

# PoVSB File Format

## PoV Scene Builder

Some \*.psb file- [test.psb](#)

The file format described in this help file is for v0.98 of PoVSB. If there seems to be invalid information please send e-mail to [jhauswir@carbon.denver.colorado.edu](mailto:jhauswir@carbon.denver.colorado.edu).

test.psb

## PoV Scene Builder

```
[POVSB]
Number of objects
[INCLUDE_FILES]
[CAMERAS]
A Camera
[ENDCAMERAS]
[LAYERS]
Layer_0 1 0
Layer_1 1 7f
Layer_2 1 7f00
Layer_3 1 7f0000
Layer_4 1 bf
Layer_5 1 bf00
Layer_6 1 bf0000
Layer_7 1 ff
Layer_8 1 ff00
Layer_9 1 ff0000
Layer_10 1 bfbf00
Layer_11 1 bf00bf
Layer_12 1 bfbf
Layer_13 1 ffff00
Layer_14 1 ff00ff
Layer_15 1 ffff
[Some_Object_1]
[Some_Object_2]
[Some_Object_3]
[Some_Object_N]
[END_POVSB]
```

[INCLUDE\_FILES]

Not yet implemented. Thinking about having just one include file included with PoV exported file (maybe include.inc). In this file would be all the include files you want.

The number of objects in the scene. (Must be >0)

Layer Name (Spaces must use the \_ character i.e. Layer\_1)

## A Camera

# PoV Scene Builder

**NOTE:** Multiple cameras are not implemented yet.

**FORMAT:**

Camera Name (Spaces must have the \_ character i.e.- Camera\_1)

Location

Look\_At

Up

FoV

**EXAMPLE:**

```
7.000000 7.000000 7.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 1.000000  
0.785398
```

Camera Location in 3D- X,Y,Z

Camera Look\_At point in 3D- X,Y,Z



Up Vector as described in PoV documentation.

Camera FoV. See PoV documentation for definition and values.

Layer On/Off Flag-  
1- On  
0- Off

Layer Color

There must only be 16 layers, 0-15

# Some Object

## PoV Scene Builder

Valid Objects are-

- Point Light
- Area Light
- Spot Light
- Plane
- Box
- Sphere
- Cone
- Cylinder
- Torus
- Looks Like Point Light
- Looks Like Spot Light
- Looks Like Area Light
- Height Field
- Bezier Patch
- Blob
- DXF
- RAW
- CSG
- Lathe

# Point Light

## PoV Scene Builder

[LIGHT\_SOURCE]  
Base Object  
Location Color

EXAMPLE: [LIGHT\_SOURCE]  
PointLightObject  
0  
0.814815 3.259259 0.000000 White

# Area Light

## PoV Scene Builder

[AREALIGHT]

Base Object

Object Transformations

Jitter Adaptive N1 N2 Use\_SpotLight

Spot Light Parameters

EXAMPLE: [AREALIGHT]  
AreaLightObject  
0  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
1.131611 0.000000 2.164822  
0 1 5 5 0  
30.000000 35.000000 10.000000 White



# Plane

## PoV Scene Builder

[PLANE]  
Base Object  
Object Texture  
Object Transformations

```
EXAMPLE: [PLANE]
PlaneObject
0
Blue_Agate
1
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
1 0 0 0 1 1 0 1 0 0 0 1
0.000000
* .
_ BlueViolet CadetBlue _ _ _
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 1 1 0 1 0 0 0 1 0 0
* .
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 1 1 0 0 0
0.000000 0.000000 0.500000 0.600000 0.000000 0.000000 0.000000 0.000000
0.000000 0.000000
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.987290 1.925926 1.131611
```

# Box

## PoV Scene Builder

[BOX]  
Base Object  
Object Texture  
Object Transformations

EXAMPLE: [BOX]  
BoxObject  
0  
Brass\_Metal  
1  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1  
0.000000  
\*.  
-----  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 1 0  
\*.  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000

# Sphere

## PoV Scene Builder

[Sphere]  
Base Object  
Object Texture  
Object Transformations

EXAMPLE: [SPHERE]  
SphereObject  
0  
Blood\_Sky  
1  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1  
0.000000  
\*.  
  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1 0 0  
\*.  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000

# Cone

## PoV Scene Builder

[CONE]  
Base Object  
Object Texture  
Object Transformations

```
EXAMPLE: [CONE]
ConeObject
0
_
0
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 1 0 0 1 1 0 1 0 0 0 0 1
0.000000
* .
Bronze _ _ _ _ _
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 0 1 1 0 1 0 0 0 1 0 0
* .
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 0 0 0
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.000000 0.000000
2.200000 2.200000 2.200000
0.000000 -60.000000 -21.000000
0.365854 -0.548780 0.000000
```

# Cylinder

## PoV Scene Builder

[CYLINDER]  
Base Object  
Object Texture  
Object Transformations

```
EXAMPLE: [CYLINDER]
CylinderObject
2
Bright_Blue_Sky
1
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 1 1 0 1 0 0 0 1
0.000000
*.
-----
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 1 1 0 1 0 0 1 0
*.
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 0 0 0
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.000000 0.000000
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.670732 -0.853659 0.000000
```

# Torus

## PoV Scene Builder

[TORUS]  
Base Object  
Object Texture  
Object Transformations  
Major\_Axis\_Radius Minor\_Axis\_Radius

EXAMPLE: [TORUS]  
TorusObject  
4  
Cork  
1  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 0 1  
0.000000  
\*.  
-----  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1 0 0  
\*.  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 -22.000000  
0.792683 -1.524390 0.000000  
2.000000 0.500000

# Spot Light

## PoV Scene Builder

[SPOTLIGHT]  
Base Object  
Object Transformations  
Spot Light Parameters

EXAMPLE: [SPOTLIGHT]  
SpotLightObject  
0  
4.000000 4.000000 4.000000  
0.000000 27.000000 0.000000  
3.048781 0.609756 0.000000  
30.000000 35.000000 10.000000 White

# Looks Like Point Light

## PoV Scene Builder

[LL\_POINT\_LIGHT]  
Base Object  
Location Color  
Some Object

EXAMPLE: [LL\_POINT\_LIGHT]  
LL\_PointLight  
0  
0.000000 0.000000 0.000000 White  
[SPHERE]  
SphereObject  
0  
Copper\_Metal  
1  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 0 1  
0.000000  
\*.  
.  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1 0 0  
\*.  
.  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000



# Looks Like Spot Light

## PoV Scene Builder

[LL\_SPOT\_LIGHT]  
Base Object  
Object Transformations  
Spot Light Parameters  
Some Object

```
EXAMPLE: [LL_SPOT_LIGHT]
SpotLightObject
0
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
30.000000 35.000000 10.000000 White
[SPHERE]
SphereObject
0
Copper_Metal
1
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 1 1 0 1 0 0 0 0 1
0.000000
*.*
- - - - -
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 1 1 0 1 0 0 0 1 0
*.*
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 0 0 0
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.000000 0.000000
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
```

# Looks Like Area Light

## PoV Scene Builder

[AREALIGHT]  
Base Object  
Object Transformations  
Jitter Adaptive N1 N2 Use\_SpotLight  
Spot Light Parameters  
Some Object

```
EXAMPLE: [LL_AREA_LIGHT]
          LL_AreaLight
          0
          1.000000 1.000000 1.000000
          0.000000 0.000000 0.000000
          0.000000 0.000000 0.000000
          0 1 5 0
          30.000000 35.000000 10.000000 White
          [SPHERE]
          SphereObject
          0
          Copper_Metal
          1
          1.000000 1.000000 1.000000
          0.000000 0.000000 0.000000
          0.000000 0.000000 0.000000
          0 0 0 0 1 1 0 1 0 0 0 1
          0.000000
          *.
          .
          1.000000 1.000000 1.000000
          0.000000 0.000000 0.000000
          0.000000 0.000000 0.000000
          0 0 0 0 1 1 0 1 0 0 1 0
          *.
          .
          0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
          1.000000 1.000000 1.000000
          0.000000 0.000000 0.000000
          0.000000 0.000000 0.000000
          0 0 0 0 0 0 0
          0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
          0.000000 0.000000
          1.000000 1.000000 1.000000
          0.000000 0.000000 0.000000
          0.000000 0.000000 0.000000
```

# Height Field

## PoV Scene Builder

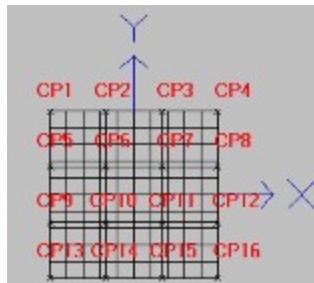
[HFIELD]  
Base Object  
Object Texture  
Object Transformations  
File\_Type Smooth\_Flag Water\_Level  
File Name

EXAMPLE: [HFIELD]  
C:\POVSB\POV\GOLD.GIF  
0  
-  
0  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1  
0.000000  
\*.  
- - - - -  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1 0 0  
\*.  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
1 1 0.000000  
C:\POVSB\POV\GOLD.GIF

# Bezier Patch

## PoV Scene Builder

```
[BEZIER_PATCH]
Base Object
Object Texture
Object Transformations
CP1
CP2
CP3
CP4
CP5
CP6
CP7
.
.
.
.
CP16
```



```
EXAMPLE: [BEZIER_PATCH]
BezierObject
0
Blue_Sky3
1
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 1 1 0 1 0 0 0 0 1
0.000000
*.
-----
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 1 1 0 1 0 0 0 1 0
*.
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
```

0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
-0.600000 0.600000 0.000000  
-0.200000 0.600000 0.000000  
0.200000 0.600000 0.000000  
0.600000 0.600000 0.000000  
-0.600000 0.200000 0.000000  
-0.200000 0.200000 0.000000  
0.200000 0.200000 0.000000  
0.600000 0.200000 0.000000  
-0.600000 -0.200000 0.000000  
-0.200000 -0.200000 0.000000  
0.200000 -0.200000 0.000000  
0.600000 -0.200000 0.000000  
-0.600000 -0.600000 0.000000  
-0.200000 -0.600000 0.000000  
0.200000 -0.600000 0.000000  
0.600000 -0.600000 0.000000

# Blob

## PoV Scene Builder

[BLOB]  
Base Object  
Object Texture  
Object Transformations  
Threshold  
Number\_of\_Blobs  
Component 1  
Component 2  
.  
.  
.  
Component N

EXAMPLE: [BLOB]  
C:\POVSB\POV\TEST.BLB  
0  
Blue\_Sky  
1  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1  
0.000000  
\*.  
- - - - -  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 1 0  
\*.  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
1.829268 0.000000 1.422764  
0.600000  
5  
1.000000 0.970659 -0.005968 0.000000 0.005970  
1.000000 1.120278 1.080165 0.000000 -0.005970  
1.000000 1.106494 -0.017903 0.000000 1.164179  
1.000000 1.104684 -1.163714 0.000000 0.029851  
1.000000 1.272616 0.017903 0.000000 -1.152239

# DXF

## PoV Scene Builder

[DXF]  
Base Object  
Object Texture  
Object Transformations  
Side Texture  
Bevel Texture  
Face Texture  
Side\_Tex  
Bevel\_Tex  
Face\_Tex  
Output\_Bevel  
Output\_Sides  
Output\_Face  
Output\_Back  
FileName  
Bevel  
Thickness  
Smoothtris  
Smooth\_Angle  
Bounding\_Box  
NumPts  
Inside  
BoundingRect  
2D Coordinate 1  
2D Coordinate 2  
2D Coordinate 3  
.  
.  
.  
2D Coordinate N  
-1

("NumPts" to "2D Coordinate N" may be repeated until a -1 is found for NumPts)

EXAMPLE: [DXF]  
C:\POVSB\RAWX.DXF  
13  
Sandalwood  
0  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1

0.000000

\*.\*

1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 1 0 0

\*.\*

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
3.438681 4.416744 0.487805

0

1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1  
0.000000

\*.\*

1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 1 0 0

\*.\*

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000

0

1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1  
0.000000

\*.\*

1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 1 0 0

\*.\*

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000



0.000000 0.000000 0.000000  
0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000

0  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1  
0.000000  
\*.  
.

1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 1 0  
\*.  
.

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000

0  
0  
0  
1  
1  
1  
1

C:\POVSB\RAW\X.DXF

1  
0.060000  
1  
0.000000  
-4.225000 -5.458000 -2.574000 -3.421000  
13

0  
-4.225000 -5.458000 -2.574000 -3.421000  
-4.225000 -5.458000  
-3.527000 -4.415000  
-4.184000 -3.421000  
-3.946000 -3.421000  
-3.403000 -4.234000  
-2.861000 -3.421000  
-2.623000 -3.421000  
-3.280000 -4.415000  
-2.574000 -5.458000  
-2.812000 -5.458000  
-3.403000 -4.588000  
-3.979000 -5.458000  
-4.225000 -5.458000

-1

# RAW

## PoV Scene Builder

[RAW]  
Base Object  
Object Texture  
Object Transformations  
Smoothtris  
Smooth\_Angle  
Num\_Triangles  
Triangle 1  
Triangle 1  
.  
.  
.  
Triangle N

EXAMPLE: [RAW]  
C:\POVSB\RAW\TEST.RAW  
0  
DMFWood1  
1  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1  
0.000000  
\*.  
- - - - -  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 1 0  
\*.  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
1  
0.000000  
12  
-0.866000 1.000000 0.000000 -0.866000 0.000000 0.000000 0.000000 0.000000  
0.500000  
-0.866000 1.000000 0.000000 0.000000 0.000000 0.500000 0.000000 1.000000  
0.500000

0.000000 1.000000 0.500000 0.000000 0.000000 0.500000 0.866000 1.000000  
0.000000  
0.000000 0.000000 0.500000 0.866000 0.000000 0.000000 0.866000 1.000000  
0.000000  
-0.707000 2.000000 0.000000 -0.707000 1.000000 0.000000 0.000000 1.000000  
0.707000  
-0.707000 2.000000 0.000000 0.000000 1.000000 0.707000 0.000000 2.000000  
0.707000  
0.000000 2.000000 0.707000 0.000000 1.000000 0.707000 0.707000 2.000000  
0.000000  
0.000000 1.000000 0.707000 0.707000 1.000000 0.000000 0.707000 2.000000  
0.000000  
-0.500000 3.000000 0.000000 -0.500000 2.000000 0.000000 0.000000 2.000000  
0.866000  
-0.500000 3.000000 0.000000 0.000000 2.000000 0.866000 0.000000 3.000000  
0.866000  
0.000000 3.000000 0.866000 0.000000 2.000000 0.866000 0.500000 3.000000  
0.000000  
0.000000 2.000000 0.866000 0.500000 2.000000 0.000000 0.500000 3.000000  
0.000000

# CSG

## PoV Scene Builder

```
[CSG]
CSG Operation
Number CSG Sub Objects (N)
Base Object
Object Texture
Object Transformations
Sub Object 1
Sub Object 2
.
.
.
Sub Object N
[END_CSG]
```

```
EXAMPLE: [CSG]
3
2
CSGObject
0
Gold_Metal
1
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 1 1 0 1 0 0 0 0 1
0.000000
*.
.
-----
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 1 1 0 1 0 0 0 1 0 0
*.
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0 0 0 0 0 0 0
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.000000 0.000000
1.000000 1.000000 1.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
[SPHERE]
SphereObject
```

0

0

1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1  
0.000000

\*.\*

1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 1 0

\*.\*

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000

[BOX]

BoxObject

0

0

1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 0 1  
0.000000

\*.\*

1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 1 1 0 1 0 0 1 0

\*.\*

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.548781 -0.548780 0.000000

[END\_CSG]

# Lathe

## PoV Scene Builder

[LATHE]  
Base Object  
Object Texture  
Object Transformations  
Number Vertical Divisions  
3D Control Point 1  
3D Control Point 2  
.  
.  
.  
3D Control Point 7  
Number Rotational Divisions  
Smoothtris  
Smooth\_Angle

EXAMPLE: [LATHE]  
LatheObject  
0  
  
0  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 1 0 0 1 1 0 1 0 0 0 0 1  
0.000000  
\*.  
Brown \_ \_ \_ \_ \_  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 1 1 0 1 0 0 0 1 0  
\*.  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
0 0 0 0 0 0  
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000  
0.000000 0.000000  
1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
0.000000 0.000000 0.000000  
10  
1.000000 0.000000 -1.000000  
1.000000 0.000000 -0.666667  
1.000000 0.000000 -0.333333  
1.000000 0.000000 0.000000  
1.000000 0.000000 0.333333

1.000000 0.000000 0.666667  
1.000000 0.000000 1.000000  
18  
1  
0.000000

The Base Object Consists of the Object Name and the layer it is on.



Object Location in 3D X Y Z

Light Color

# Object Transformations

## PoV Scene Builder

There are 3 Object Transformations saved-

Scale  
Rotate  
Translate

EXAMPLE: 1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
1.131611 0.000000 2.164822

Flag indicating to use Spot Light Parameters

0- No

1- Yes

Spot Light Parameters-  
Radius FallOff Tightness Color

Texture Identifier Flag. Indicates whether to export to PoV file.

On- 1

Off- 0

# Object Texture

## PoV Scene Builder

Texture Identifier

Texture Identifier Flag

Texture Identifier Transformations

checker hexagon color filter map once gif tga planar spherical cylindrical torus

bilinear normdist

Filter

Image Map File Name

Color CheckerColor1 CheckerColor2 HexColor1 HexColor2 HexColor3

Pigment Transformations

bumps dents ripples waves wrinkles once gif tga planar spherical cylindrical torus

bilinear normdist map

Normal Map File Name

Bumps Dents Ripples Waves Wrinkles Frequency Phase

Normal Transformations

diffuse brilliance ambient reflection phong specular metallic refraction

Diffuse Brilliance Ambient Reflection Phong Specular Refraction Ior Roughness

Phong\_Size

EXAMPLE:

Blue\_Agate

1

1.000000 1.000000 1.000000

0.000000 0.000000 0.000000

0.000000 0.000000 0.000000

1 0 0 0 1 1 0 1 0 0 0 1

0.000000

\*\*

BlueViolet CadetBlue \_ \_ \_

1.000000 1.000000 1.000000

0.000000 0.000000 0.000000

0.000000 0.000000 0.000000

0 0 0 0 1 1 0 1 0 0 1 0

\*\*

0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000

1.000000 1.000000 1.000000

0.000000 0.000000 0.000000

0.000000 0.000000 0.000000

0 0 1 1 0 0 0

0.000000 0.000000 0.500000 0.600000 0.000000 0.000000 0.000000 0.000000 0.000000

0.000000

PoV predefined (or custom) Texture Identifier. Spaces must be replaced with a \_.



# Texture Identifier Transformations

## PoV Scene Builder

There are 3 Texture Transformations saved-

Scale  
Rotate  
Translate

EXAMPLE: 1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
1.131611 0.000000 2.164822

Pigment Flag. Indicates whether this Pigment parameter is exported to a PoV file.

On- 1

Off- 0

Color Filter Value

Image Map File Name. If no file name specified, use \*.\*

Color- Red, White, Green. Defined in colors.inc. Spaces must be replaced with a \_.  
Or if there is no color defined a \_ must be used.

# Pigment Transformations

## PoV Scene Builder

There are 3 Transformations saved-

Scale  
Rotate  
Translate

EXAMPLE: 1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
1.131611 0.000000 2.164822

Normal Flag- Indicates whether to export this Normal parameter to a PoV file.

On- 1

Off- 0

Normal Map File Name. If no file name defined, use \*.\*



Normal Parameter Value. Floating Point.

# Normal Transformations

## PoV Scene Builder

There are 3 Transformations saved-

Scale  
Rotate  
Translate

EXAMPLE: 1.000000 1.000000 1.000000  
0.000000 0.000000 0.000000  
1.131611 0.000000 2.164822

Finish Flags. Indicates whether to export this Finish parameter to a PoV file.

On- 1

Off- 0

Finish Parameter Value. Floating Point

File Type:

GIF- 1

TGA- 2

POT- 3

File Name of graphics file.

Smooth Flag

On- 1  
Off- 0

Water Level as described in PoV documentation.



Component  
Strength Radius Coordinate

Flag indicating whether to use this option.

On- 1

Off- 0

DXF filename. Not used for anything anymore.

Thickness of Bevel (floating point value)

Smoothtris Flag.

On- 1  
Off- 0

Angle (in radians) used for edge preservation in smooth triangle calculations.

3D Coordinate - X Y Z

Bounding\_Box (For all polylines)- Xmin Ymin Xmax Ymax



Inside- A flag indicating if the polyline is inside another polyline.

BoundingRect- Similar to Bounding Box, but Bounding Rect. is just the Bounding Box for the single polyline object.

2D Coordinate- X Y

Number of Triangles

Triangle-  $v1.x$   $v1.y$   $v1.z$   $v2.x$   $v2.y$   $v2.z$   $v3.x$   $v3.y$   $v3.z$   
Where-  $vN$  is vertex  $N$ .

CSG Operation-  
UNION- 1  
MERGE- 2  
INTERSECTION- 3  
DIFF- 4

3D Control Point- X Y Z





