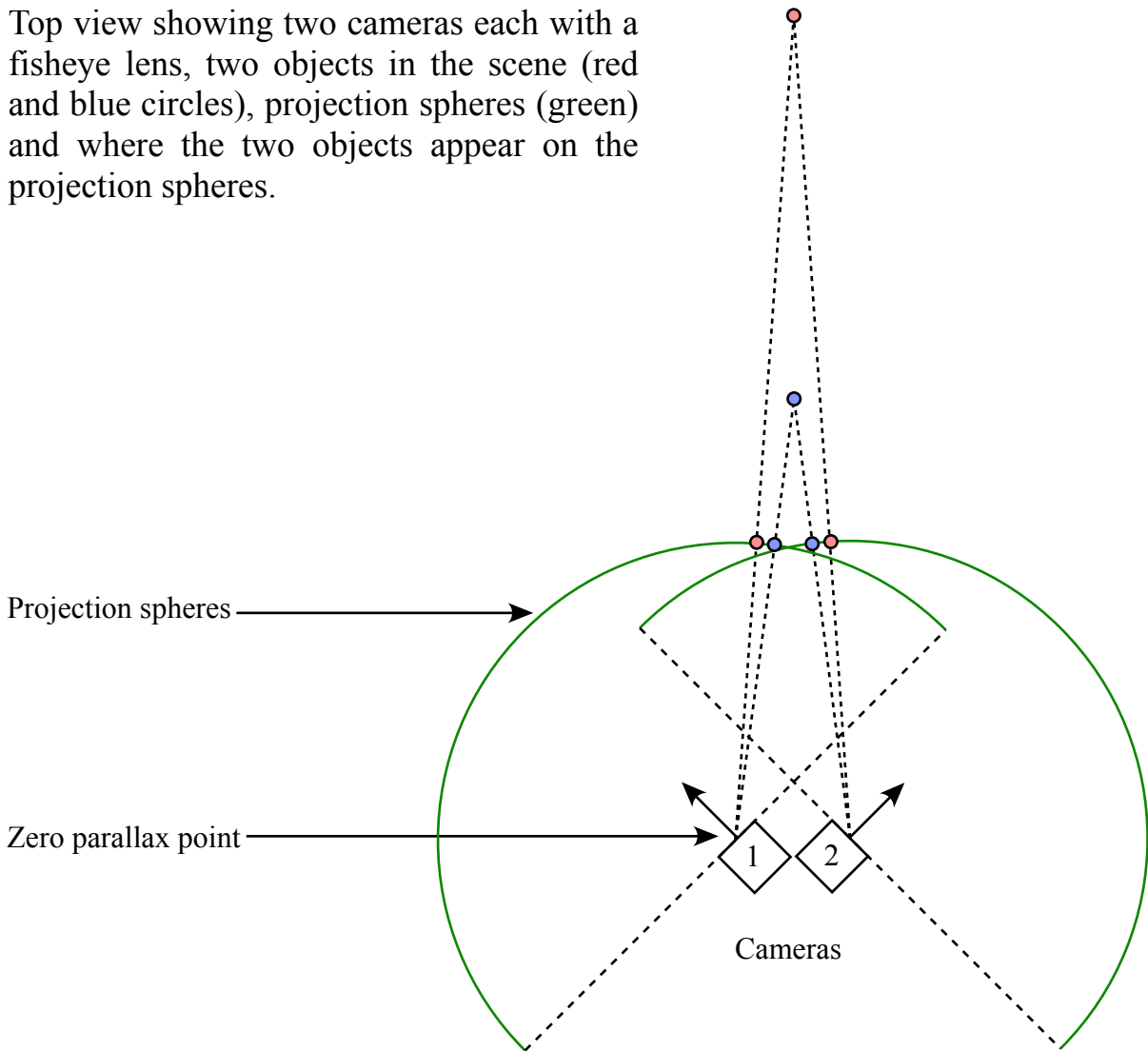# Diagram for
"fundamental parallax issue for blending images from multiple cameras"
(fisheye case)

Paul Bourke

Top view showing two cameras each with a fisheye lens, two objects in the scene (red and blue circles), projection spheres (green) and where the two objects appear on the projection spheres.

Projection spheres —————→

Zero parallax point —————→

1   2

Cameras

Fisheye circle from each camera showing where each object appears with respect to the other.

Camera 1

Camera 2
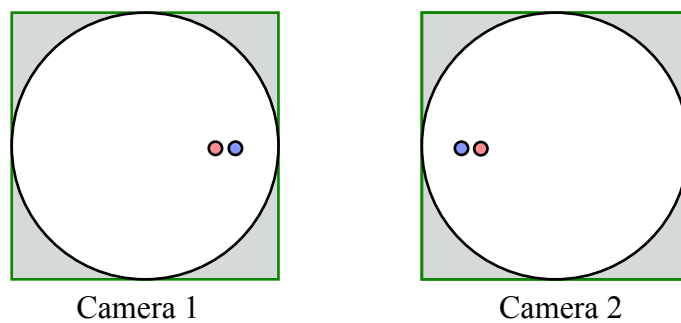
The usual approach for the image alignment and blending, at least conceptually, is to transform the fisheye images into equirectangular space (back project onto a sphere). Irrespective of the exact approach, it is clear that both the blue and red object cannot be aligned. A perfect alignment can be made only if the zero parallax points are colocated, or alternatively for a particular depth but not all depths.