Radial Projection



This 2-dimensional figure illustrates the homeomorphism of the disk to itself that is the identity on the boundary sphere and maps 0 to a point v in the interior of the disk. For each point u on the unit sphere, the homeomorphism maps the closed segment joining 0 to u <u>linearly</u> to the closed segment joining v to u. Several possibilities for u are illustrated. Maps of this sort arise repeatedly in elementary geometric topology and the geometry of convex sets.