# MojoWorld 1.2



## WELCOME TO MOJOWORLD 1.2

### WHAT'S NEW?

**General Controls:**

- Dialogs have a highlighted default option (mapped to the Return key) and tab will move between options.
- Tab moves to the next text field.
- Ctrl-W closes any editor or render window (Cmd-W on Macs).

**Navigation and RTR**

- Shift key with W, S, A, D, Q, E, M, N keys reduces camera movement by 90% for fine positioning.
- RTR shows dotted blue lines indicating the aspect and area of the current Render Setting. Portrait-mode settings now are rendered correctly in the RTR window. (This in the Generator only, as the Transporter Render Settings always match the RTR.)
- Text entry fields are enabled in the Transport Navigation Panel and in the Generator navigation controls. (Previously they were simply displays.)
- When in walk mode, the right mouse button (ctrl-click on Mac) pans and tilts the camera much faster than the left button.

**New Transporter Features**

- Pause button stops MW stealing all your CPU; Jump button starts it back up.
- Navigation Panel has a camera FOV (field of view) control.
- File Menu has a Planet Info entry to display author information for the current planet. (Such information is entered in the Generator.)

**New Generator Features**

- Planet Info entry in File menu to specify author, date and comments.
- Uplink Queue Editor now on the Editors menu rather than File menu.

***Render Menu***

- Last Rendered Image: Re-opens the last completed render in a new image window.
- Open Image off Disk: loads and displays an image file.
- Export World: exports the height and color information of the planet in 6 square images.
  - Map Sample Resolution: specifies the resolution of the image, or the number of vertices on each side of the mesh, depending on output format.
  - Options: specific to each file format; mostly either color depth for images, or turning on/off texture coordinates for 3D formats. (May be blank, for some output formats.)
  - Write Texture File: specifies whether or not to render an unshaded texture image of the terrain, for use as a texture map on exported terrain models.
- Render Settings:
  - Advanced Settings: controls internal values of the Photorealistic Renderer that can be tweaked to either improve render times or reduce memory demands. Control ling these is quite counterintuitive, so they shouldn't be changed unless problems arise in renders. Incorrect settings can result in very long rendering times or very high memory demands.
  - Bucket Size: specifies the size of the small square blocks that the rendering is done in. Making this larger can result in using less memory in the render, at the expense of increased rendering time
  - Sub-Prim Threshold: specifies the size of a chunk of geometry to be diced into micropolygons. Increasing this can sometimes make renders faster, at the cost of using more memory.
  - Redo Buckets: enables/disables the second render pass, which fills in geometry missed in the initial pass. Turning this off will speed up renderings, but may leave holes in the terrain and ocean.

***Texture/Material Editor***

- Editor name now indicates the item being edited.
- Remove: removes the current material/texture from the parent material/texture, but leaves it in the system and connected to anything else that is using it.
- Delete: removes this material/texture from everything that uses it, and deletes it from the world file.

*Basis Function Editor*

- Preview window added to show what the Basis Function (or Noise) looks like.
- All basis functions now have a Result Curve to modify their character. This is very powerful—go in there and play with it!

*Parameter Bomb Editor*

- Export Terrain: exports the patch of terrain within the parameter bomb to a 3D model/ height field file, with an optional surface color texture (without illumination). See "Export World."
- Import Terrain: This menu option automates the importing of height field terrains (DEMs or other images) and their associated bitmap texture. The imported terrain will automati cally scale to fill the parameter bomb.

*Materials*

- Materials now support transparency. This can be a texture, as with any other material parameter. Imported 3D models will have correct transparency textures.
- Nested Material Type: to create materials more complex than combinations of four separate textures, set a leaf node type to "Nested Material Tree." This allows you to open a new Material Editor for that leaf. Material trees can be made arbitrarily large using Nested Materials. WARNING: complex materials slow MojoWorld down.

*Coordinate Systems*

- Latitude coordinate system: useful for creating polar ice caps and other climate-by-latitude effects. (Previously a plugin to 1.02; now part of the main distribution.)
- Constant coordinate system: feeds a constant value or color into a texture.
- Altitude->Use Sea Level: an option to have altitude be relative to sea level. Use this to create textures that respond to changes in sea level, as when changed by a slider in the Transporter.

*Atmospheres*

- Cloudy Atmosphere->Zero Level: provides an offset to the base level of the atmosphere, which was previously fixed at the planetary radius. Essentially, moves "sea level" for the atmosphere up and down. Useful for controlling atmospheric density in low areas.