The sphere package

Here are the routines defined in the file **`sphere.inc`**. This package is concerned with drawing on spheres.

ROUTINE: **axis**
ARGUMENTS: A rotation matrix A
RETURNS: The axis of rotation

Returns $(Ae_0 - e_0) \times (A_1 - e_1)$, so doesn't work if this is 0, or in particulr if e_0 or e_1 is on the axis.

ROUTINE: **great-circle**
ARGUMENTS: $[w_0\ w_1]$ and t
RETURNS: The point $\gamma(t)$ on the arc from w_0 to w_1.

This is used in **`mkpath3d`** to parametrize the spherical arc from w_0 to w_1. Assumes w_1 perpendicular to w_0.

ROUTINE: **sphere-arc**
ARGUMENTS: L, w_0, w_1, N
RETURNS: Constructs the spherical path from w_0 to w_1.

I.e. the whole spherical path in N Bezier segments, on the unit sphere transformed by the 3D location matrix L.

ROUTINE: **horizon**
ARGUMENTS: axis
RETURNS: The point where the great circle around the axis goes from visible to invisible.

ROUTINE: **true-horizon**
ARGUMENTS: R, w_0, w_1
RETURNS: The point where the great circle from Rw_0 to Rw_1 from visible to invisible.

Assumes R a rotation matrix, w_0 visible.

ROUTINE: **spherical-to-rect**
ARGUMENTS: $[R\ \varphi\ \theta]$
RETURNS: $[x\ y\ z]$

Converts spherical to rectangular coordinates.