

NAME

genrev - generate a RADIANCE description of surface of revolution

SYNOPSIS

genrev **mat name** '**z(t)**' '**r(t)**' **nseg** [**-e** **expr**] [**-f** **file**] [**-s**]

DESCRIPTION

Genrev produces a RADIANCE scene description of a surface of revolution. The object will be composed of *nseg* cones, cups, cylinders, tubes or rings following the parametric curve defined by $z(t)$ (height) and $r(t)$ (radius). When z is increasing with t , the surface normal points outward. When z is decreasing, the normal points inward. The variable t used in the function expressions varies from 0 to 1 in even steps of $1/nseg$. The expressions are of the same type used in RADIANCE function files. Auxiliary expressions and/or files may be specified in any number of $-e$ and $-f$ options. The variable and function definitions in each $-f$ *source* file are read and compiled from the RADIANCE library where it is found. The $-s$ option smooths the surfaces using Phong normal interpolation.

EXAMPLE

To generate a torus with an inner radius of 1 and an outer radius of 3:

```
genrev steel torus 'sin(2*PI*t)' '2+cos(2*PI*t)' 32
```

ENVIRONMENT

RAYPATH the directories to check for auxiliary files.

AUTHOR

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SEE ALSO

genbox(1), gencat(1), genprism(1), gensurf(1), genworm(1), rcalc(1), rpict(1), rvu(1), xform(1)