Radiance + OpenDX

Radiance

Radiance + Unity3D

OpenDX + Octave + Radiance

Radiance Workshop 2006

OpenDX

Radiance workshop 2006

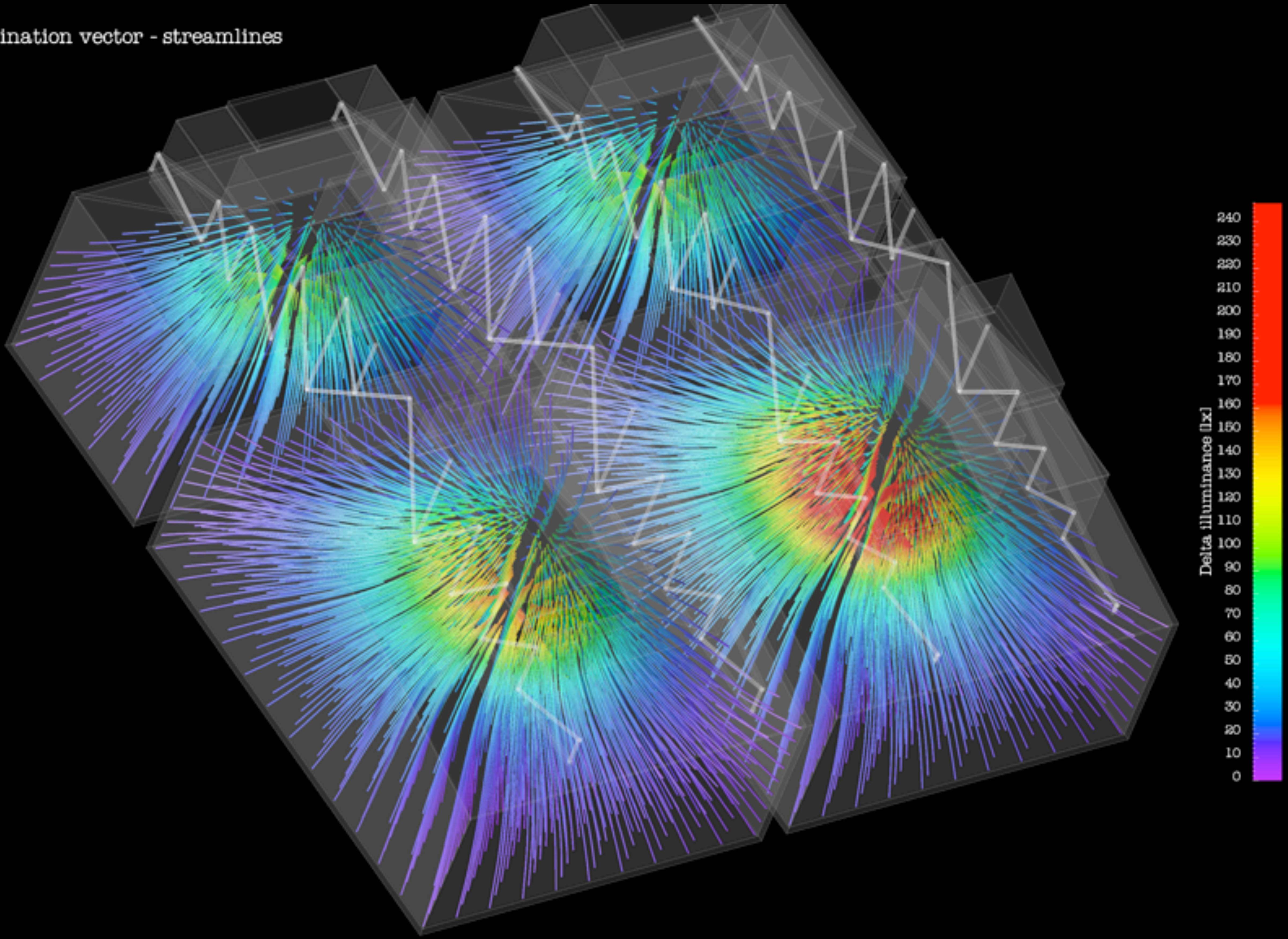
Visualisation with Open DX

Experiences on the use of OpenDX in the Radiance workflow

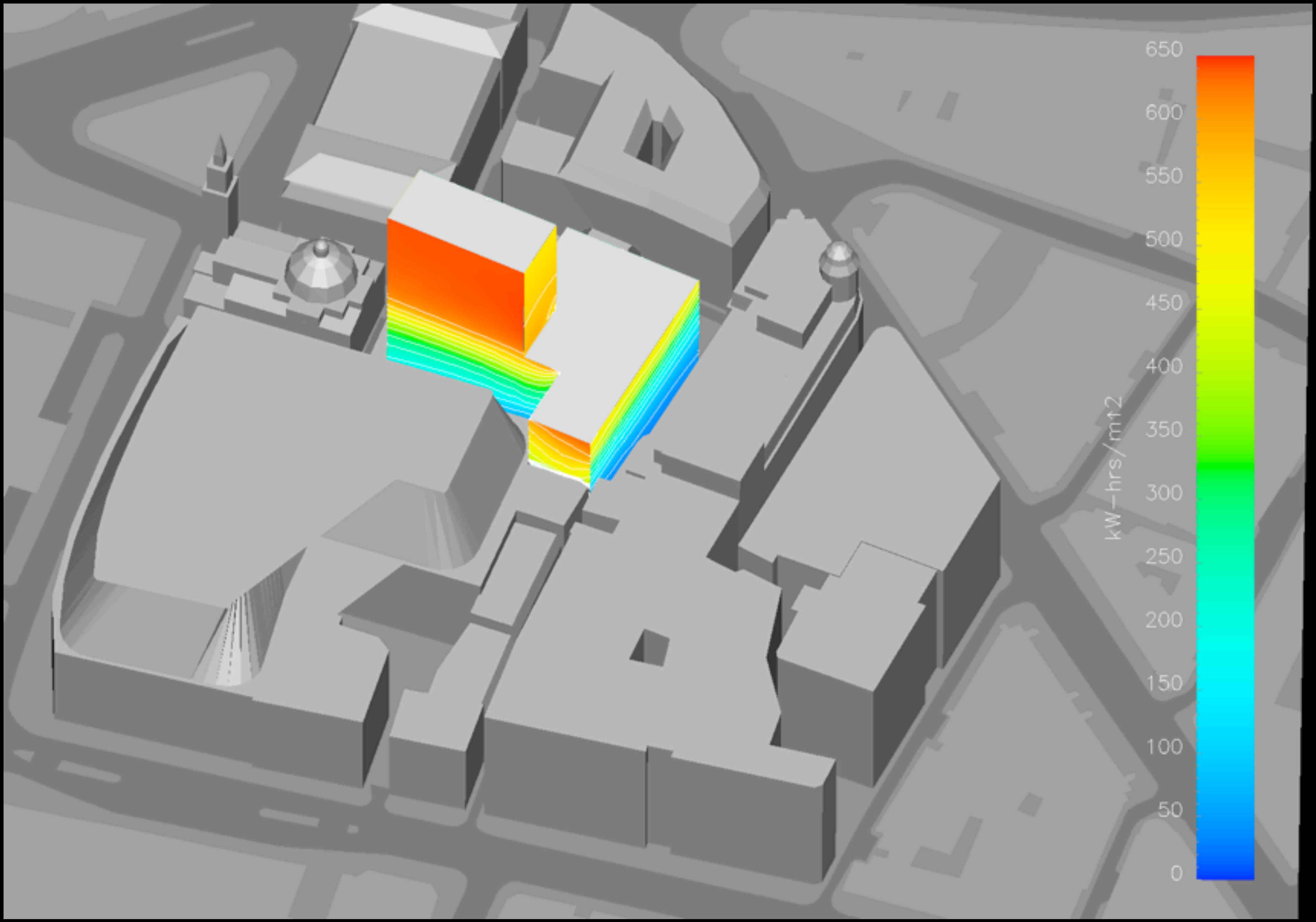
Andrew Mc Neil
Giulio Antonutto

ArupLighting

Illumination vector - streamlines

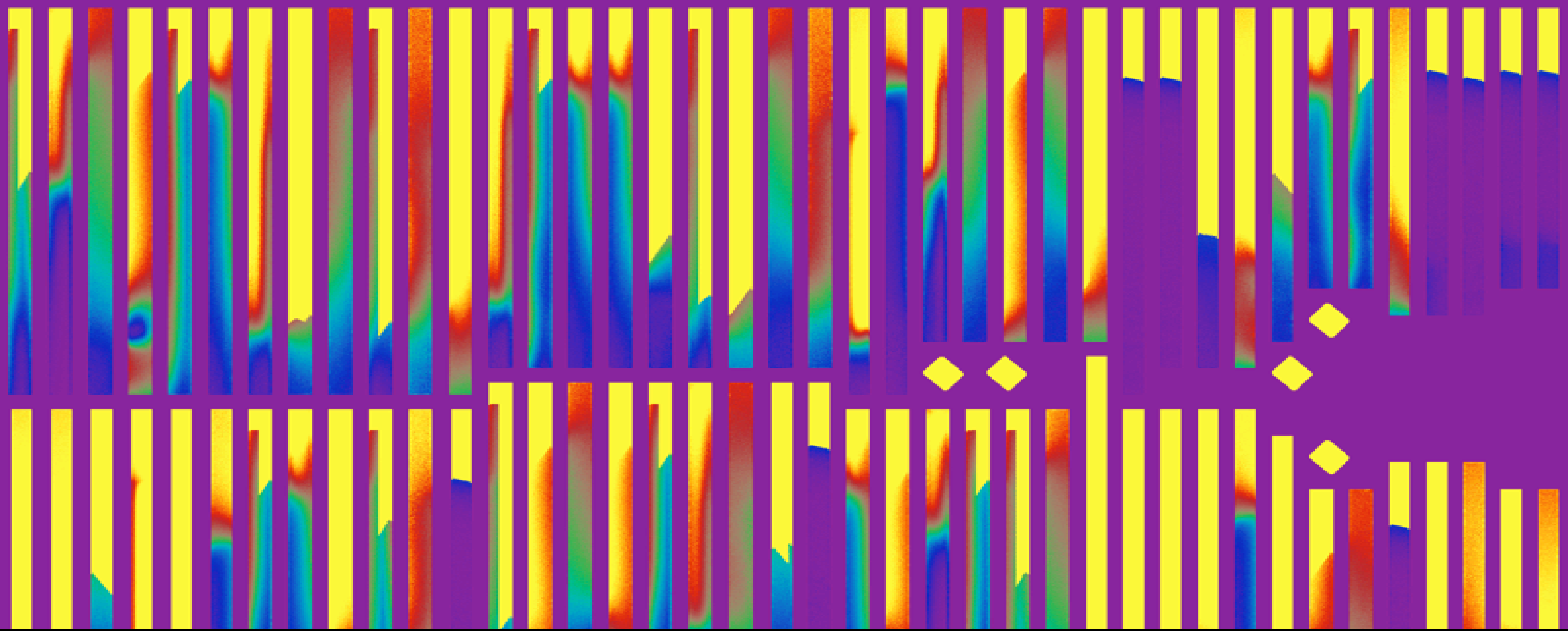


Bank Facade Irradiance



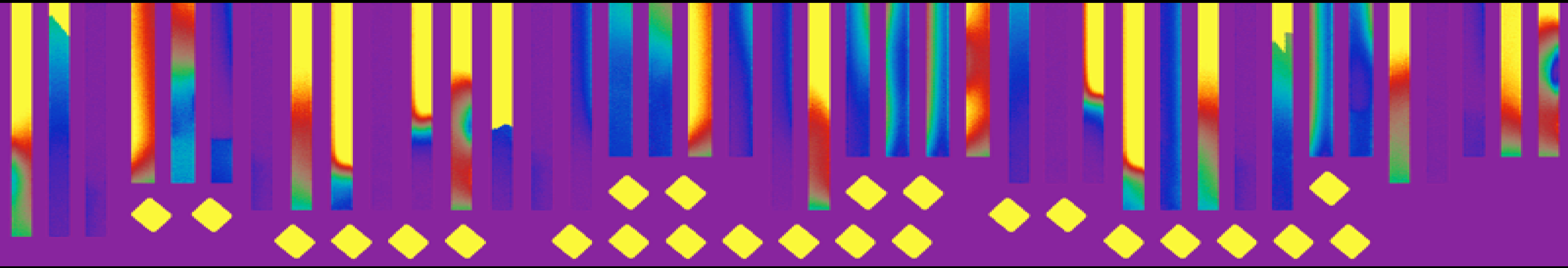
Radiance Workshop 2008

UV Mapping / Unity3D

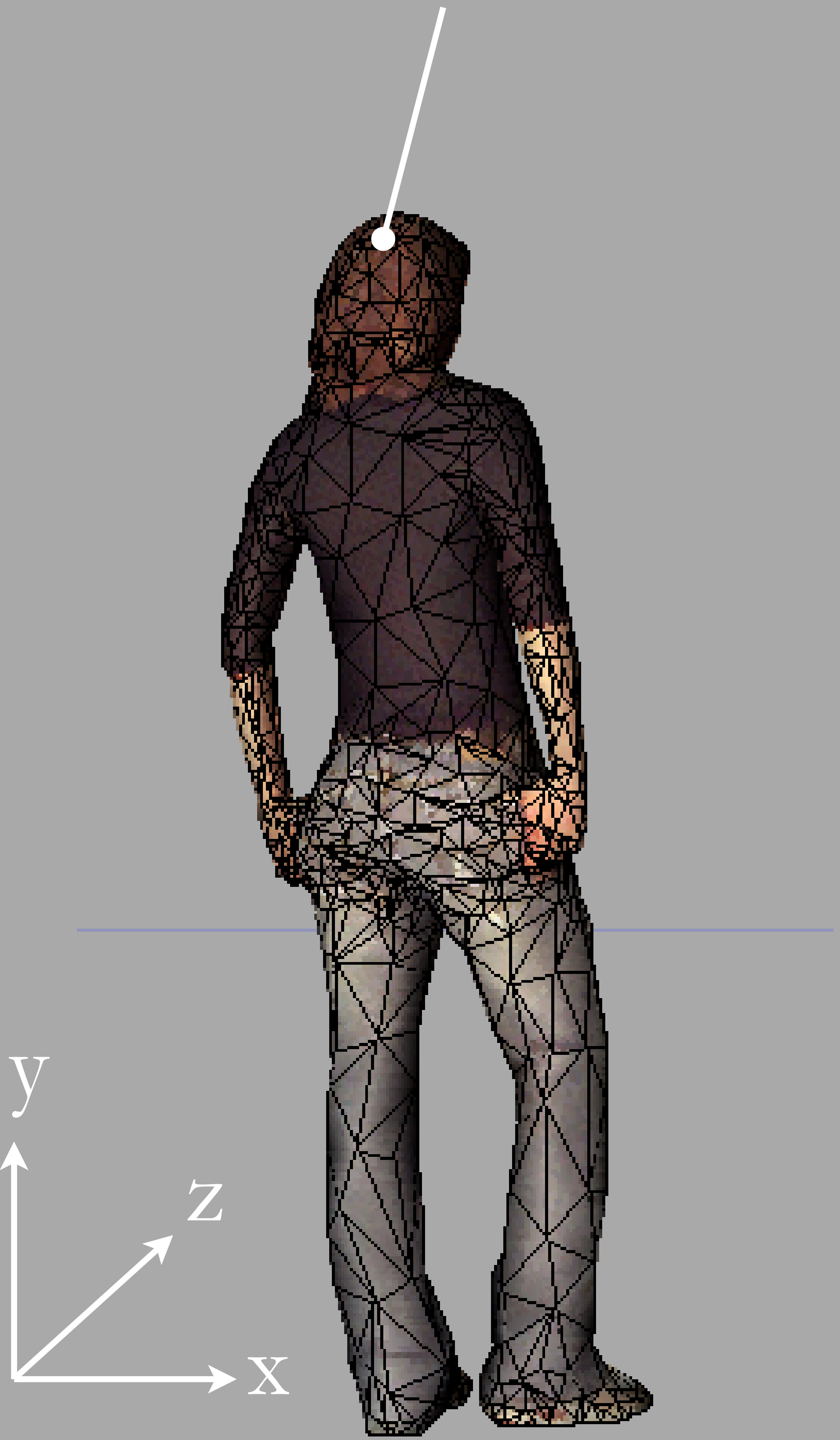


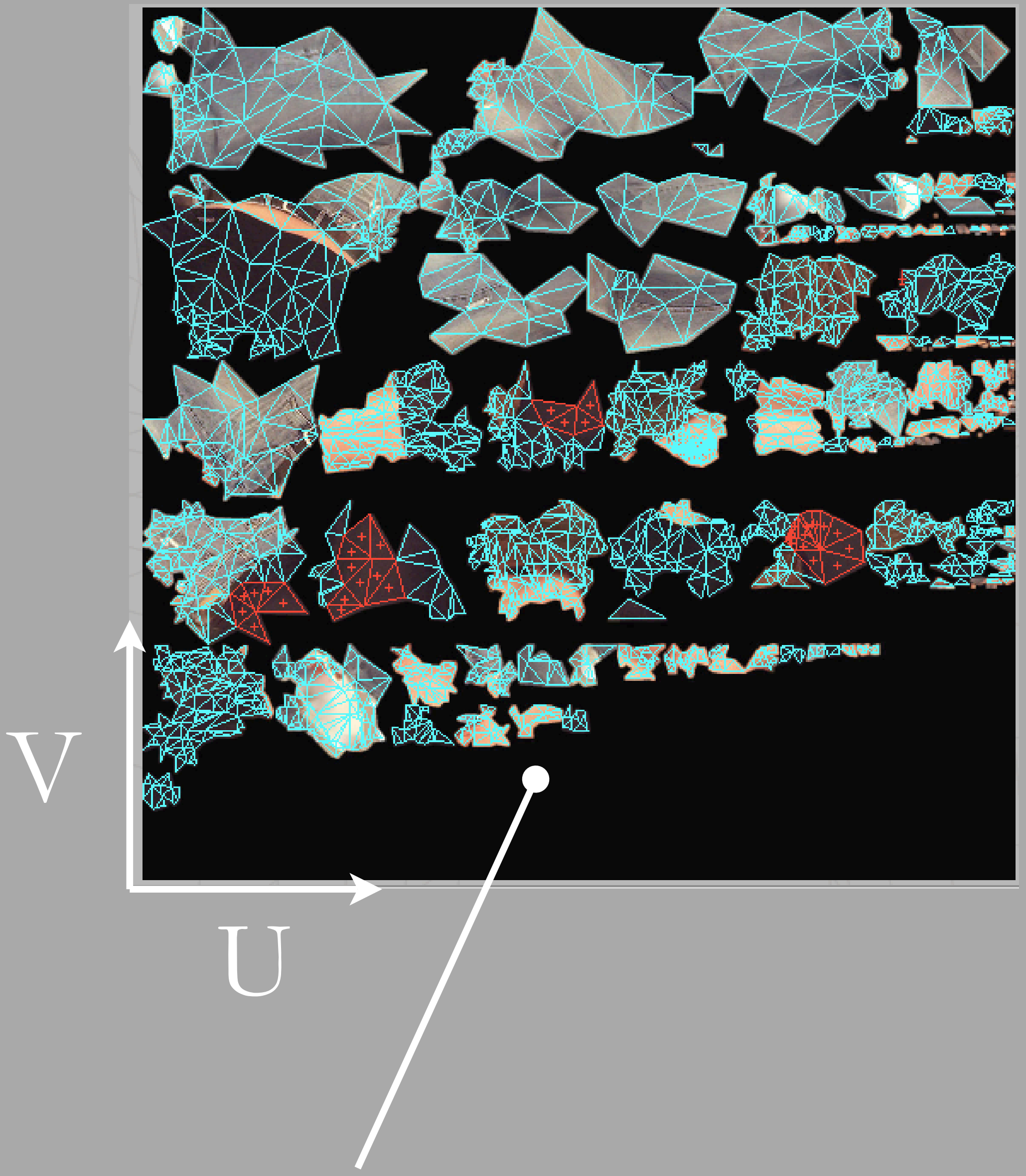
Light maps with Radiance

Giulio Antonutto / ArupLighting / 2008



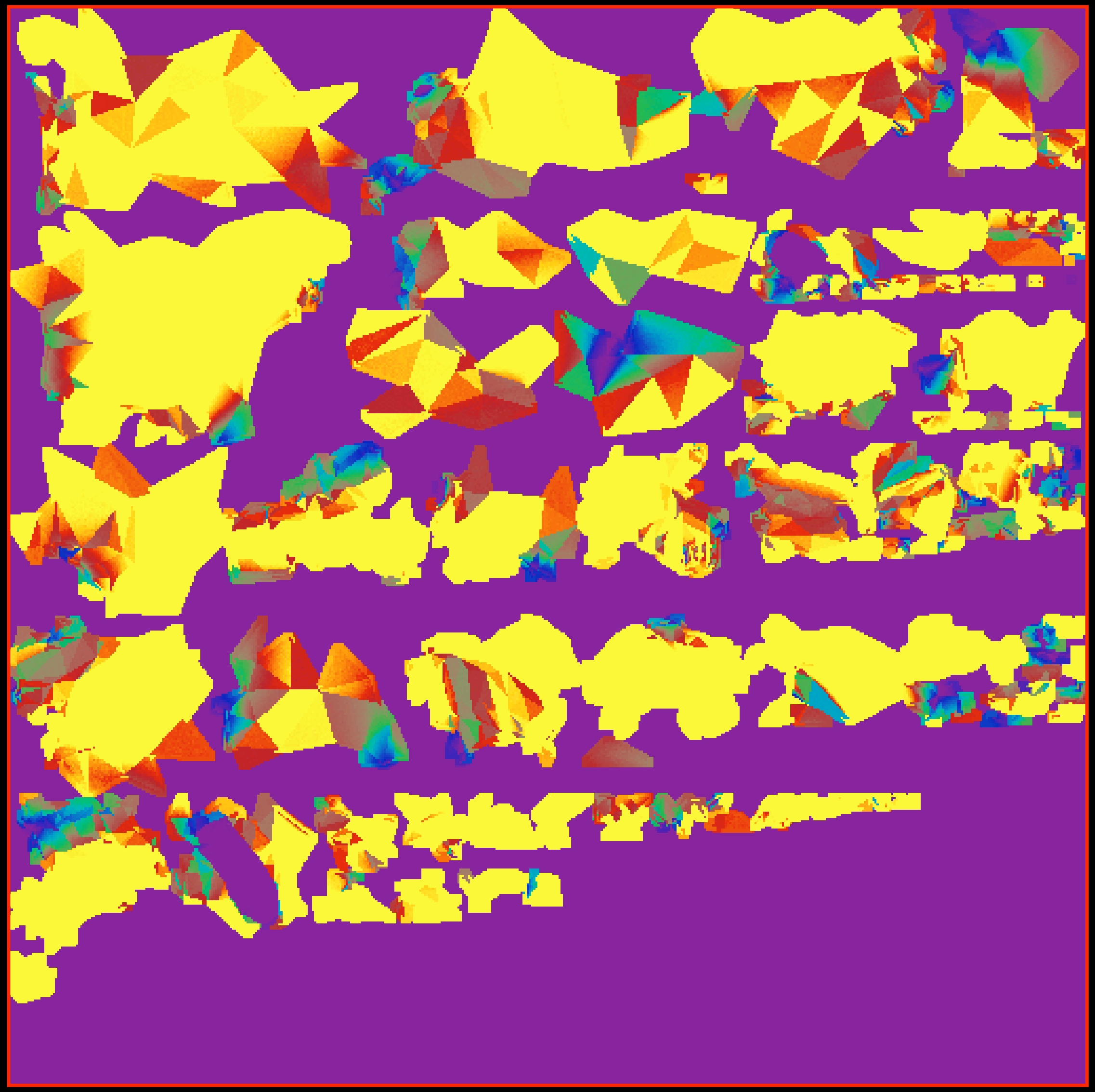
This is a 3D model with textures





This is a UV map

Complicate geometry...



ArupLighting

Radiance Workshop 2014

Ambient files in OpenDX

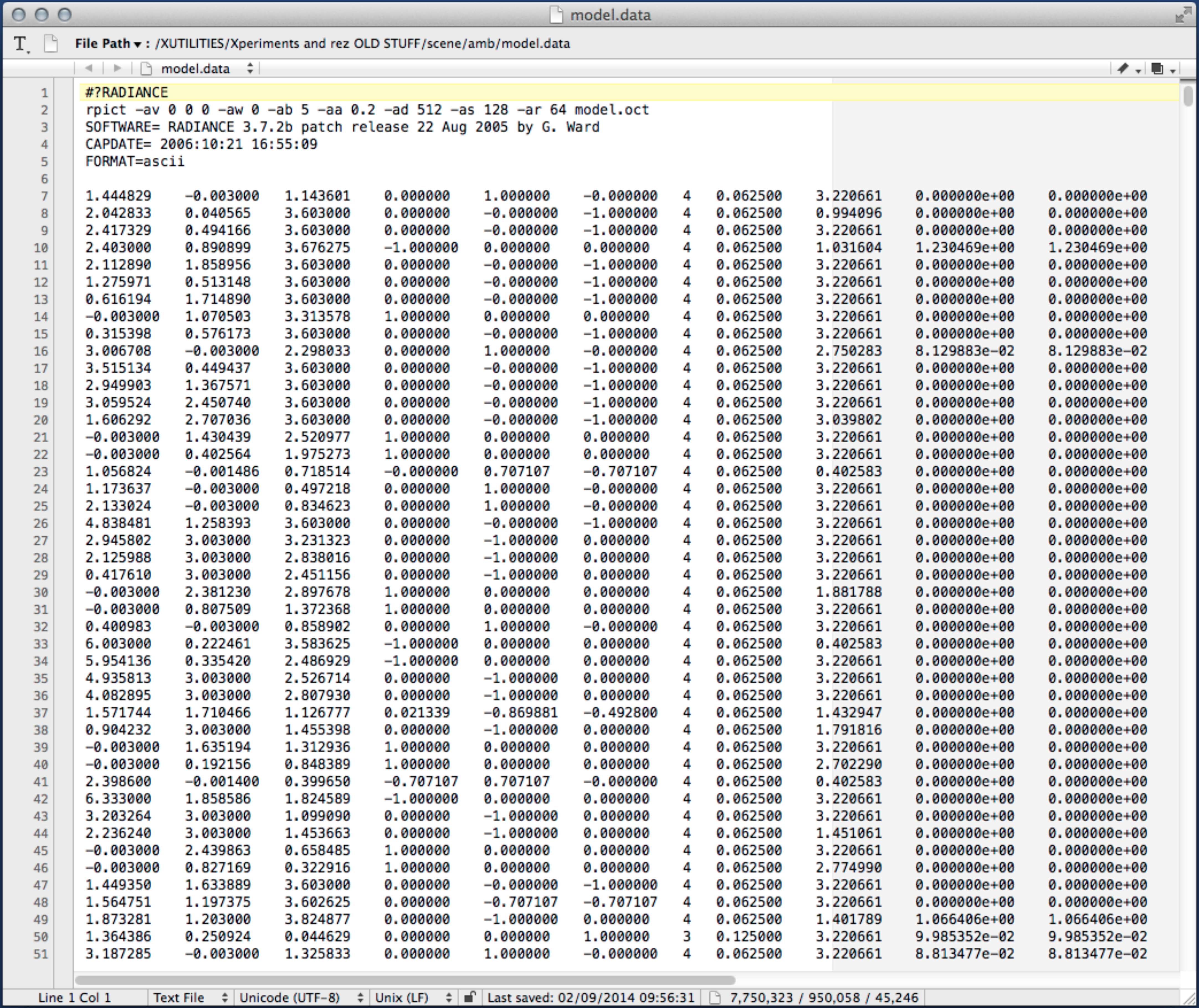
model.amb

```
lookamb -d model.amb > model.data
```

model.amb

for each point:

Position, vector
Direction, vector
Lvl, scalar
Wt, scalar
Rad, scalar
Value, vector
Pos.Grad: vector
Dir.Grad: vector


model.data
File Path ▾ : /XUTILITIES/Xperiments and rez OLD STUFF/scene/amb/model.data
model.data
Line 1 Col 1
Text File
Unicode (UTF-8)
Unix (LF)
Last saved: 02/09/2014 09:56:31
7,750,323 / 950,058 / 45,246

```
#?RADIANCE
rpict -av 0 0 0 -aw 0 -ab 5 -aa 0.2 -ad 512 -as 128 -ar 64 model.oct
SOFTWARE= RADIANCE 3.7.2b patch release 22 Aug 2005 by G. Ward
CAPDATE= 2006:10:21 16:55:09
FORMAT=ascii

1.444829    -0.003000   1.143601    0.000000    1.000000    -0.000000   4   0.062500    3.220661    0.000000e+00    0.000000e+00
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2.417329    0.494166    3.603000    0.000000    -0.000000   -1.000000   4   0.062500    3.220661    0.000000e+00    0.000000e+00
2.403000    0.890899    3.676275    -1.000000   0.000000    0.000000    4   0.062500    1.031604    1.230469e+00    1.230469e+00
2.112890    1.858956    3.603000    0.000000    -0.000000   -1.000000   4   0.062500    3.220661    0.000000e+00    0.000000e+00
1.275971    0.513148    3.603000    0.000000    -0.000000   -1.000000   4   0.062500    3.220661    0.000000e+00    0.000000e+00
0.616194    1.714890    3.603000    0.000000    -0.000000   -1.000000   4   0.062500    3.220661    0.000000e+00    0.000000e+00
-0.003000   1.070503    3.313578    1.000000    0.000000    0.000000    4   0.062500    3.220661    0.000000e+00    0.000000e+00
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3.006708    -0.003000   2.298033    0.000000    1.000000    -0.000000   4   0.062500    2.750283    8.129883e-02    8.129883e-02
3.515134    0.449437    3.603000    0.000000    -0.000000   -1.000000   4   0.062500    3.220661    0.000000e+00    0.000000e+00
2.949903    1.367571    3.603000    0.000000    -0.000000   -1.000000   4   0.062500    3.220661    0.000000e+00    0.000000e+00
3.059524    2.450740    3.603000    0.000000    -0.000000   -1.000000   4   0.062500    3.220661    0.000000e+00    0.000000e+00
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-0.003000   0.402564    1.975273    1.000000    0.000000    0.000000    4   0.062500    3.220661    0.000000e+00    0.000000e+00
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0.400983    -0.003000   0.858902    0.000000    1.000000    -0.000000   4   0.062500    3.220661    0.000000e+00    0.000000e+00
6.003000    0.222461    3.583625    -1.000000   0.000000    0.000000    4   0.062500    0.402583    0.000000e+00    0.000000e+00
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1.364386    0.250924    0.044629    0.000000    0.000000    1.000000    3   0.125000    3.220661    9.985352e-02    9.985352e-02
3.187285    -0.003000   1.325833    0.000000    1.000000    -0.000000   4   0.062500    3.220661    8.813477e-02    8.813477e-02
```
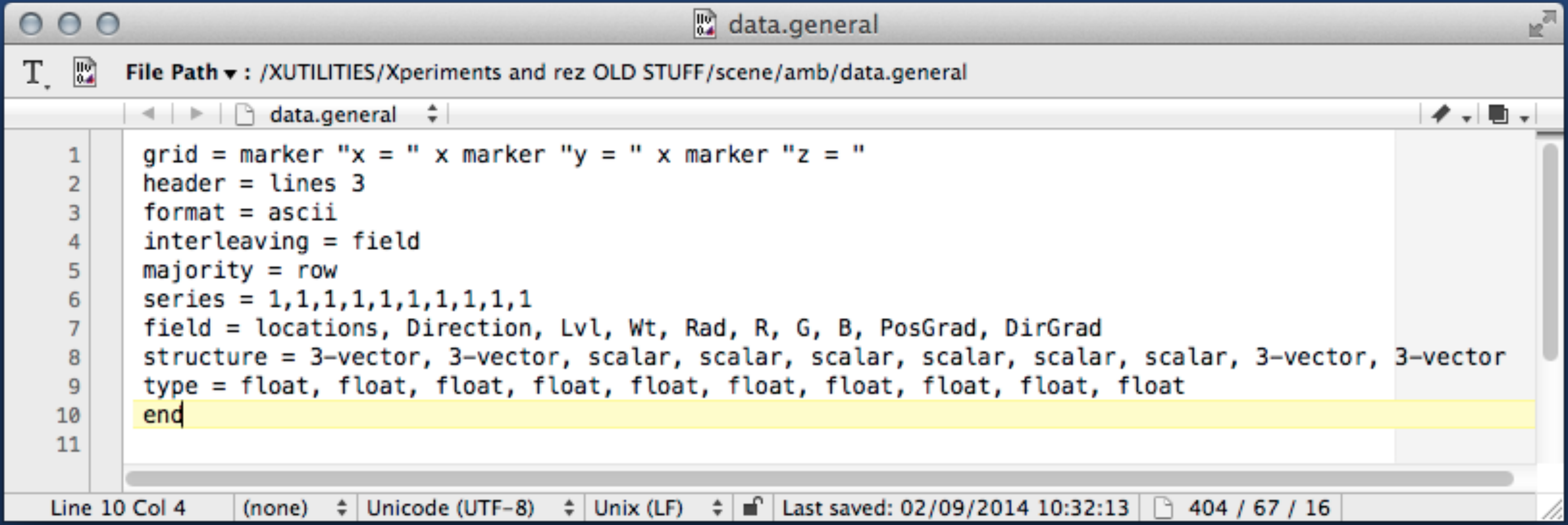
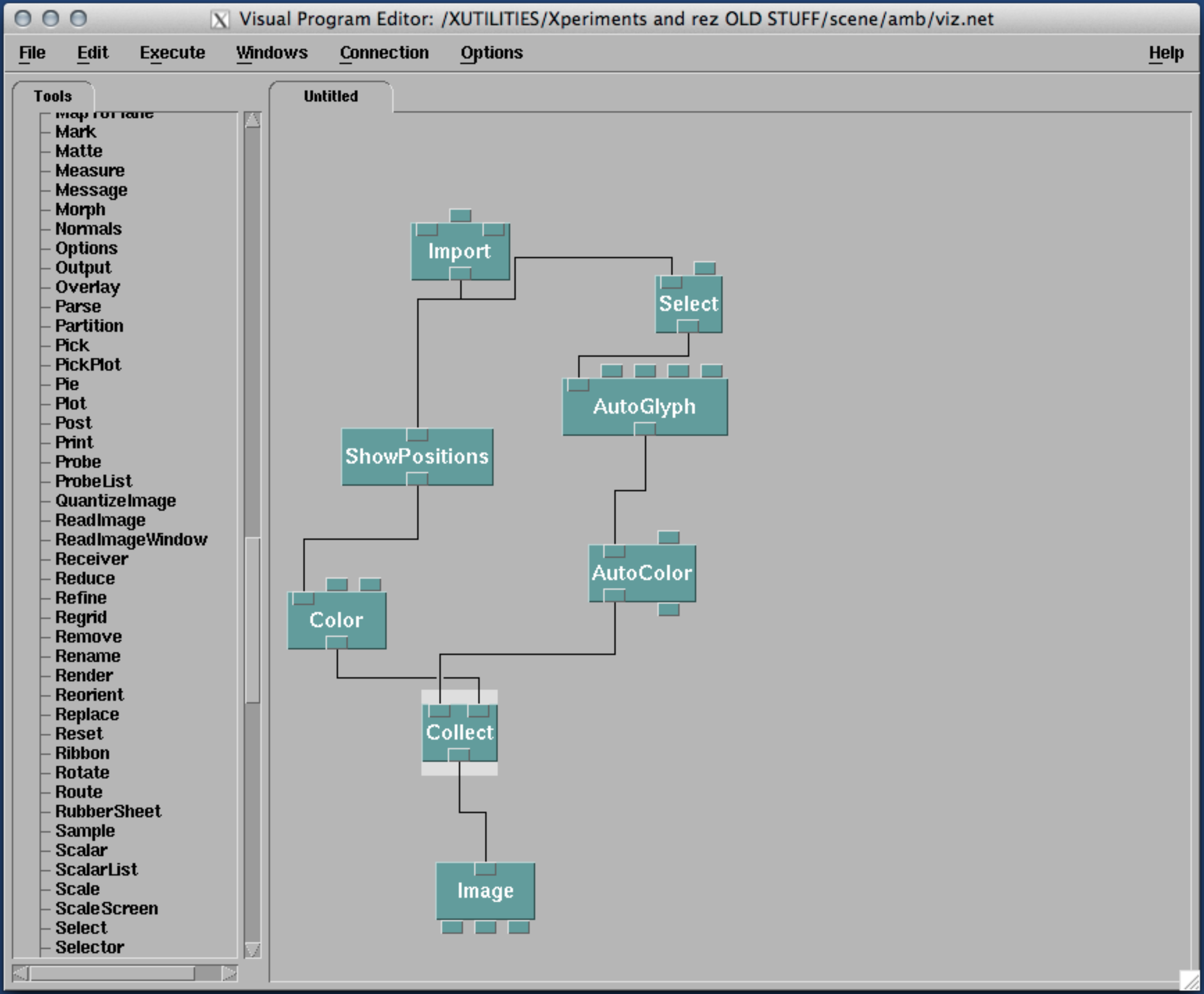

bringing all in OpenDX



File Path ▾ : /XUTILITIES/Xperiments and rez OLD STUFF/scene/amb/data.general

```
grid = marker "x = " x marker "y = " x marker "z = "
header = lines 3
format = ascii
interleaving = field
majority = row
series = 1,1,1,1,1,1,1,1,1,1
field = locations, Direction, Lvl, Wt, Rad, R, G, B, PosGrad, DirGrad
structure = 3-vector, 3-vector, scalar, scalar, scalar, scalar, scalar, scalar, 3-vector, 3-vector
type = float, float, float, float, float, float, float, float, float, float
end
```

bringing all in OpenDX



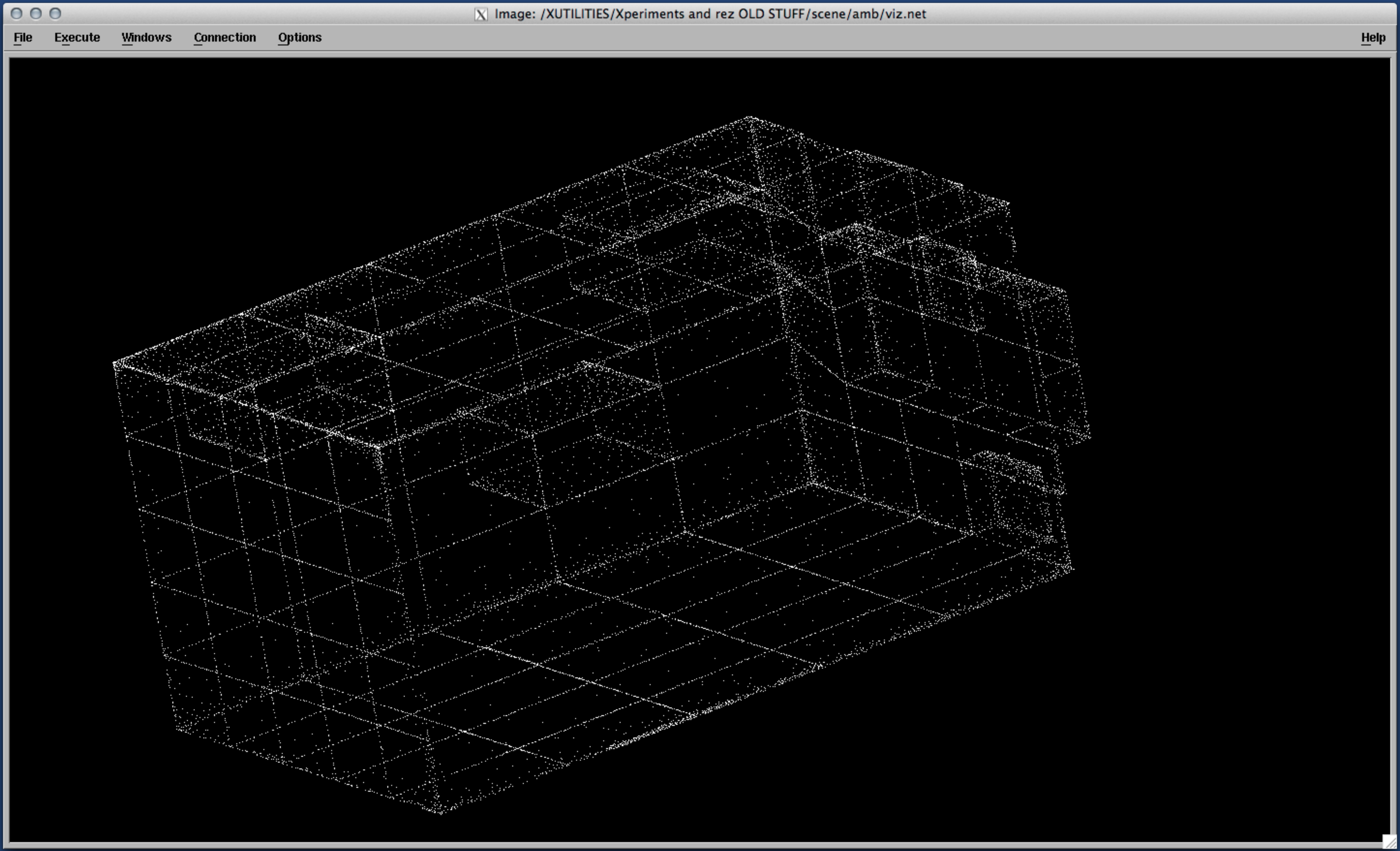
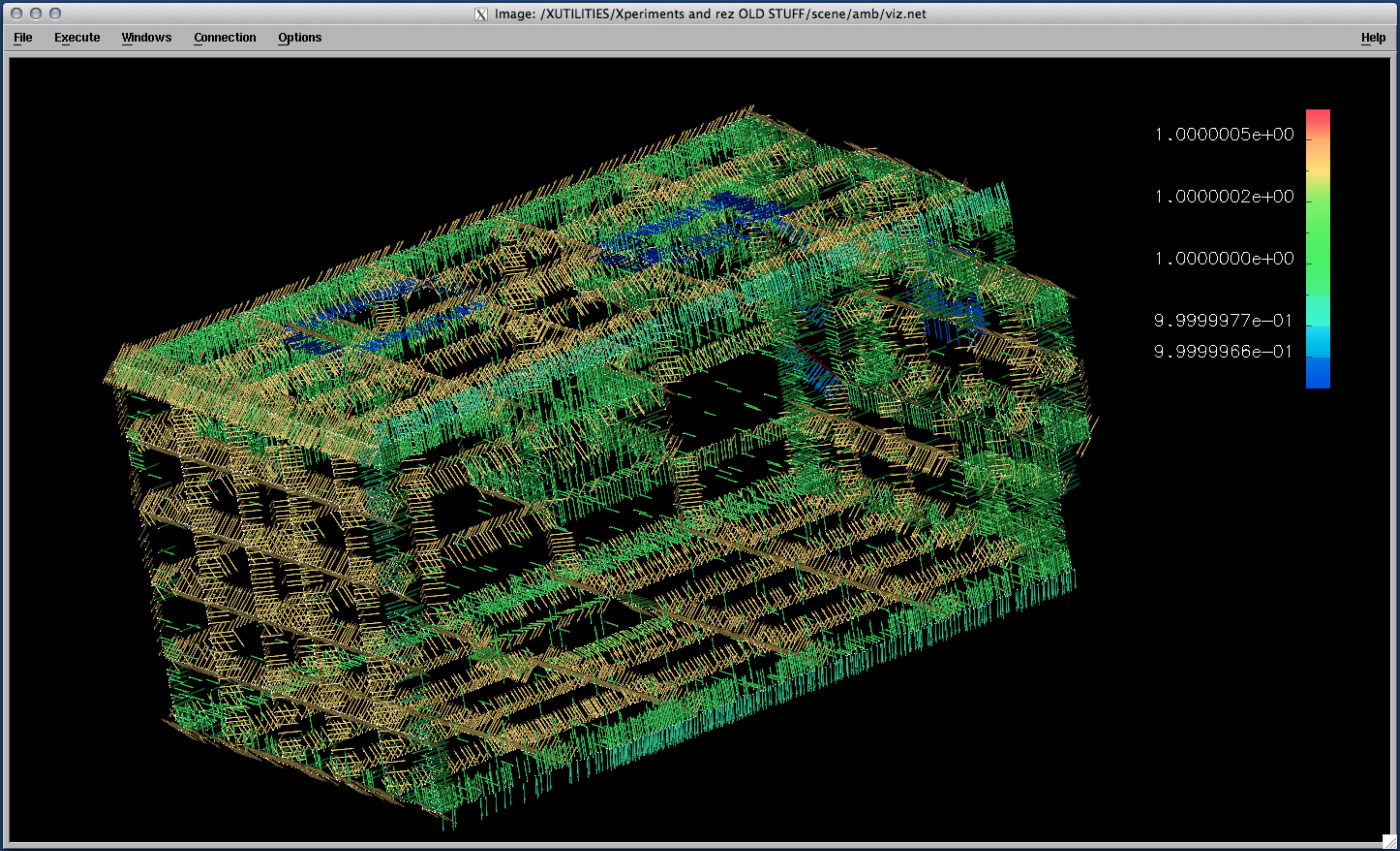


Image: /XUTILITIES/Xperiments and rez OLD STUFF/scene/amb/viz.net
File
Execute
Windows
Connection
Options
Help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File
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Help
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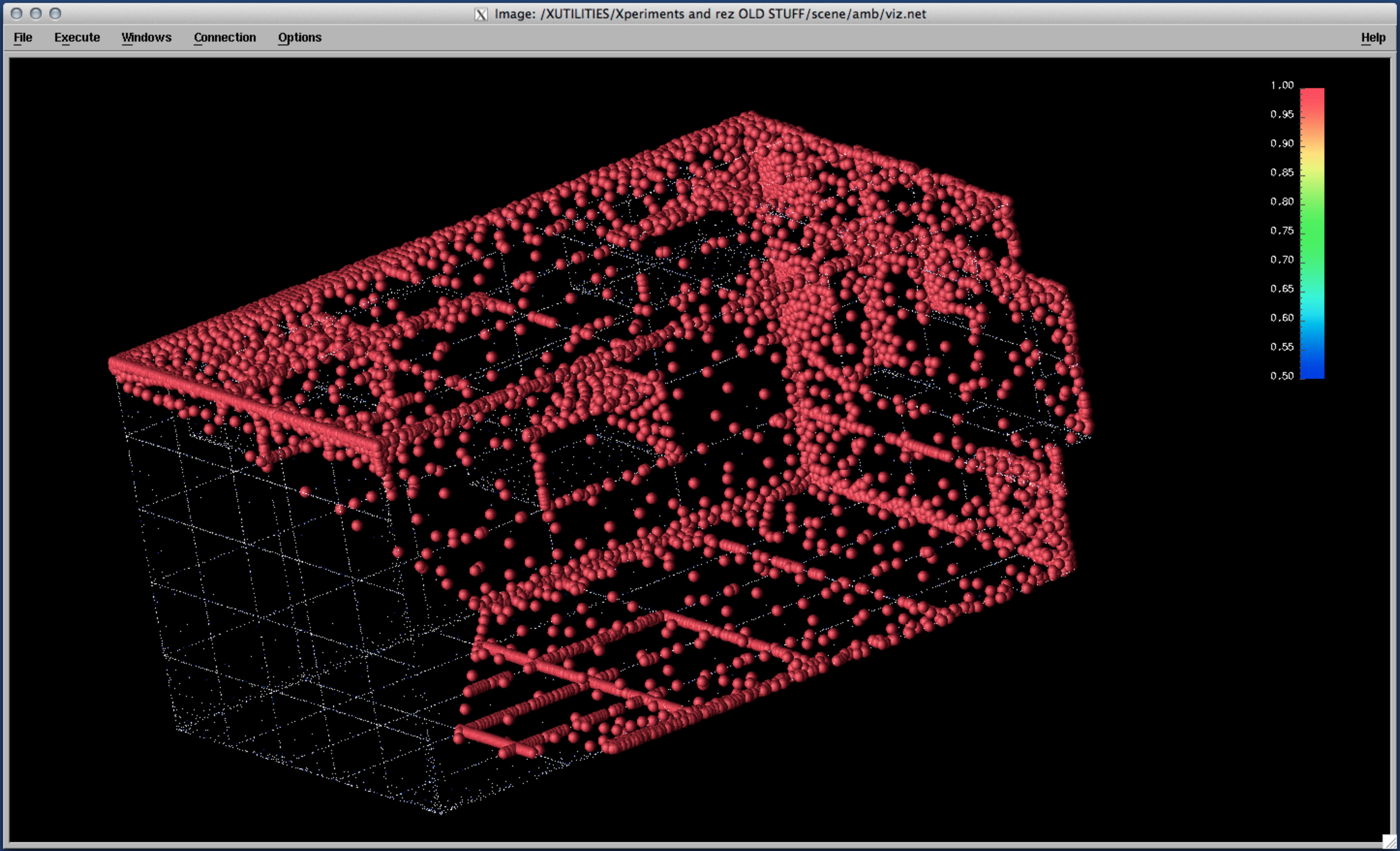
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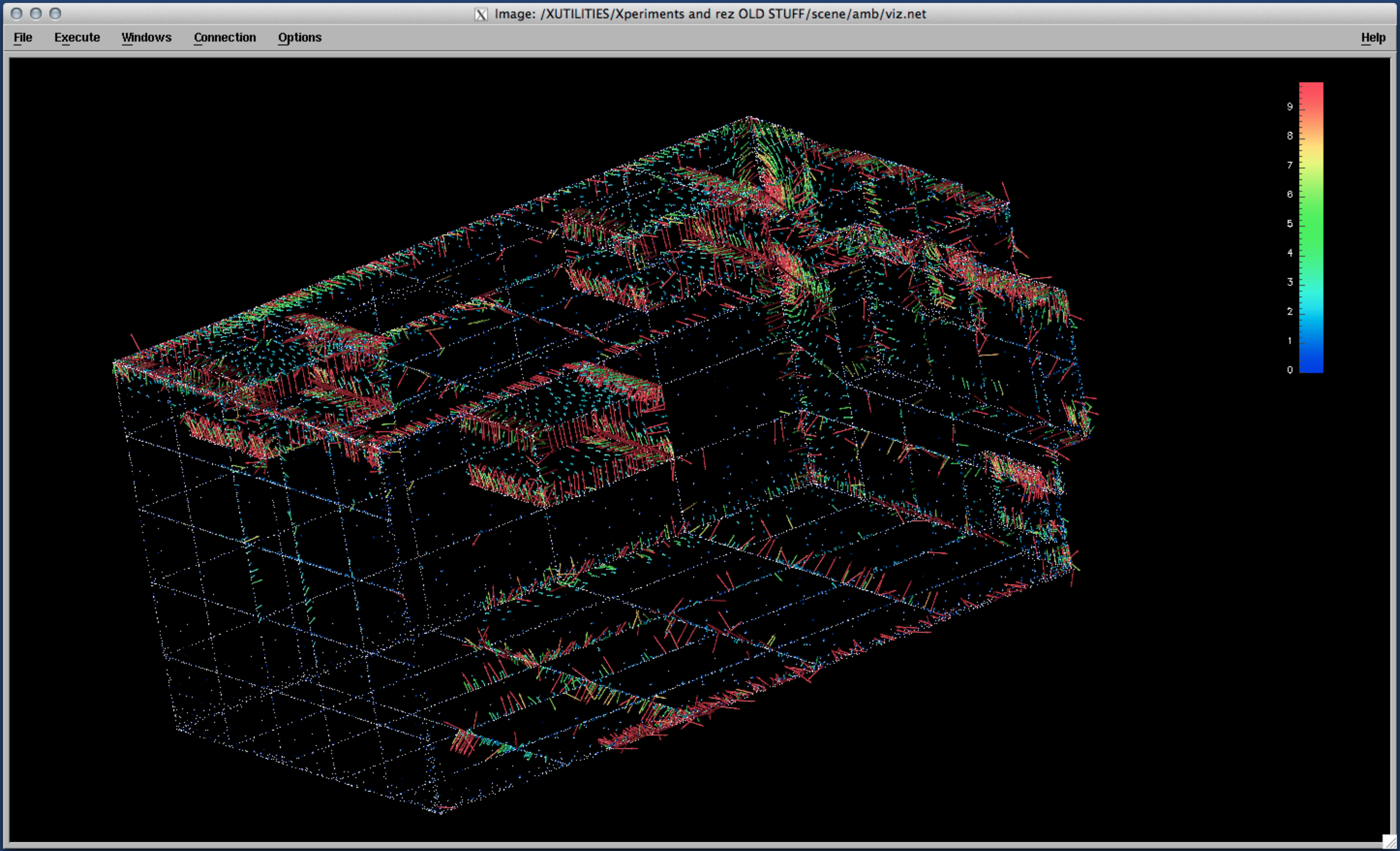
0.50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Windows
Connection
Options
Help
9
8
7
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5
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3
2
1
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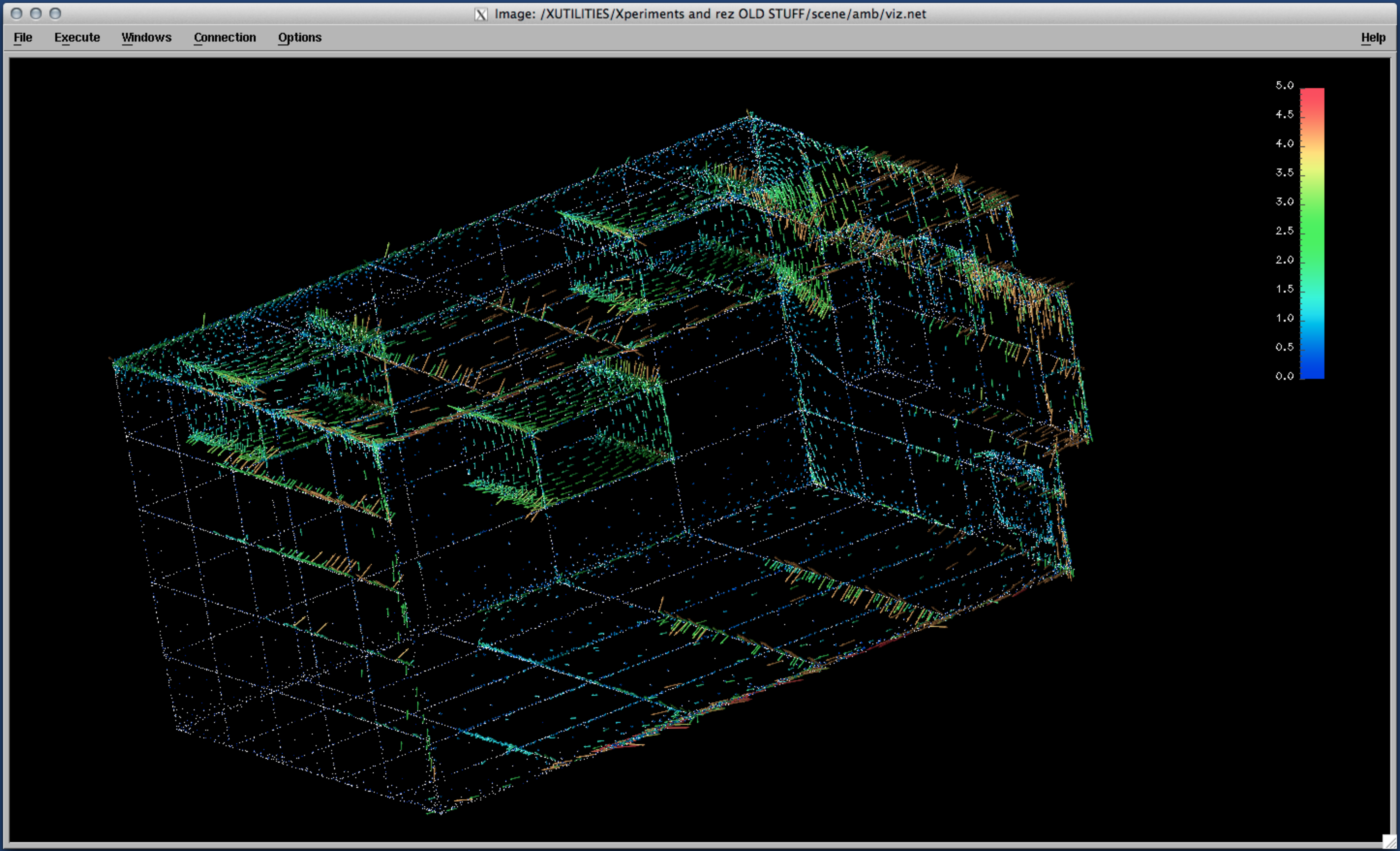
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File
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Windows
Connection
Options
Help
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4.0
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2.5
2.0
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1.0
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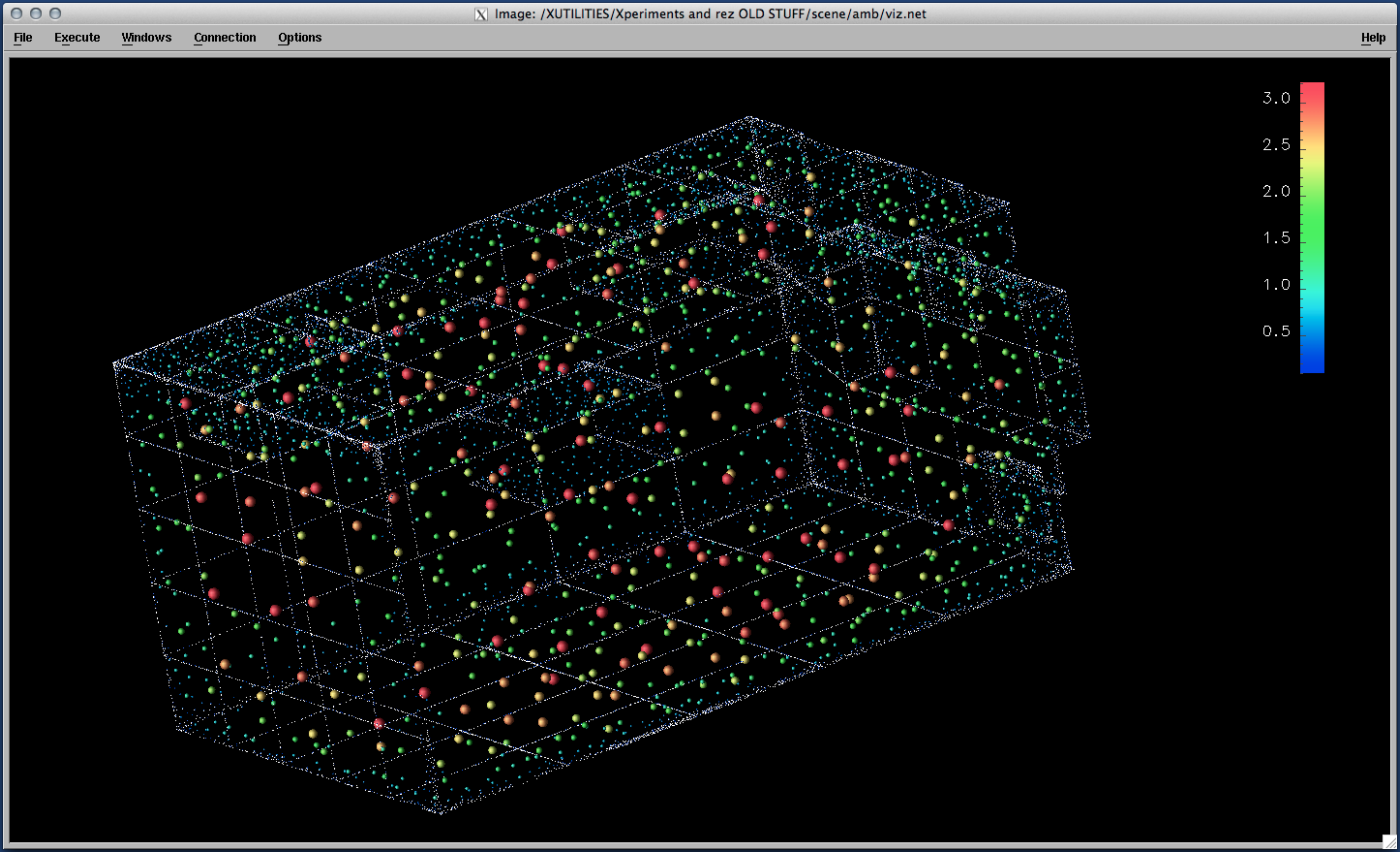
0.0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Connection
Options
Help
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2.5
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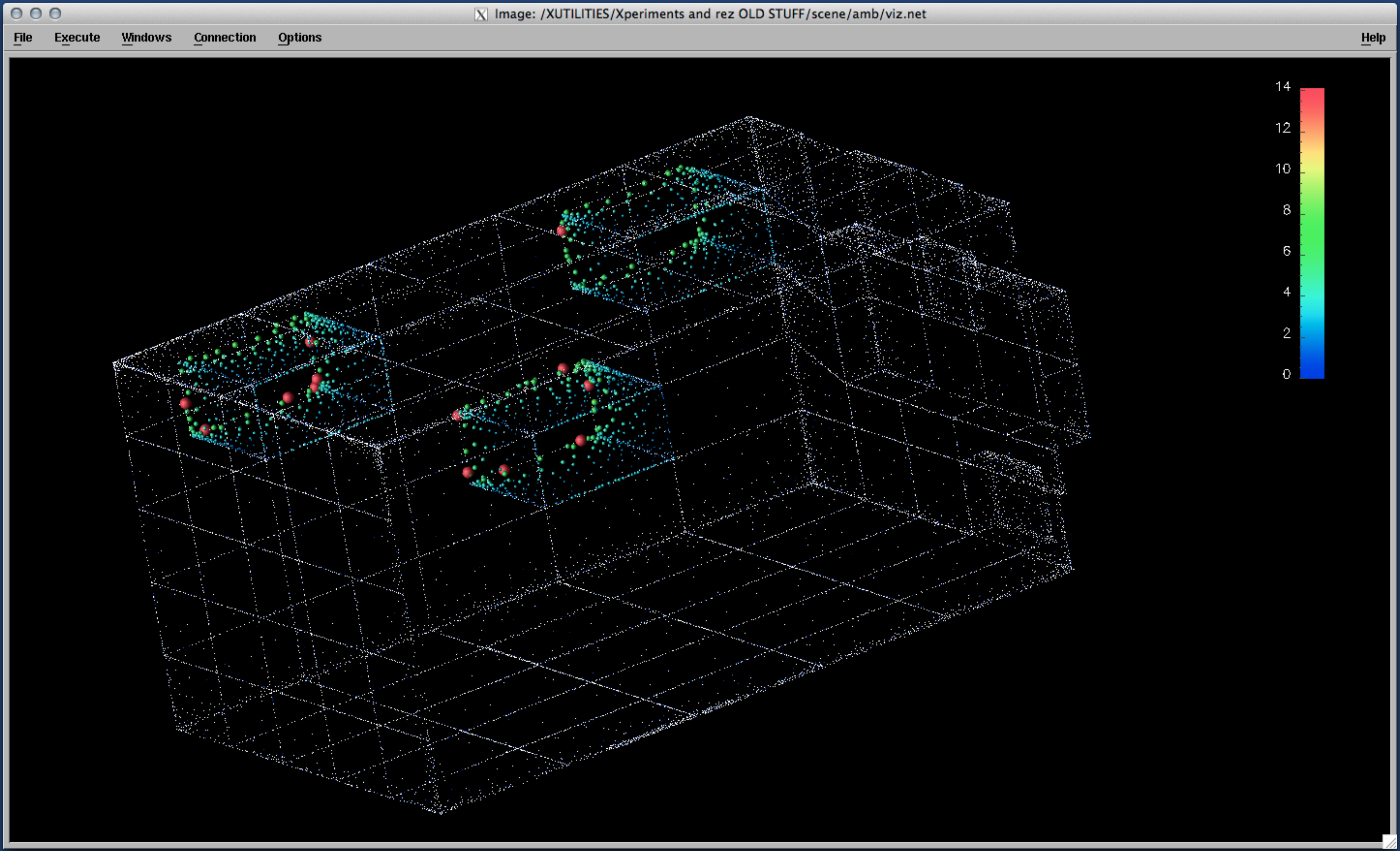
1.0
0.5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File
Execute
Windows
Connection
Options
Help
14
12
10
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6
4
2
0

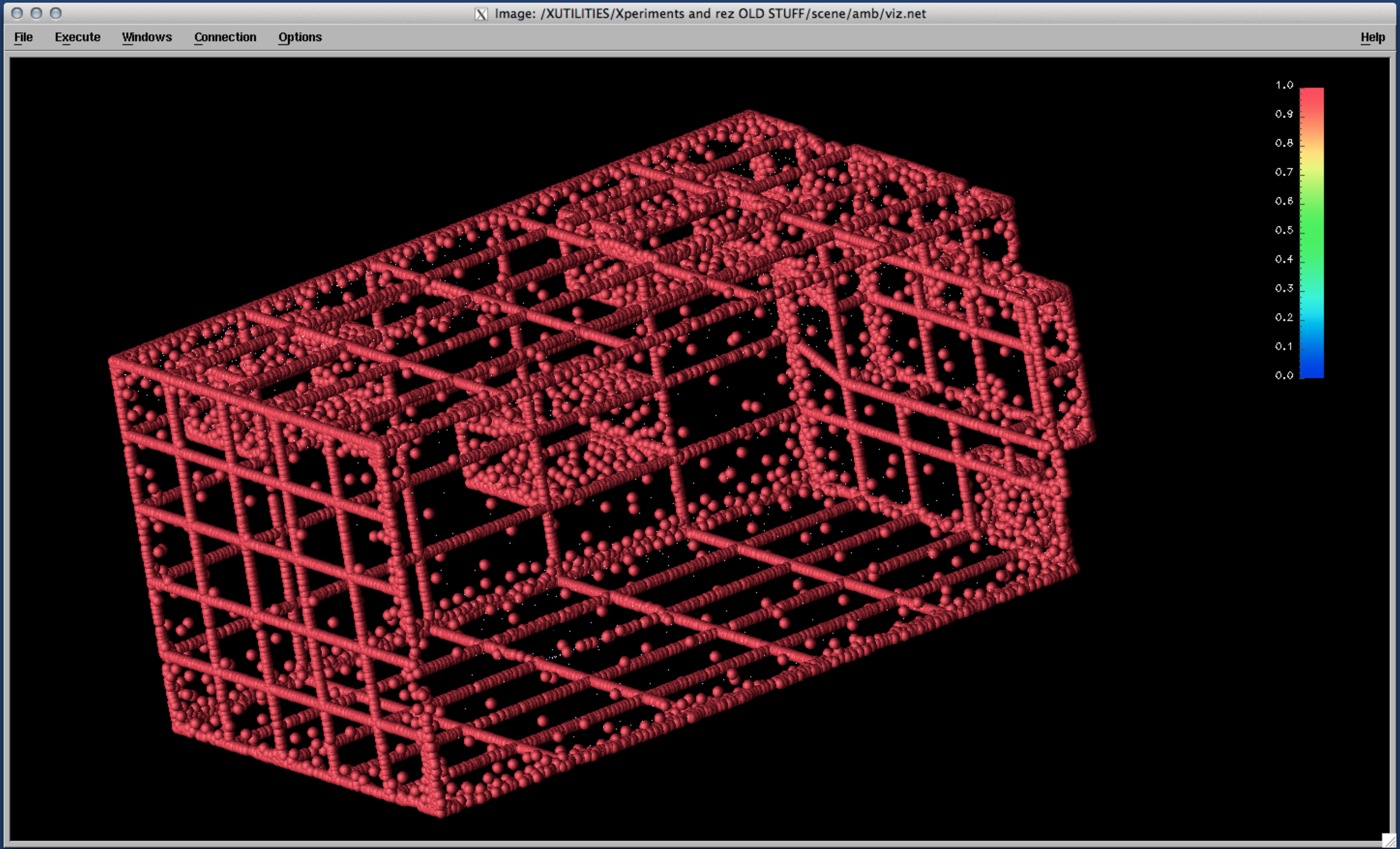
Image: /XUTILITIES/Xperiments and rez OLD STUFF/scene/amb/viz.net
File
Execute
Windows
Connection
Options
Help
1.0
0.9
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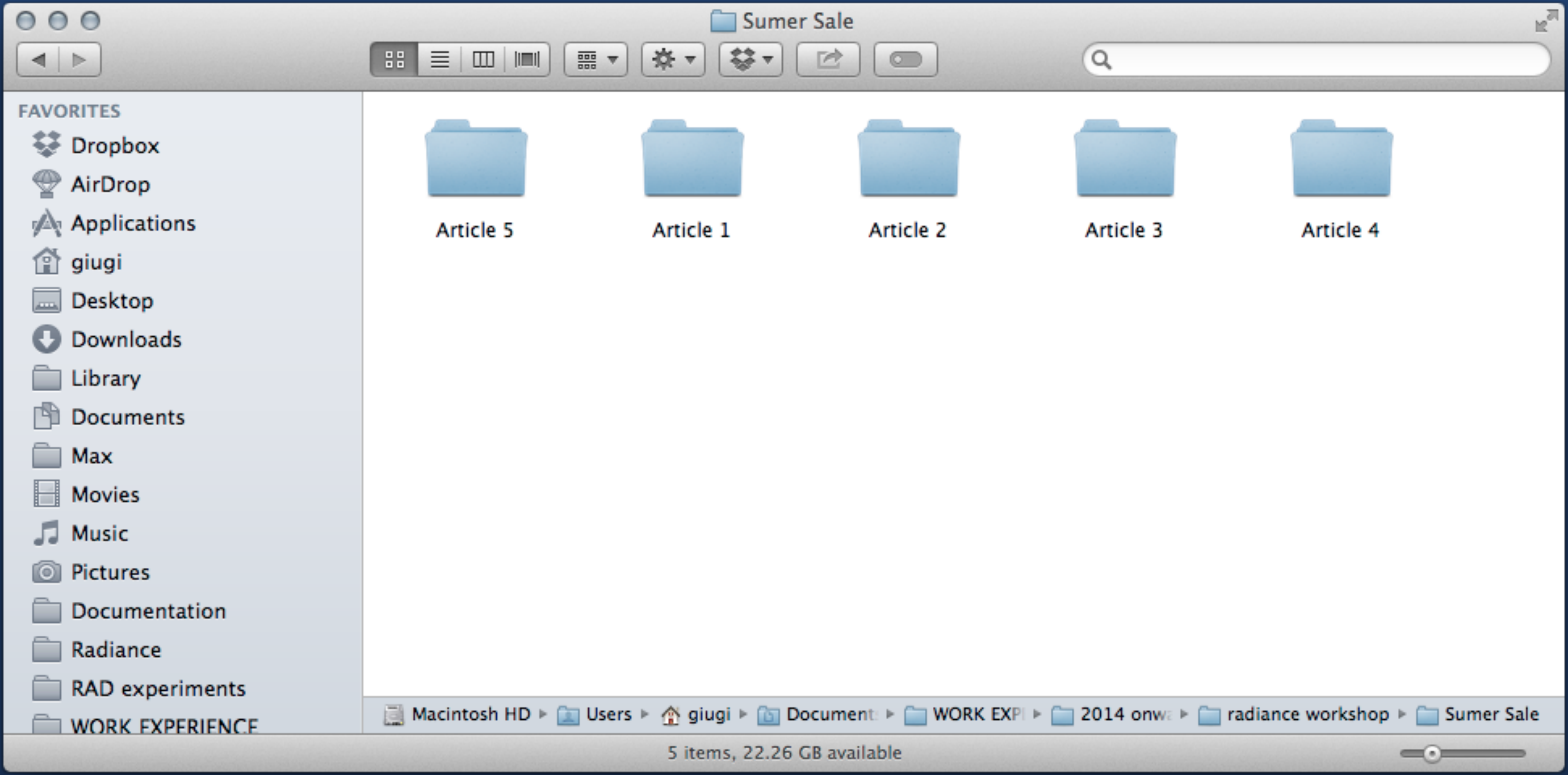
0.5
0.4
0.3
0.2
0.1
0.0

2014 Radiance Workshop

Summer Sale

Giulio Antonutto

Arup


Sumer Sale
FAVORITES
Dropbox
AirDrop
Applications
giugi
Desktop
Downloads
Library
Documents
Max
Movies
Music
Pictures
Documentation
Radiance
RAD experiments
WORK EXPERIENCE
Article 5
Article 1
Article 2
Article 3
Article 4
Macintosh HD ▸ Users ▸ giugi ▸ Document ▸ WORK EXP ▸ 2014 onw ▸ radiance workshop ▸ Sumer Sale
5 items, 22.26 GB available

Article #1

Script to create grids from rectangles

Prepare an obj file:
* containing materials
* with only rectangles
* with no orphan vertexes

Copy file **grigliata.m** into working folder

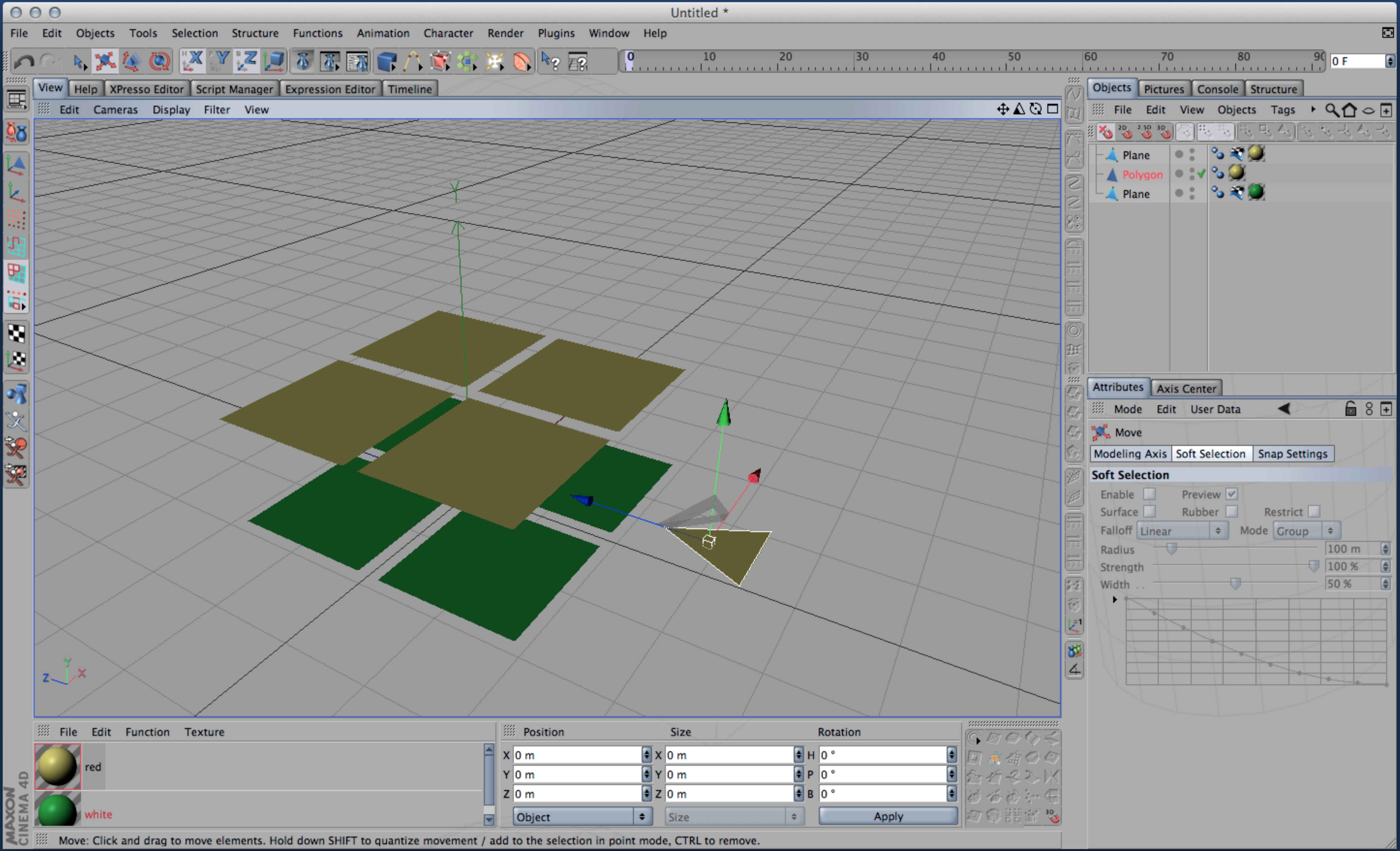
Open **Octave**

To use type: **grigliata(‘name of the file.obj’, pass i in world units, pass j in world units)**

As example like this:

```
grigliata(‘grids.obj’,2,2)
```

Note: All tested and working with Cinema4D obj files, not sure it is the same with Rhino…


Untitled *
File Edit Objects Tools Selection Structure Functions Animation Character Render Plugins Window Help
0 10 20 30 40 50 60 70 80 90
0 F
View Help XPresso Editor Script Manager Expression Editor Timeline
Edit Cameras Display Filter View
Objects Pictures Console Structure
File Edit View Objects Tags
Attributes Axis Center
Mode Edit User Data
Modeling Axis Soft Selection Snap Settings
File Edit Function Texture
Position Size Rotation
Apply
MAXON CINEMA 4D

Plane
Polygon
Plane

Move

Soft Selection

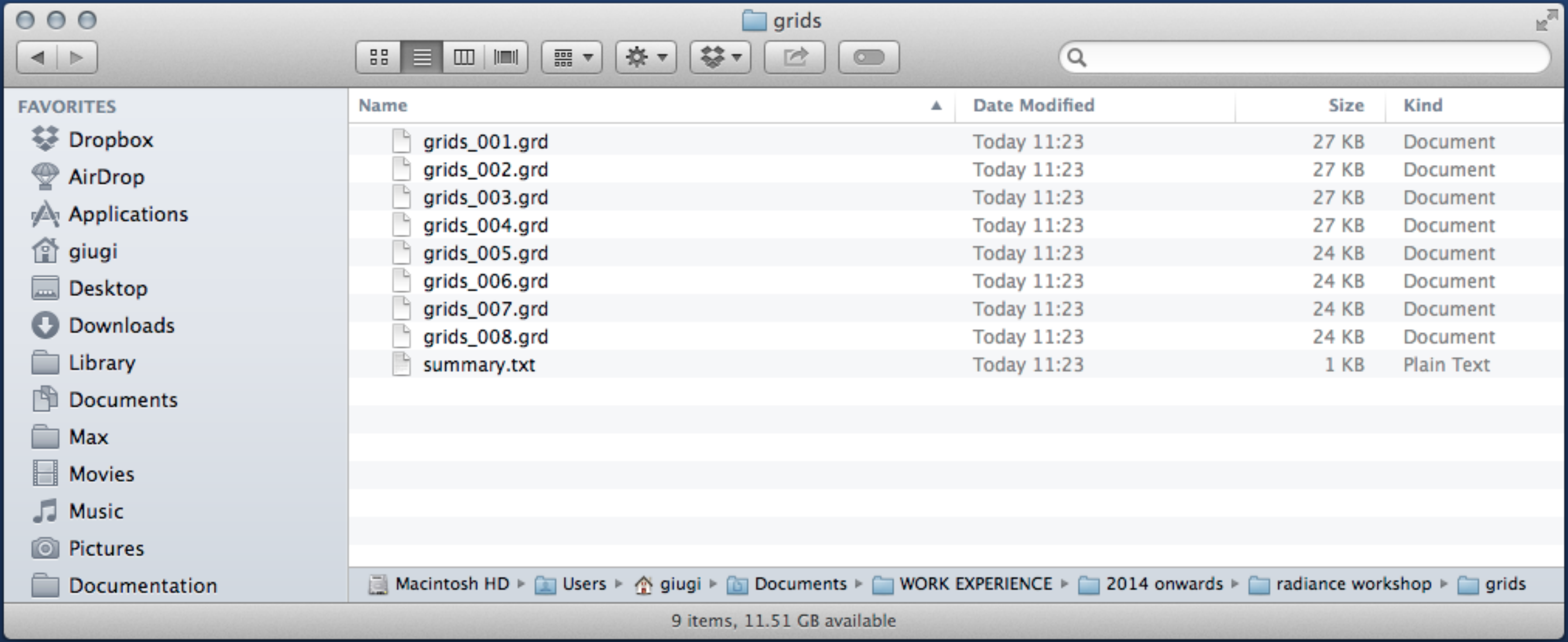
Enable □ Preview ☑
Surface □ Rubber □ Restrict □
Falloff Linear Mode Group
Radius 100 m
Strength 100 %
Width 50 %

red
white

Position	Size	Rotation
X 0 m	X 0 m	H 0 °
Y 0 m	Y 0 m	P 0 °
Z 0 m	Z 0 m	B 0 °
Object	Size	Apply

Move: Click and drag to move elements. Hold down SHIFT to quantize movement / add to the selection in point mode, CTRL to remove.

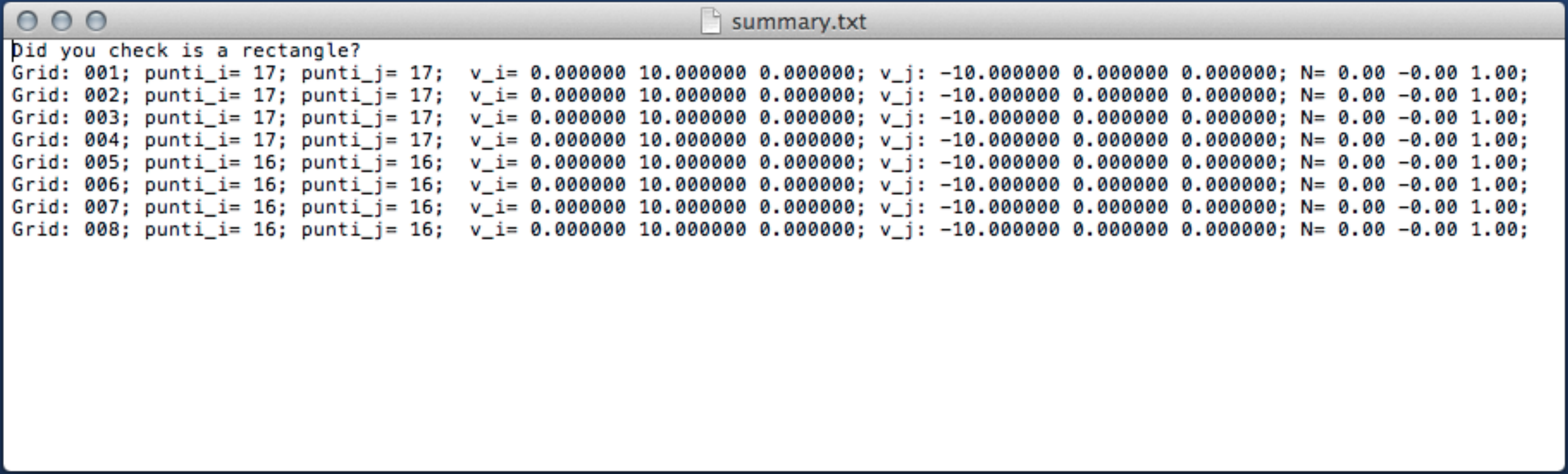
Note: triangles will be ignored



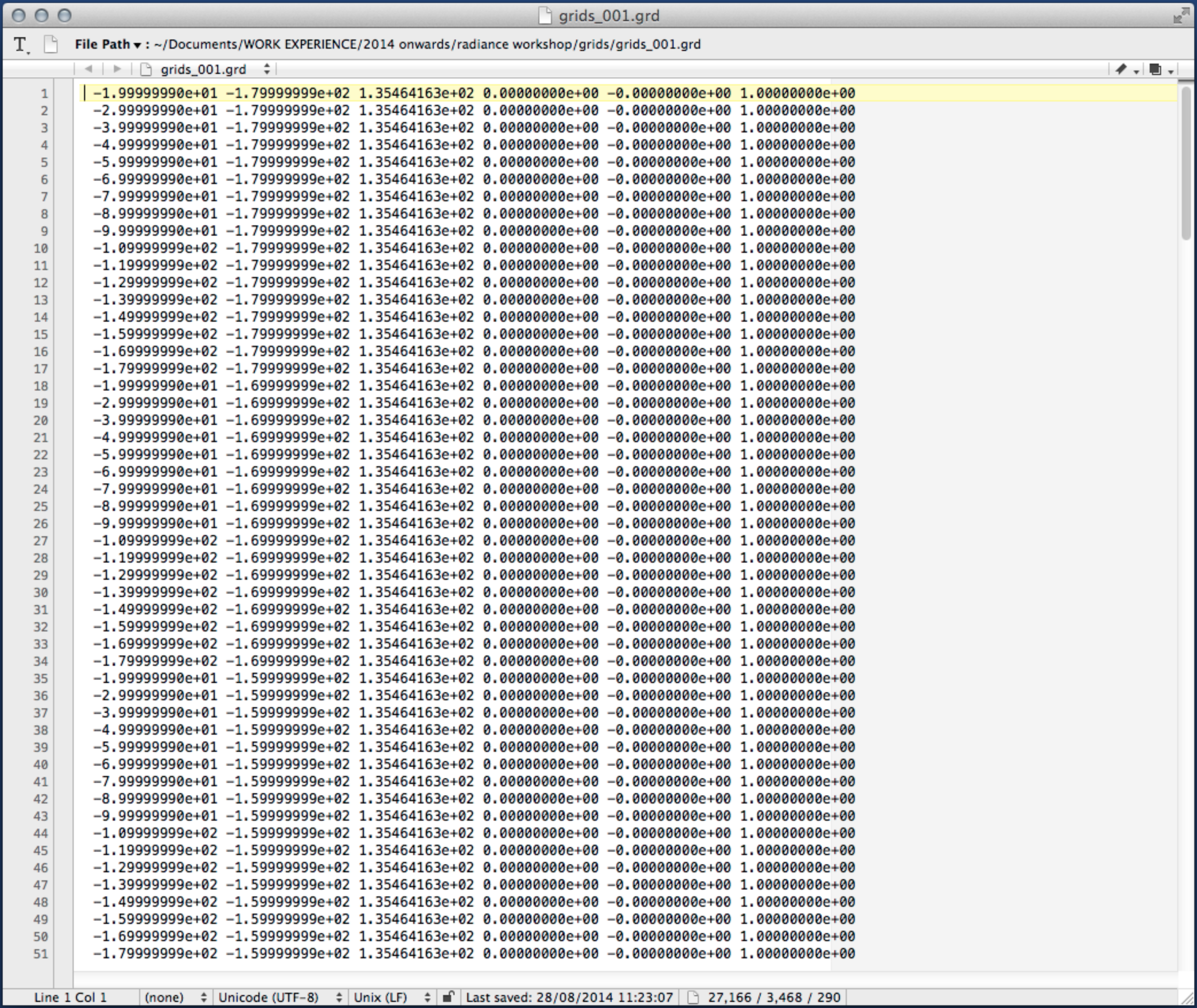
Name	Date Modified	Size	Kind
grids_001.grd	Today 11:23	27 KB	Document
grids_002.grd	Today 11:23	27 KB	Document
grids_003.grd	Today 11:23	27 KB	Document
grids_004.grd	Today 11:23	27 KB	Document
grids_005.grd	Today 11:23	24 KB	Document
grids_006.grd	Today 11:23	24 KB	Document
grids_007.grd	Today 11:23	24 KB	Document
grids_008.grd	Today 11:23	24 KB	Document
summary.txt	Today 11:23	1 KB	Plain Text

Macintosh HD ▸ Users ▸ giugi ▸ Documents ▸ WORK EXPERIENCE ▸ 2014 onwards ▸ radiance workshop ▸ grids

9 items, 11.51 GB available



```
Did you check is a rectangle?
Grid: 001; punti_i= 17; punti_j= 17;  v_i= 0.000000 10.000000 0.000000; v_j: -10.000000 0.000000 0.000000; N= 0.00 -0.00 1.00;
Grid: 002; punti_i= 17; punti_j= 17;  v_i= 0.000000 10.000000 0.000000; v_j: -10.000000 0.000000 0.000000; N= 0.00 -0.00 1.00;
Grid: 003; punti_i= 17; punti_j= 17;  v_i= 0.000000 10.000000 0.000000; v_j: -10.000000 0.000000 0.000000; N= 0.00 -0.00 1.00;
Grid: 004; punti_i= 17; punti_j= 17;  v_i= 0.000000 10.000000 0.000000; v_j: -10.000000 0.000000 0.000000; N= 0.00 -0.00 1.00;
Grid: 005; punti_i= 16; punti_j= 16;  v_i= 0.000000 10.000000 0.000000; v_j: -10.000000 0.000000 0.000000; N= 0.00 -0.00 1.00;
Grid: 006; punti_i= 16; punti_j= 16;  v_i= 0.000000 10.000000 0.000000; v_j: -10.000000 0.000000 0.000000; N= 0.00 -0.00 1.00;
Grid: 007; punti_i= 16; punti_j= 16;  v_i= 0.000000 10.000000 0.000000; v_j: -10.000000 0.000000 0.000000; N= 0.00 -0.00 1.00;
Grid: 008; punti_i= 16; punti_j= 16;  v_i= 0.000000 10.000000 0.000000; v_j: -10.000000 0.000000 0.000000; N= 0.00 -0.00 1.00;
```



grids_001.grd

File Path ▾ : ~/Documents/WORK EXPERIENCE/2014 onwards/radiance workshop/grids/grids_001.grd

```
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-2.99999990e+01 -1.79999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
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-9.99999990e+01 -1.79999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.09999999e+02 -1.79999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.19999999e+02 -1.79999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.29999999e+02 -1.79999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.39999999e+02 -1.79999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.49999999e+02 -1.79999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.59999999e+02 -1.79999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.69999999e+02 -1.79999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
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-3.99999990e+01 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-4.99999990e+01 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-5.99999990e+01 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-6.99999990e+01 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-7.99999990e+01 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-8.99999990e+01 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-9.99999990e+01 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.09999999e+02 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.19999999e+02 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.29999999e+02 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.39999999e+02 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.49999999e+02 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.59999999e+02 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.69999999e+02 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.79999999e+02 -1.69999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.99999990e+01 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-2.99999990e+01 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-3.99999990e+01 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-4.99999990e+01 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-5.99999990e+01 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-6.99999990e+01 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
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-8.99999990e+01 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-9.99999990e+01 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.09999999e+02 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.19999999e+02 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.29999999e+02 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.39999999e+02 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.49999999e+02 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.59999999e+02 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.69999999e+02 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
-1.79999999e+02 -1.59999999e+02 1.35464163e+02 0.00000000e+00 -0.00000000e+00 1.00000000e+00
```

Line 1 Col 1 | (none) | Unicode (UTF-8) | Unix (LF) | Last saved: 28/08/2014 11:23:07 | 27,166 / 3,468 / 290

Article #2

Script to convert obj files to OpenDX

Prepare an obj file:
* containing materials
* with no orphan vertexes

Copy file **obj2odx.m** into working folder

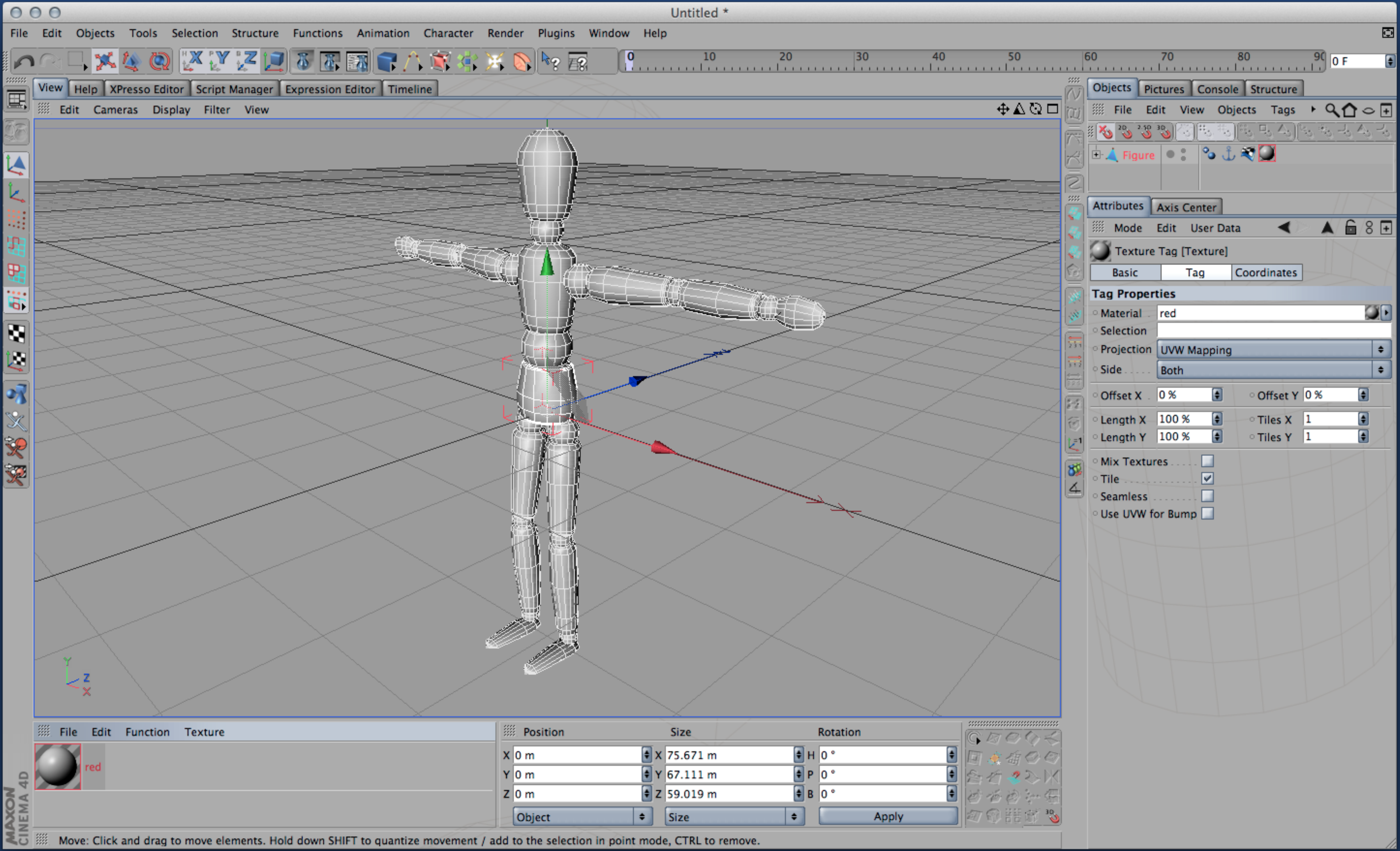
Open **Octave**

To use type: **obj2odx(‘name of the file.obj’)**

As an example try like this:

```
obj2odx(‘model.obj’)
```

Note: All tested and working with Cinema4D obj files, not sure it is the same with Rhino…



Untitled *
File Edit Objects Tools Selection Structure Functions Animation Character Render Plugins Window Help
0 10 20 30 40 50 60 70 80 90
0 F
View Help XPresso Editor Script Manager Expression Editor Timeline
Edit Cameras Display Filter View
Objects Pictures Console Structure
File Edit View Objects Tags
Figure
Attributes Axis Center
Mode Edit User Data
Basic Tag Coordinates
File Edit Function Texture
red
MAXON CINEMA 4D

Texture Tag [Texture]

Tag Properties

Material	red
Selection	
Projection	UVW Mapping
Side	Both

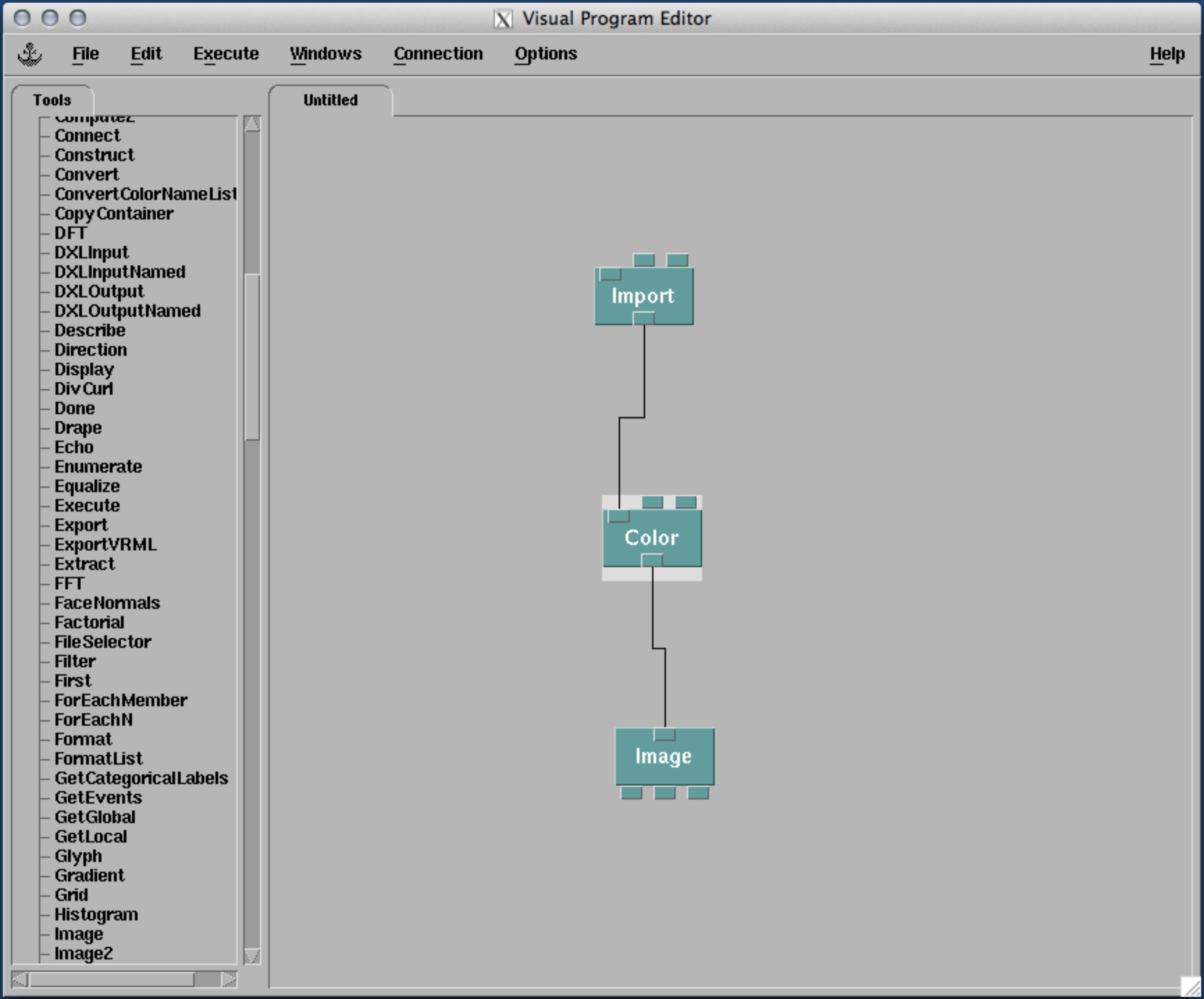
Offset X	0 %	Offset Y	0 %
Length X	100 %	Tiles X	1
Length Y	100 %	Tiles Y	1

- Mix Textures □
- Tile ☑
- Seamless □
- Use UVW for Bump □

Position		Size		Rotation	
X	0 m	X	75.671 m	H	0 °
Y	0 m	Y	67.111 m	P	0 °
Z	0 m	Z	59.019 m	B	0 °

Object | Size | Apply

Move: Click and drag to move elements. Hold down SHIFT to quantize movement / add to the selection in point mode, CTRL to remove.



Visual Program Editor
File
Edit
Execute
Windows
Connection
Options
Help
Tools
Untitled
Compute2
Connect
Construct
Convert
ConvertColorNameList
CopyContainer
DFT
DXLInput
DXLInputNamed
DXLOutput
DXLOutputNamed
Describe
Direction
Display
DivCurl
Done
Drape
Echo
Enumerate
Equalize
Execute
Export
ExportVRML
Extract
FFT
FaceNormals
Factorial
FileSelector
Filter
First
ForEachMember
ForEachN
Format
FormatList
GetCategoricalLabels
GetEvents
GetGlobal
GetLocal
Glyph
Gradient
Grid
Histogram
Image
Image2
Import
Color
Image

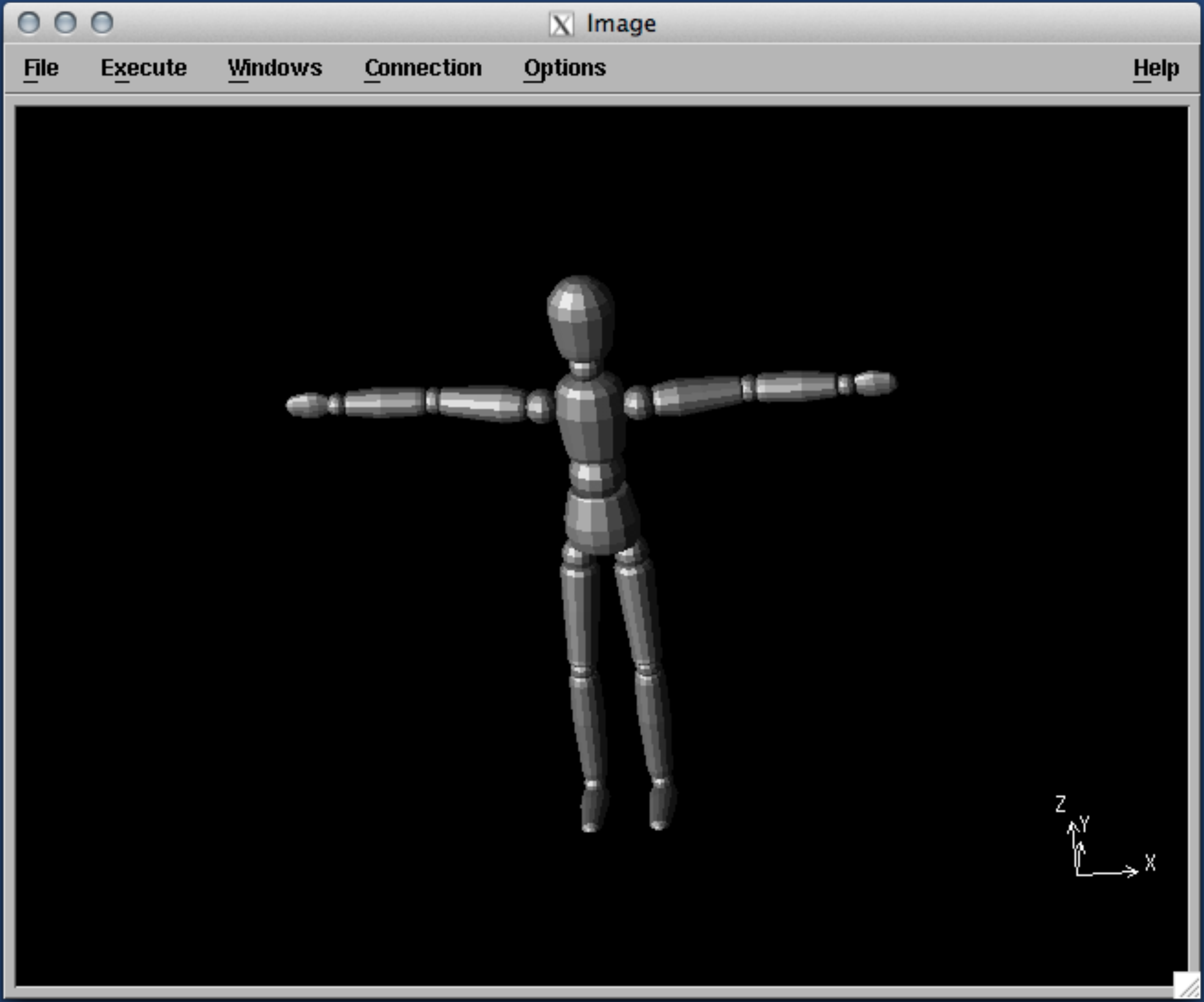


Image
File
Execute
Windows
Connection
Options
Help
Z
Y
X

Article #3

Script to plot polar diagrams out of radiance light sources

*Go to working folder containing the file **flux_calc.m***

*Copy at this location your radiance light sure (for example an **ies2rad** converted file)*

*Open **Octave***

*To use type: **flux_calc('file_name.rad')***
**Note that the scale is in meters*

*When the script outputs the light source flux, go to the dx folder and launch **OpenDX**.*

*Within **OpenDX** select the **Photometry** network.*

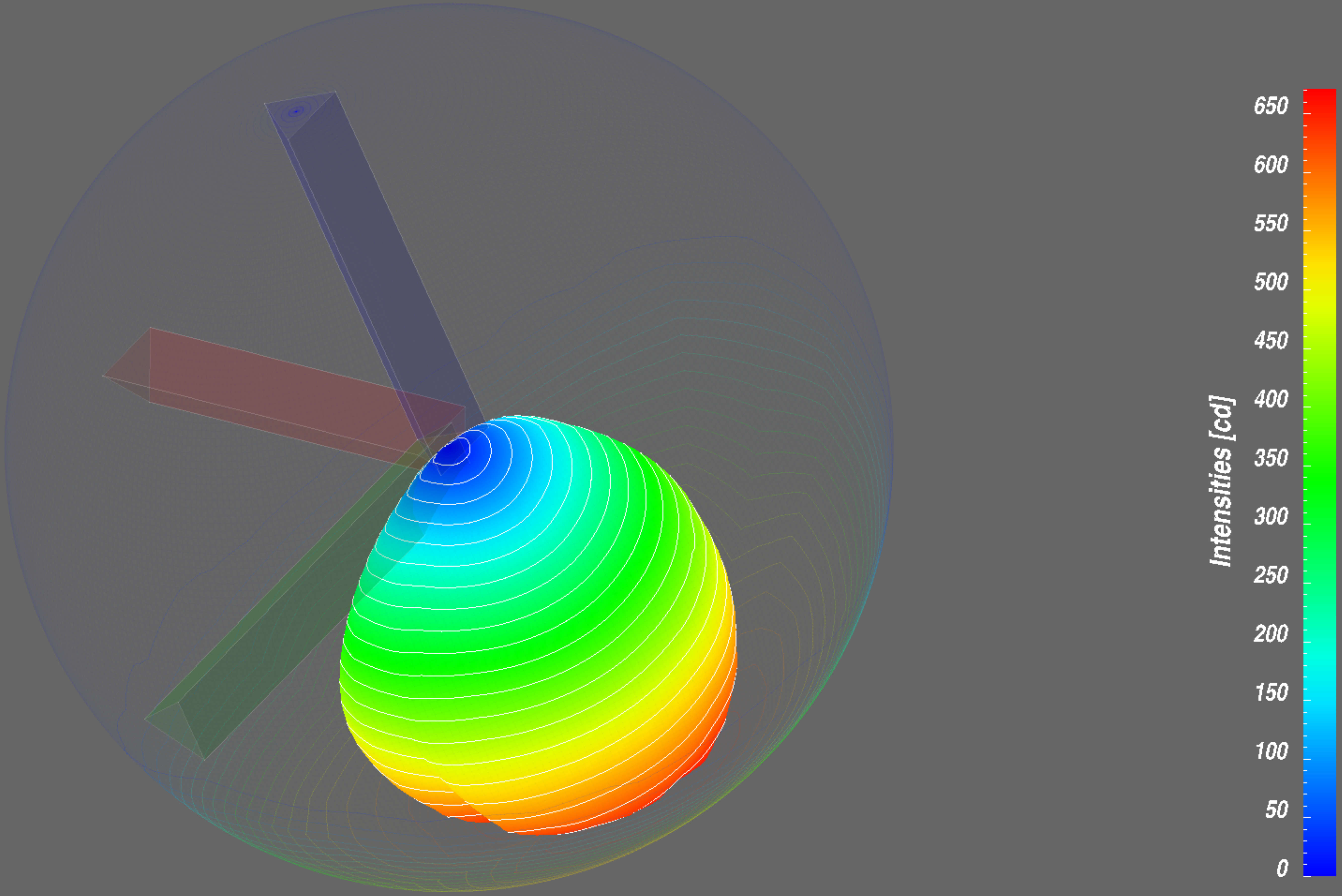
Run it

You should get a nice chart and flux plotted
*(Can export the photometry as **vrml** surface to check **replmarks**, etc).*

As an example try:

```
flux_calc('Mundial_1KW_V1.rad')
```

Note: All tested and working with Cinema4D obj files, not sure it is the same with Rhino…



Luminous flux: 1406 lm (0 lm upward component, 1406 lm downward component)

Article #4

Script to use UV maps from obj files to create textures in radiance (radiance baking)

Concept:
** use a obj file to derive UV mapping*
** use an octree file to bake based on UV mapping*

Note: All tested and working with Cinema4D obj files, not sure it is the same with Rhino…

You need to:

* *prepare an obj file with triangles, no orphan vertexes, UV mapping and materials*

* *prepare an octree of a scene with the light, colours and materials of your liking*

* *edit the **batch_tex** script to indicate name of files and materials*

* *run the **batch_tex** script in Octave*

* *This will generate images to map back in radiance or in the 3d software of your choice*

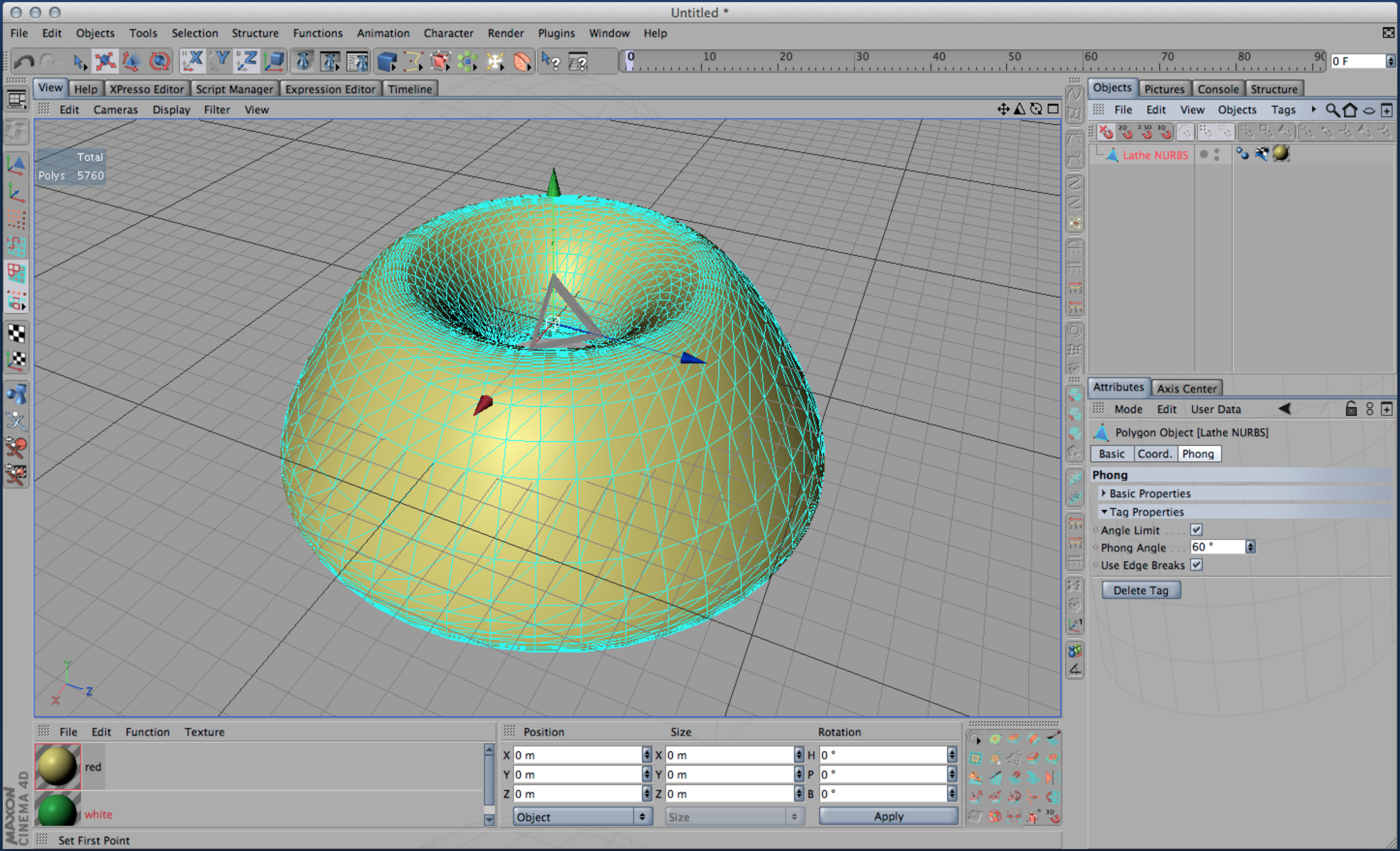
Note: All tested and working with Cinema4D obj files, not sure it is the same with Rhino…

Usage:

Edit the ***batch_tex*** *file*
(indicating name of obj and oct files, resolution, etc)

You can run several obj files out of a single octree for baking different maps

Note: All tested and working with Cinema4D obj files, not sure it is the same with Rhino…



	Total
Polys	5760

Polygon Object [Lathe NURBS]

Angle Limit ☑

Phong Angle 60 °

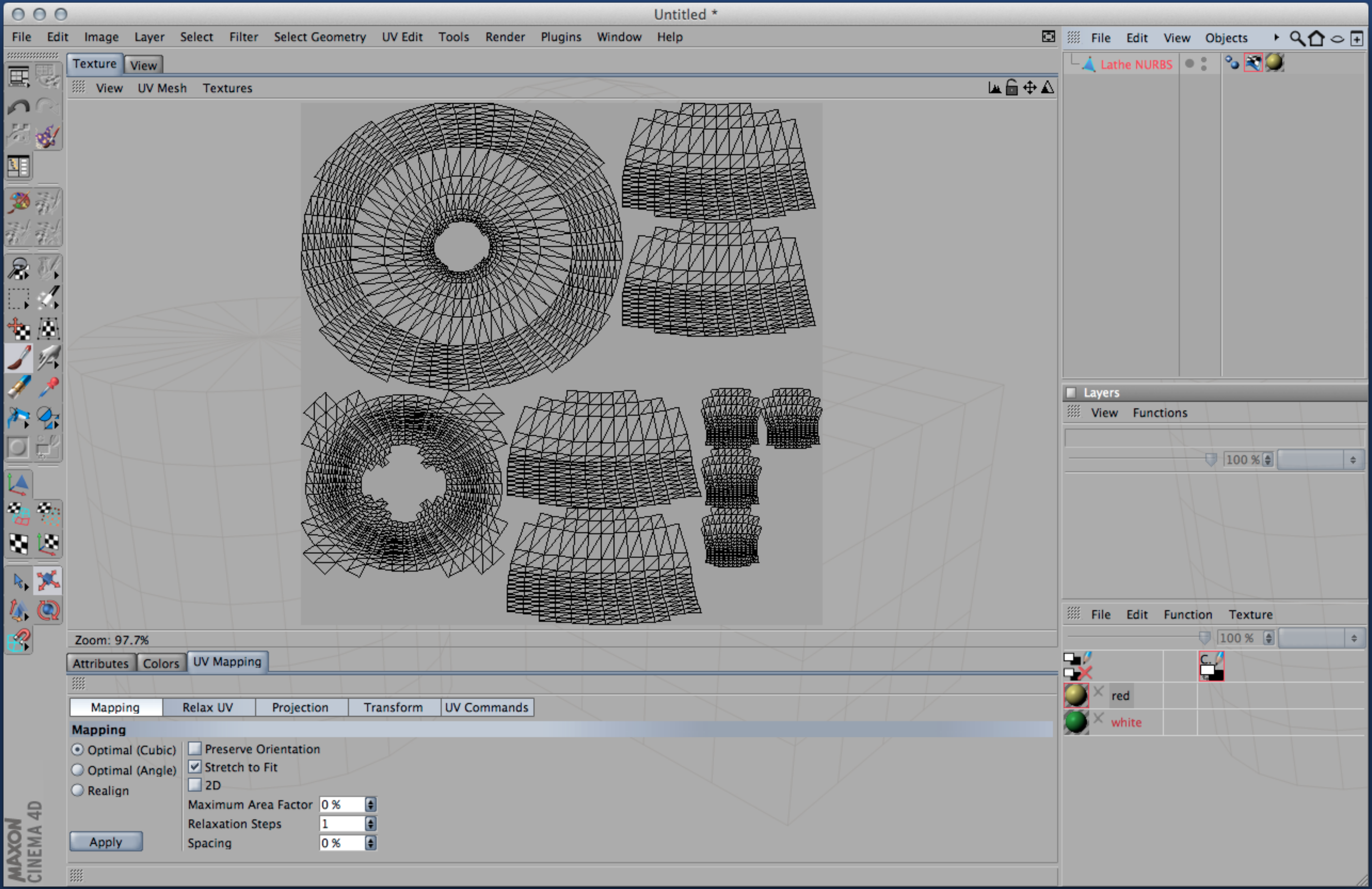
Use Edge Breaks ☑

Position		Size		Rotation	
X	0 m	X	0 m	H	0 °
Y	0 m	Y	0 m	P	0 °
Z	0 m	Z	0 m	B	0 °

Object

Size

Set First Point



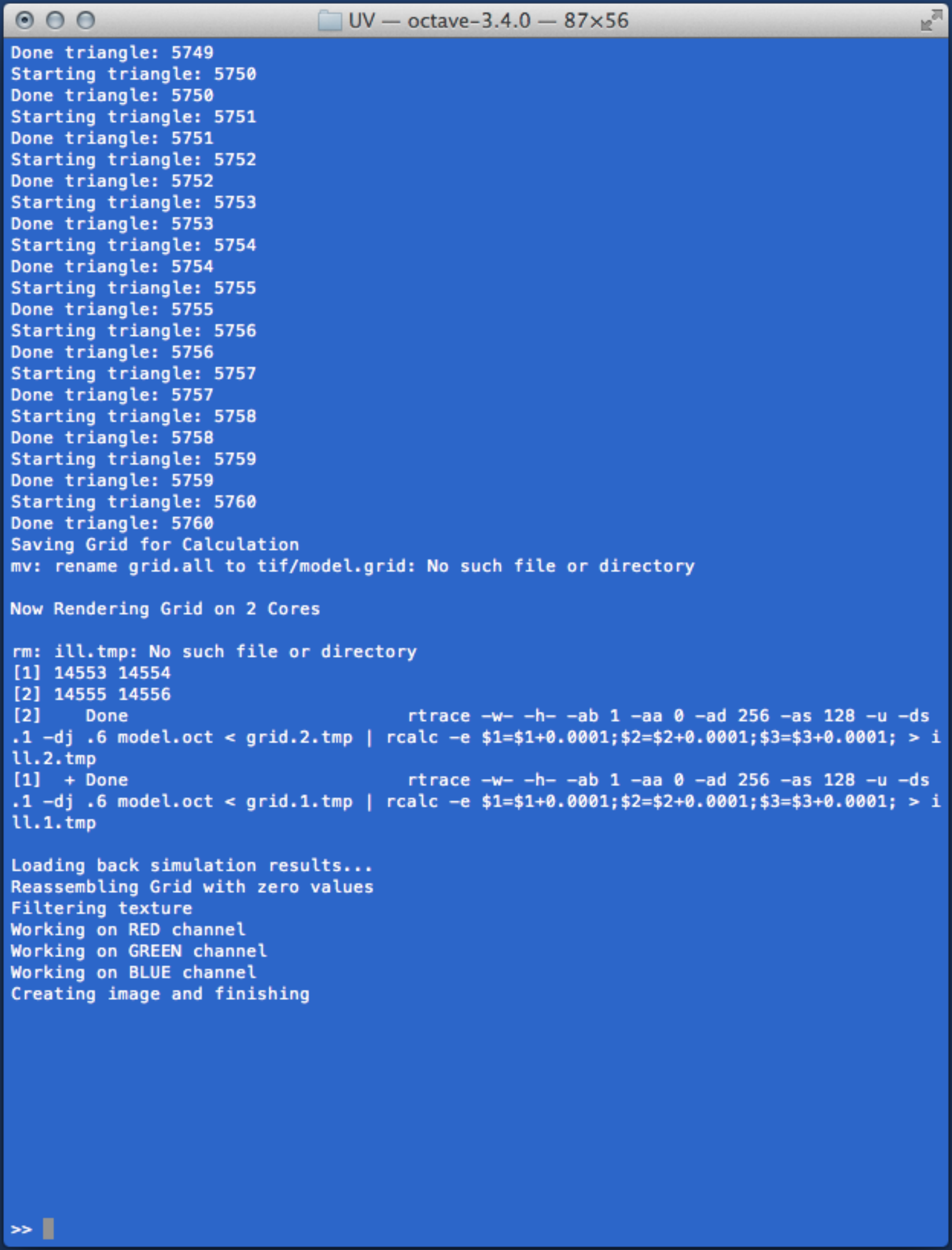
Mapping

● Optimal (Cubic)
○ Optimal (Angle)
○ Realign

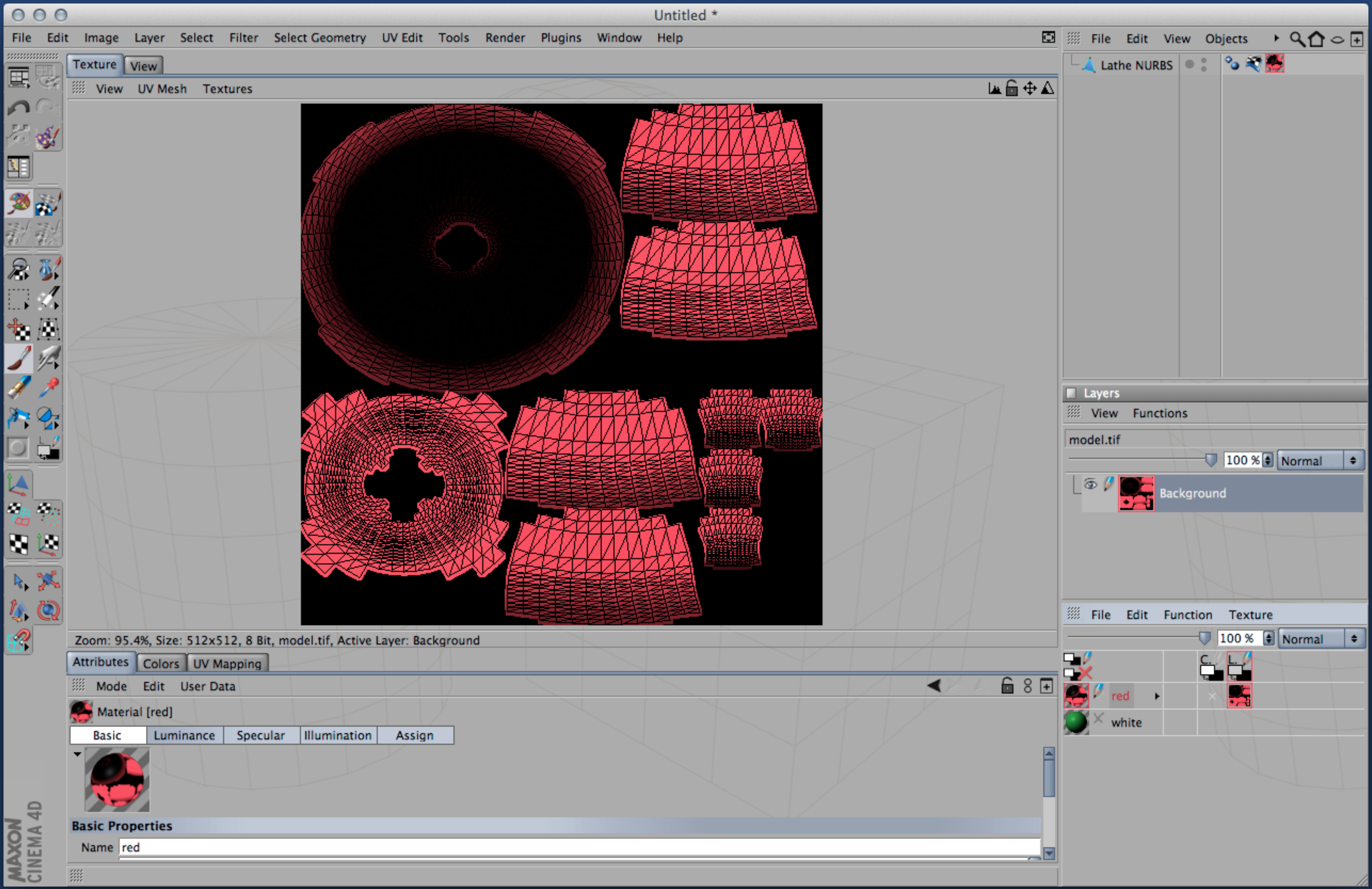
□ Preserve Orientation
☑ Stretch to Fit
□ 2D

Maximum Area Factor 0 %
Relaxation Steps 1
Spacing 0 %

Apply



```
Done triangle: 5749
Starting triangle: 5750
Done triangle: 5750
Starting triangle: 5751
Done triangle: 5751
Starting triangle: 5752
Done triangle: 5752
Starting triangle: 5753
Done triangle: 5753
Starting triangle: 5754
Done triangle: 5754
Starting triangle: 5755
Done triangle: 5755
Starting triangle: 5756
Done triangle: 5756
Starting triangle: 5757
Done triangle: 5757
Starting triangle: 5758
Done triangle: 5758
Starting triangle: 5759
Done triangle: 5759
Starting triangle: 5760
Done triangle: 5760
Saving Grid for Calculation
mv: rename grid.all to tif/model.grid: No such file or directory

Now Rendering Grid on 2 Cores

rm: ill.tmp: No such file or directory
[1] 14553 14554
[2] 14555 14556
[2]    Done                          rtrace -w- -h- -ab 1 -aa 0 -ad 256 -as 128 -u -ds
.1 -dj .6 model.oct < grid.2.tmp | rcalc -e $1=$1+0.0001;$2=$2+0.0001;$3=$3+0.0001; > i
ll.2.tmp
[1]  + Done                          rtrace -w- -h- -ab 1 -aa 0 -ad 256 -as 128 -u -ds
.1 -dj .6 model.oct < grid.1.tmp | rcalc -e $1=$1+0.0001;$2=$2+0.0001;$3=$3+0.0001; > i
ll.1.tmp

Loading back simulation results...
Reassembling Grid with zero values
Filtering texture
Working on RED channel
Working on GREEN channel
Working on BLUE channel
Creating image and finishing




>>
```

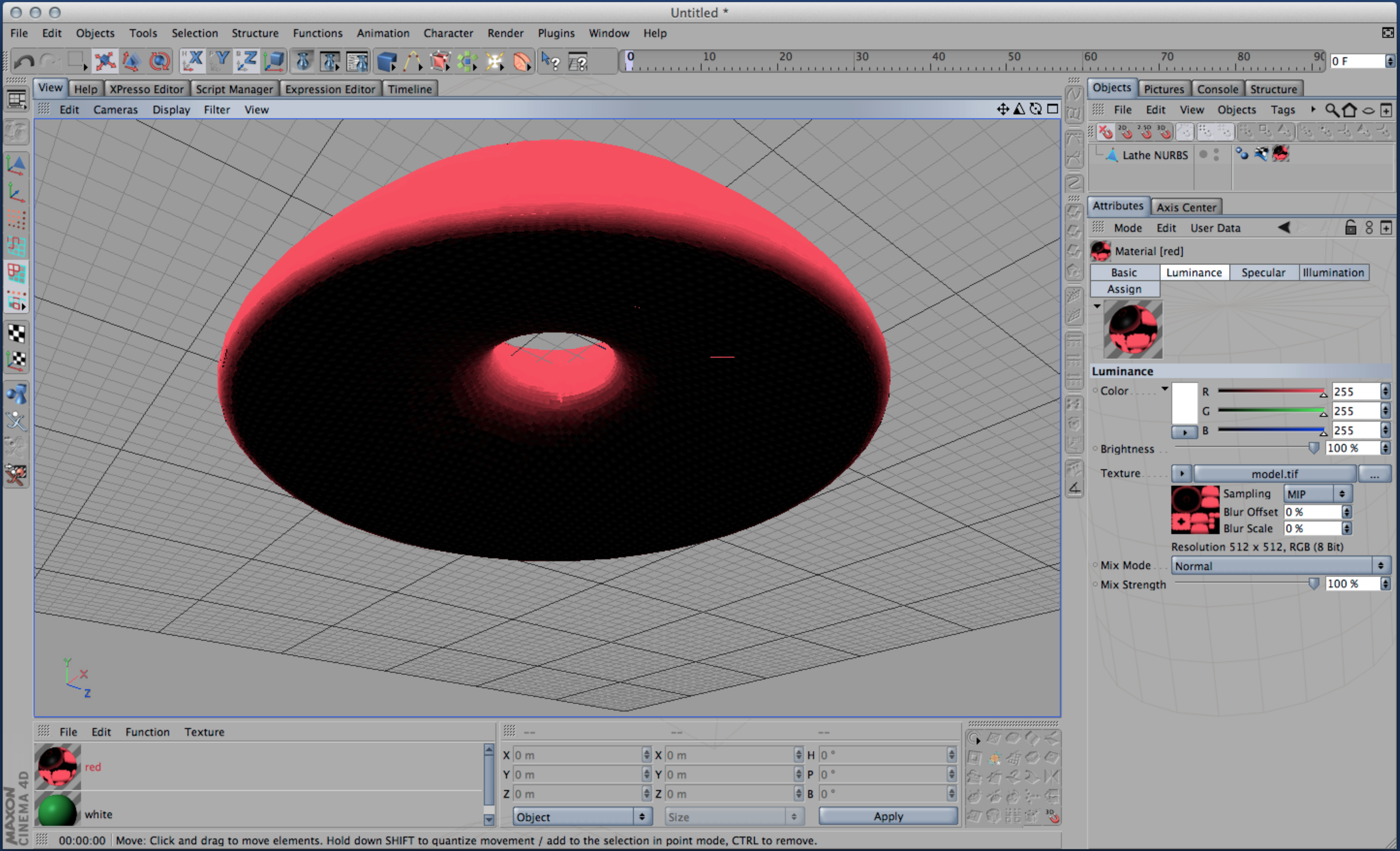


Zoom: 95.4%, Size: 512x512, 8 Bit, model.tif, Active Layer: Background

Material [red]

Basic Properties

Name red



Material [red]

Luminance

Color: R 255, G 255, B 255

Brightness 100 %

Texture model.tif

Sampling MIP

Blur Offset 0 %

Blur Scale 0 %

Resolution 512 x 512, RGB (8 Bit)

Mix Mode Normal

Mix Strength 100 %

X 0 m X 0 m H 0 °

Y 0 m Y 0 m P 0 °

Z 0 m Z 0 m B 0 °

00:00:00 Move: Click and drag to move elements. Hold down SHIFT to quantize movement / add to the selection in point mode, CTRL to remove.

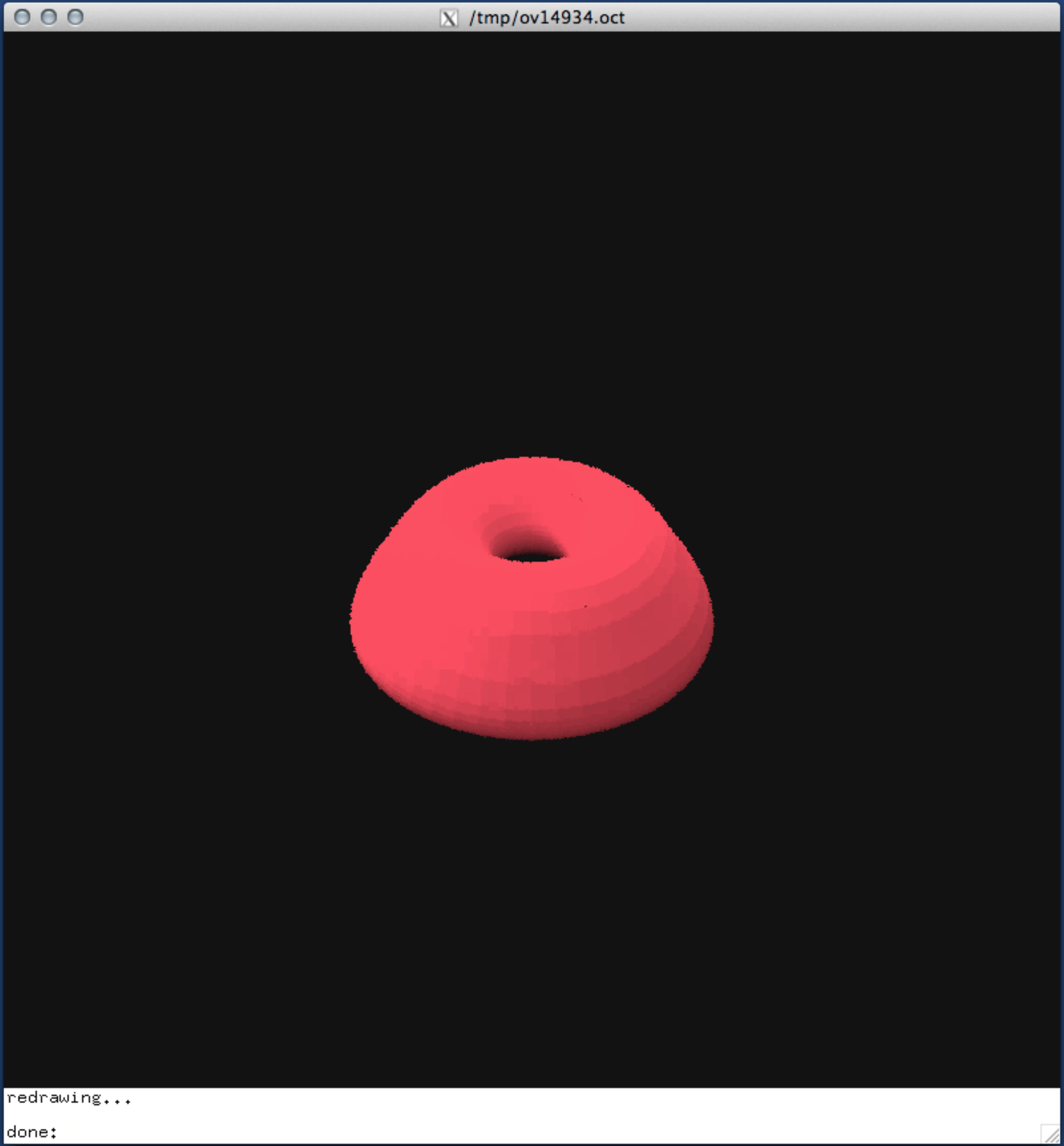
Bonus, how to put back textures in radiance:

How to:

* *prepare a material file*
* *convert obj with obj2mesh and use material file*
* *load mesh into radiance scene with **mesh** primitive*
* *check with **objview***

Example of material file:

```
void colorpict baked
7
red green blue
baked.pic
.
1-A1*((Lu-A3)/A5-floor((Lu-A3)/A5))
1-A2*((Lv-A4)/A6-floor((Lv-A4)/A6))
0
6 1 1 0 0 1 1


baked glow material
0
0
4 1 1 1 0
```



/tmp/ov14934.oct

```
redrawing...

done:
```

Common known issues

- *no triangulated polygons or other errors (such as no UV map or no material)*
- *there may be issues with normal listed on obj (rhino?)*
- *-rx 90 and Y=Z swap Cinema4D style*
- *image is swapped -h -v (pflip can help)*
- *some triangles are left black, this is because they are too small*
- *memory error, too many pixels! I used 4096 x 4096 max.*
- *all back! did you check normals? did you check the octree?*
- *takes a long time to process polygons, maybe is a good idea to save intermediate steps (requires coding)*
- *generally slow, maybe a volunteer to port it to c#?*

Suggested uses

- *can use UV to generate regular grids on fluid forms*
- *can use baking to bake geometry or small detail (for example the facade of a building)*
- *can use baking for animations in radiance and in other software*
- *can use baking for video games! such as in the Unity3d platform…*

Article #5

Script to create a parametric potato into a radiance scene

*Copy **genpotato** into a working directory, provide appropriate permissions.*

Explore the following settings:

-x value [PF along x, for details contact Carsten Bauer]
-y value [PF along y, for details contact Carsten Bauer]
-z value [PF along z, for details contact Carsten Bauer]

-u value [u subdivisions used by gensurf for maximum accuracy]
-v value [v subdivisions used by gensurf for maximum accuracy]

or simply run defaults with

```
genpotato
```

or

```
./genpotato
```

Note, never forget to add a potato to your renderings!

/tmp/ov14321.oct

```
256 sampling...
512 sampling...
done:
```

/tmp/ov14393.oct

```
256 sampling...
512 sampling...
done:
```

/tmp/ov14410.oct

```
256 sampling...
512 sampling...
done:
```

Article #6

OpenDX map to visualise ambient files

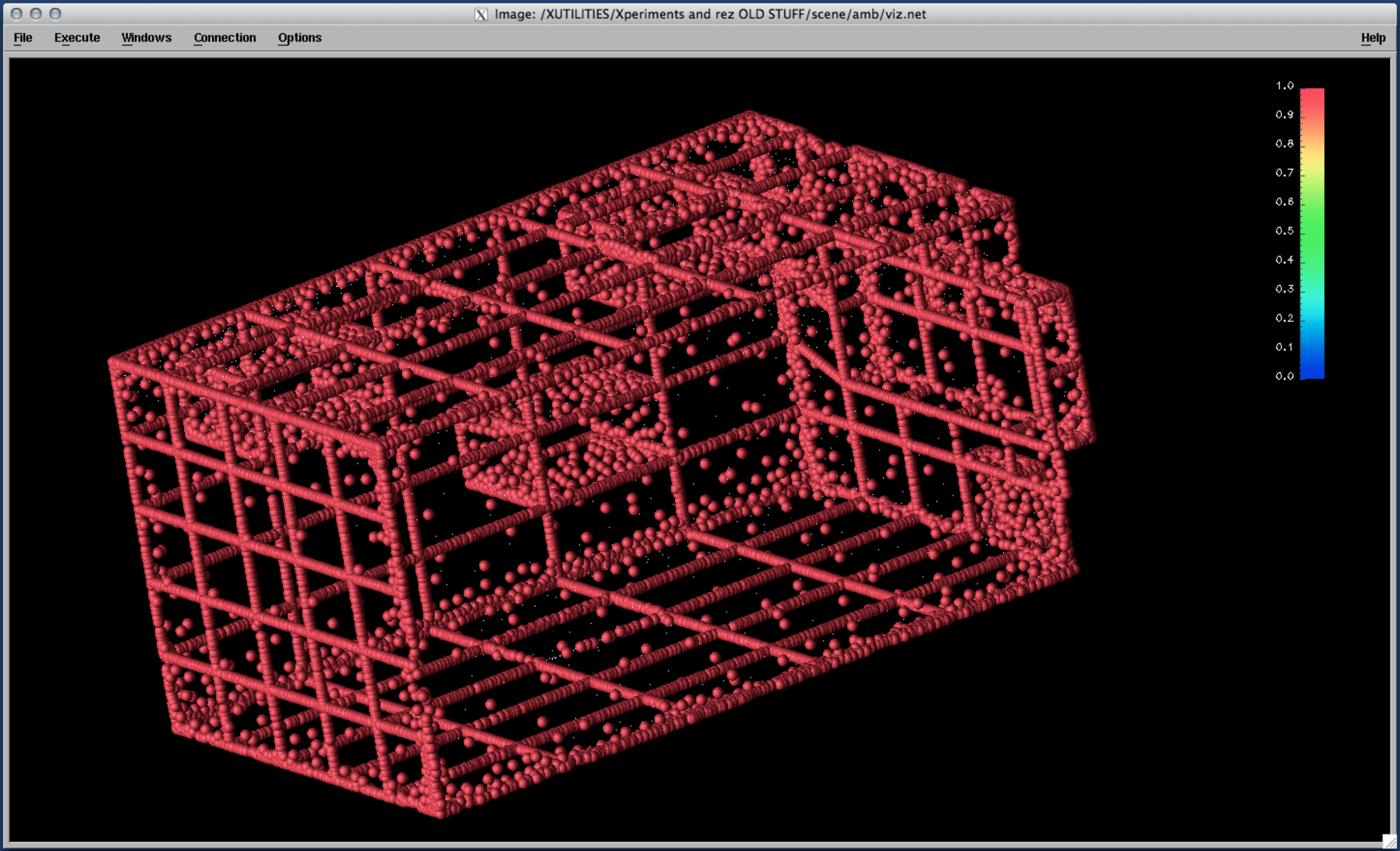


Image: /XUTILITIES/Xperiments and rez OLD STUFF/scene/amb/viz.net
File
Execute
Windows
Connection
Options
Help
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0

Terms and Conditions

Use as you wish.

The only condition is to share your improvements to the code with the community.

“Take but give back.”

For warranty refers to warranty terms.

Warranty

There is NO warranty!

Thanks!