Mesh to Volume... and back!

Welcome to this brief explanation about the settings included in "Mesh to Volume... and back!", a DAZ Studio plugin (Windows only).

Mesh To Volume 1.1	?	×
- VOLUME OPTIONS		_
🥥 expanding volume	C contained vol	ume
voxel size 		1.00
vertical blend		0.00
- NODES TO CONVERT		
🧿 all	selected only	
- NOISE OPTIONS		
seed		1234
intensity		97.11
frequency		10.00
mesh to volume		
volume to mesh		
open vdb folder		
reset options		

The tool can be used by simply double clicking the "**Mesh2Volume**" icon in the Content Library.

[VOLUME OPTIONS] expanding volume/contained volume: the expanding volume option allows, if used with a noise intensity > 0, to have the volume expand over the boundaries of the provided geometry, thus allowing to create cool effects like turbulent flows and particles.

On the other hand, the contained volume will have voxels restrained into the geometry boundaries, creating a more compact and regular shape.

 [VOLUME OPTIONS] voxel size: it represents the smallest 3D unit of a volume. Each volume is made of a specific amount of voxels; the smaller the voxel size, the higher the number of voxels and the overall quality and definition of the volume and computing times.

A value of 1.0 is usually the default for volumes of 1 cubic meter. With larger meshes you can progressively increase the voxel size; no need, for example, to use a value of 1.0 on a large terrain.

Conversely, if using small objects you may experiment smaller voxel size values. Again, using very low voxel size values will increase computing time.

- <u>[VOLUME OPTIONS] vertical blend</u>: applies an opacity vertical gradient, affecting voxels transparency as their vertical position increase. Particularly useful when creating for volumes.
- [NODES TO CONVERT] all/selected only: choose to convert all the nodes or only the selected ones. Not visible nodes will be ignored.
- <u>[NOISE OPTIONS] seed</u>: the seed value for the noise map. Produces different results each time the program is run, changing the look of the output.
- **[NOISE OPTIONS] intensity**: the amount of noise applied to the voxels. Higher the value, larger the distorsion and turbulent look.
- <u>[NOISE OPTIONS] frequency</u>: the frequency of the noise map applied to voxels.
 Low frequencies will generate more rounded, smooth maps; higher values will generate more turbulent, fast changing outputs.

[MESH TO VOLUME]: click to convert the geometry to volume.

[VOLUME TO MESH]: click and select a .vdb file to be converted to geometry.

[OPEN VDB FOLDER]: click to open the folder where vdb output files are saved.

[RESET OPTIONS]: click to reset the tool options.

If you need support you can contact me directly at: info@alessandromastronardi.com

Credits

- zstd.dll: ZStandard compression library - Yann Collet, Facebook, Inc.

- blosc.dll: fast, compressed and persistent data store library for C - The Blosc Development Team

- libnoise.dll: procedural noise library - Jason Bevin 2007

- Iz4.dll: Compression algorithm - Yann Collet

- snappy.dll: A fast compressor/decompressor library Victor Costan
- zlib1.dll: general purpose compression library Jean-loup Gailly and Mark Adler