

**NAME**

mksource - compute distant sources for RADIANCE image-based lighting

**SYNOPSIS**

**mksource** [ **-d nsamps** ] [ **-t thresh** ] [ **-a maxang** ] [ **octree** ]

**DESCRIPTION**

*Mksource* produces a RADIANCE scene description of distant illum sources corresponding to bright, concentrated regions in the given ambient environment. Any local geometry is ignored in the input octree, which should be derived from a captured light probe and modeled as a distant hemispherical or spherical glow source. The output sources may then be combined with this environment to produce a more efficient scene for rendering, faster and less prone to sampling artifacts.

The *-d* option may be used to specify the number of ray samples, which defaults to 262,000. Calculation time is roughly proportional to this setting, and the default is fine enough to resolve sources the size of the sun (half a degree) or larger.

The *-t* option may be used to manually set the radiance threshold for sources, in watts/sr/meter<sup>2</sup>. The default uses the top 2 percentile of the environment, which is usually a good value.

The *-a* option may be used to specify a maximum source diameter, which defaults to 15 degrees. *Mkillum* silently enforces a maximum of 180 degrees for this option.

If no input octree is specified, the standard input is read.

**EXAMPLE**

To add sources with a maximum size of 20 degrees to the environment described in *environ.oct*:

```
mksource -a 20 environ.oct > srcs.rad
oconv -i environ.oct srcs.rad > env+srcs.oct
```

**AUTHOR**

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**SEE ALSO**

*mkillum*(1), *rpict*(1), *rvu*(1)