Build a Globe of the Earth
Model the Globe

\[ x = \cos 2\pi s \]
\[ y = \sin 2\pi s \]

\[ r = \sin \pi t \]
\[ z = -\cos \pi t \]
Model the Globe

\[ x = \sin \pi t \cos 2\pi s \]
\[ y = \sin \pi t \sin 2\pi s \]
\[ z = -\cos \pi t \]
Model the Globe with Quads

\[ x = \sin \pi t \cos 2\pi s \]
\[ y = \sin \pi t \sin 2\pi s \]
\[ z = -\cos \pi t \]
Triangulate the Quads
Texture Coordinates
Texture Coordinates
Texture Mapping
Texture Mapping
Texture Mapping
Texture Mapping
Texture Mapping
Texture Mapping
Interpolation

- Rasterization interpolates any vertex attribute across a polygon’s fragments
- Interpolating color yields Gouraud smooth shading
- Can also interpolate texture coordinates (s,t) defined at vertices to provide texture coordinates at each fragment