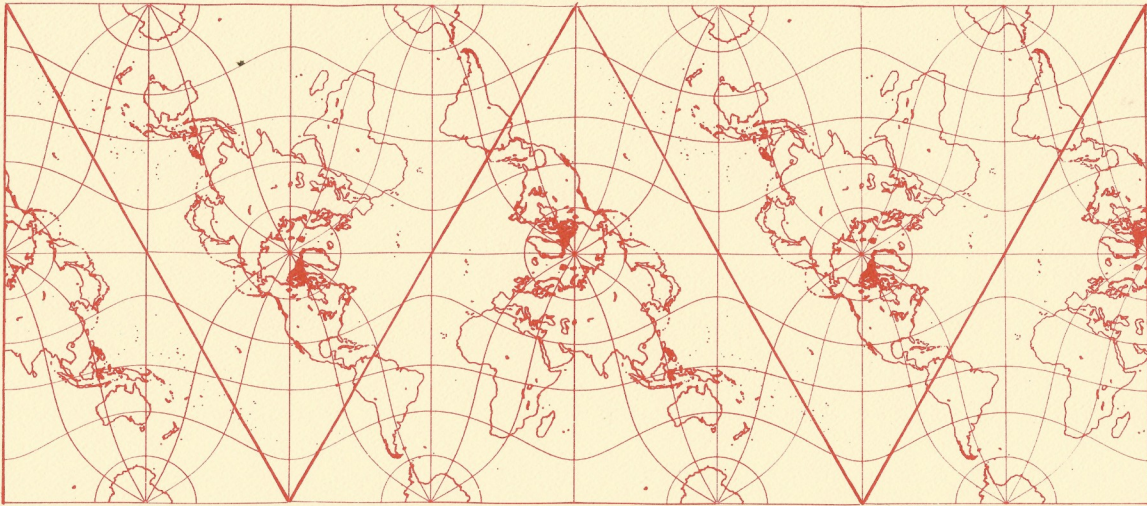


Tetrahedric Projection



Peace on Earth

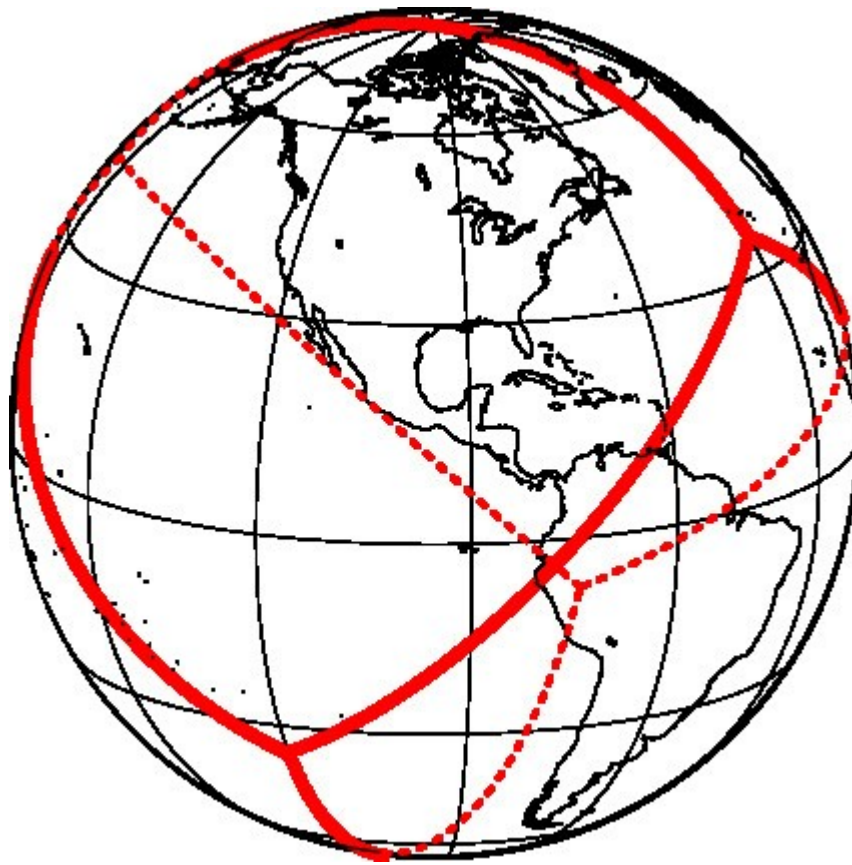
The McIlroys

CONFORMAL TETRAHEDRAL PROJECTION, by D. McIlroy
Copies of these triangular maps fit together perfectly in all directions into a repeating map as endless as the globe itself. They show the whole world true to shape at all but four isolated points in the oceans, with remarkably little scale variation across the continents. To see the world in a different perspective, fold the four triangles up into a pyramid with a triangular base.

This, my favorite world map, got me started on making map greetings. The sheet folded twice makes a card with the map on the front and back and print inside. A conformal projection maps a globe divided into four spherical triangles (see below) onto four flat triangles that make up one big triangle.

Alternating up and down copies of the big triangle tile the plane with a continuous repeating map. Straight meridians pass through vertices of the four constituent triangles, splitting there to make right-angle bends.

The tetrahedric projection was the last wallpaper map to be published, by L. P. Lee in 1965, 140 years after Abel discovered the mathematics of tiling functions. In the aspect displayed here, the projection provides a remarkably good representation of the continents upon a gracefully undulating grid of parallels and meridians. The nasty vertices are banished to the “empty” sea.



Division of the globe into four equilateral spherical triangles arranged as a tetrahedron. One edge is centered on the north pole; an opposite edge is centered on the south pole. To make a flat map, the globe is split open along the lines that are shown dotted on the back side; and the triangles that meet there are folded outward. (Orthographic projection, used in [2001](#) and on a droopy globe in [2010](#) and [2012](#).)