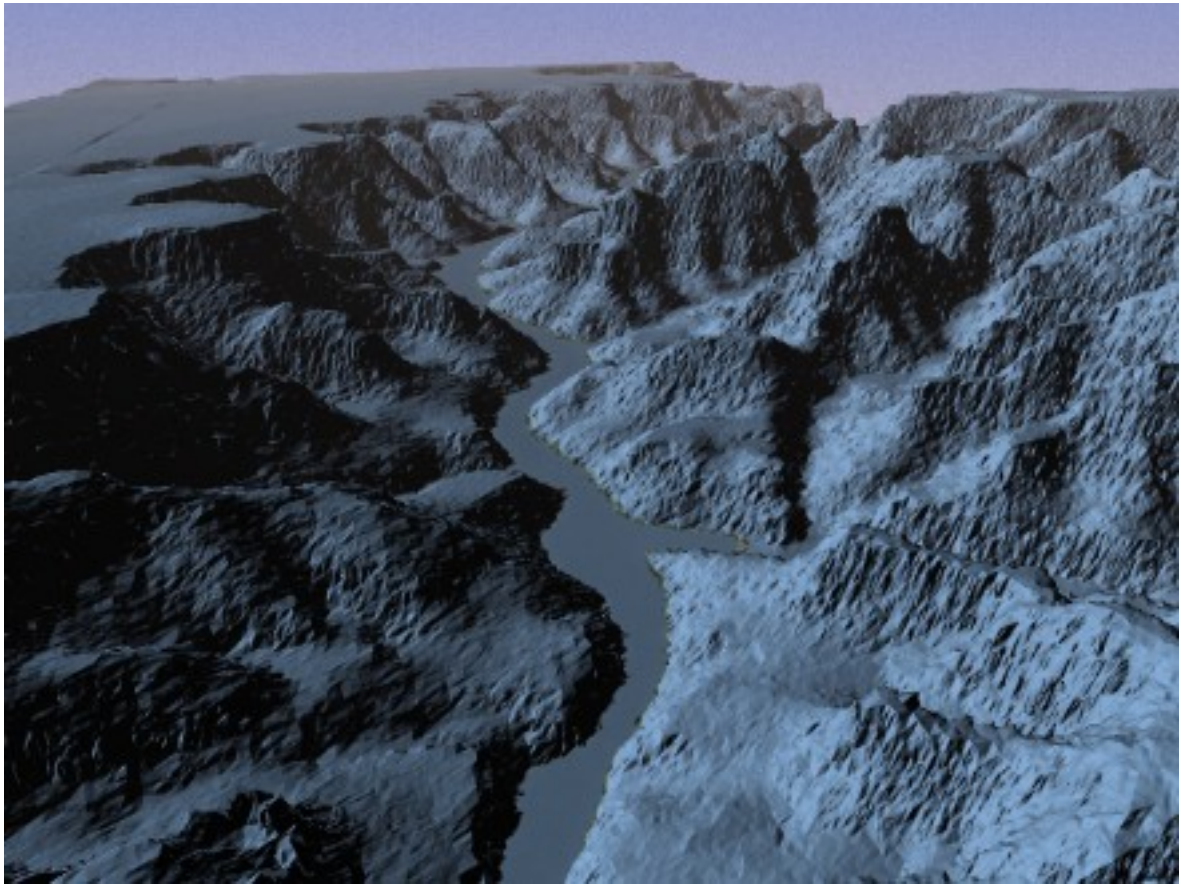
Once again confirm everything with Keep and then save again.

Rendering

For rendering go to Modules and then Render. Select the resolution, and then select the name of the image under IMA. Move to FRA and indicate the level of fractal detail that out of 4 is quite good. Then Keep to confirm and then reopen the window, pressing Rendering you will see the result. The image will be opened with any viewer.



It is certainly an extremely complicated Amiga program, but with these rudiments of use it will be possible to take the first steps and then continue on your own...



Bertinetto Bartolomeo Davide