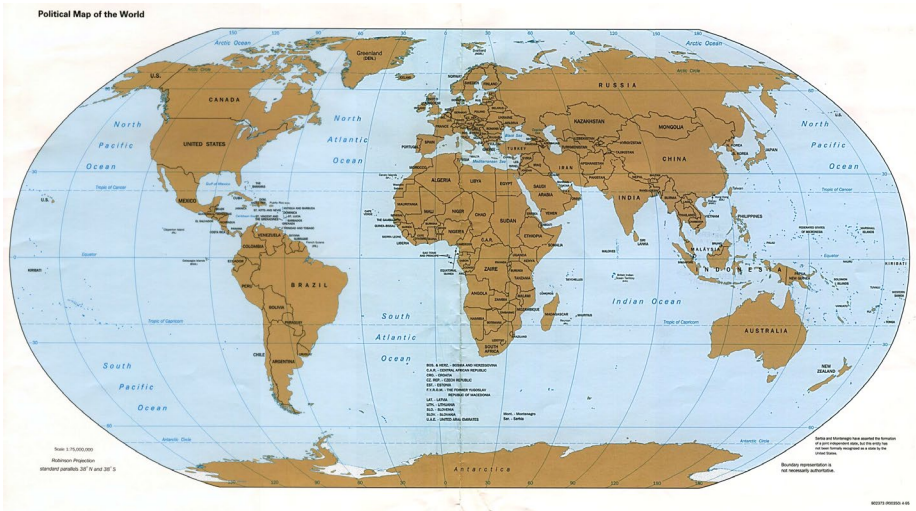
Projections

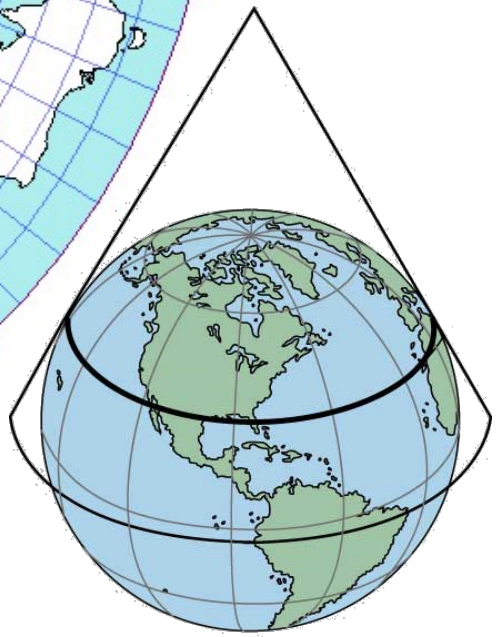
How to go from round to flat?????

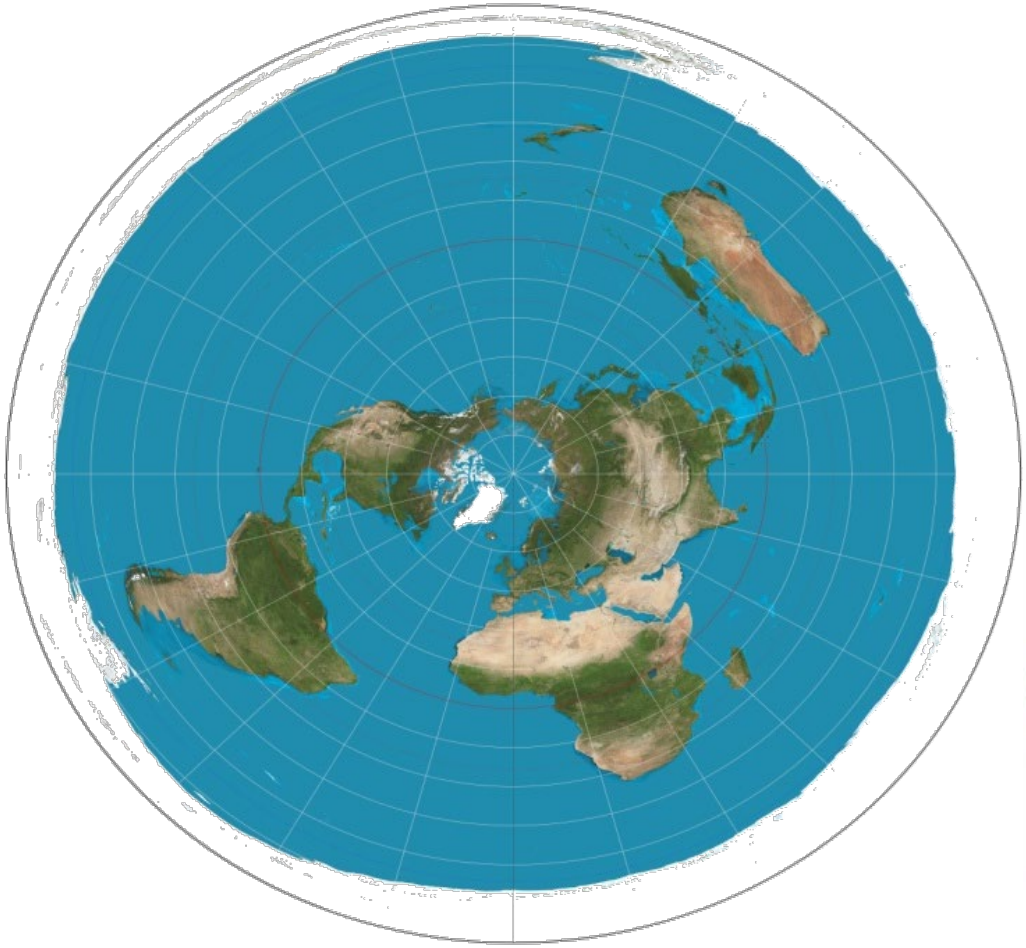


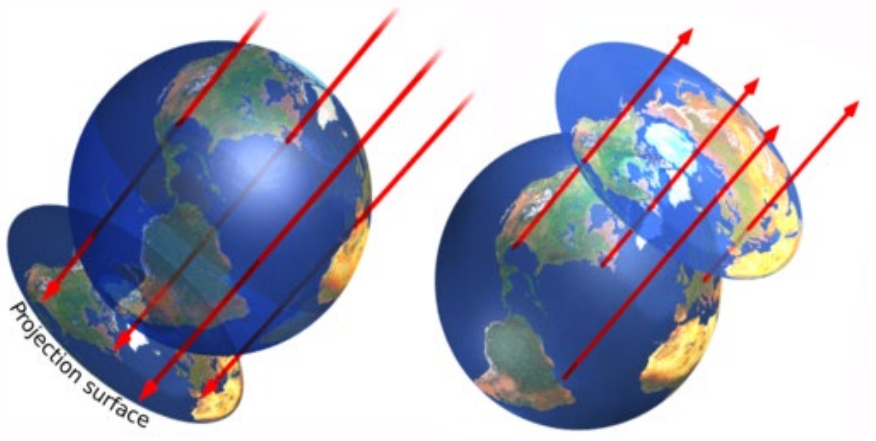
[Maps Lie!]

- **Mercator Projection**
  - Use of cylinder to wrap around the globe
  - Shapes accurate; very common projection
  - Distortions—size; distance
  - Useful for true directions (navigation; sea travel)

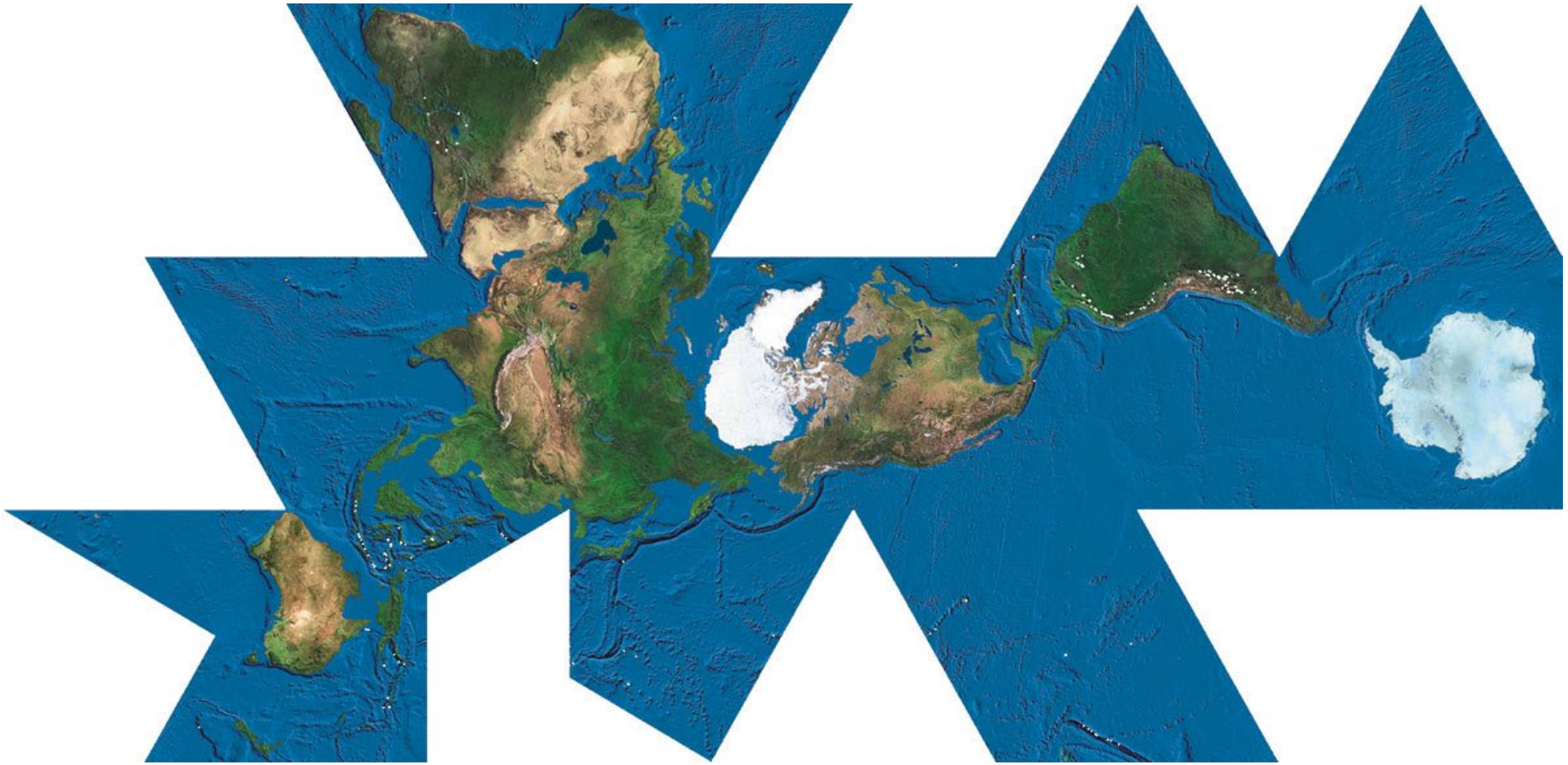
- **Conic Projections**
  - Cone is placed over part of the globe.
  - Shows small east-west areas in mid latitudes
  - Distances and directions are fairly accurate.





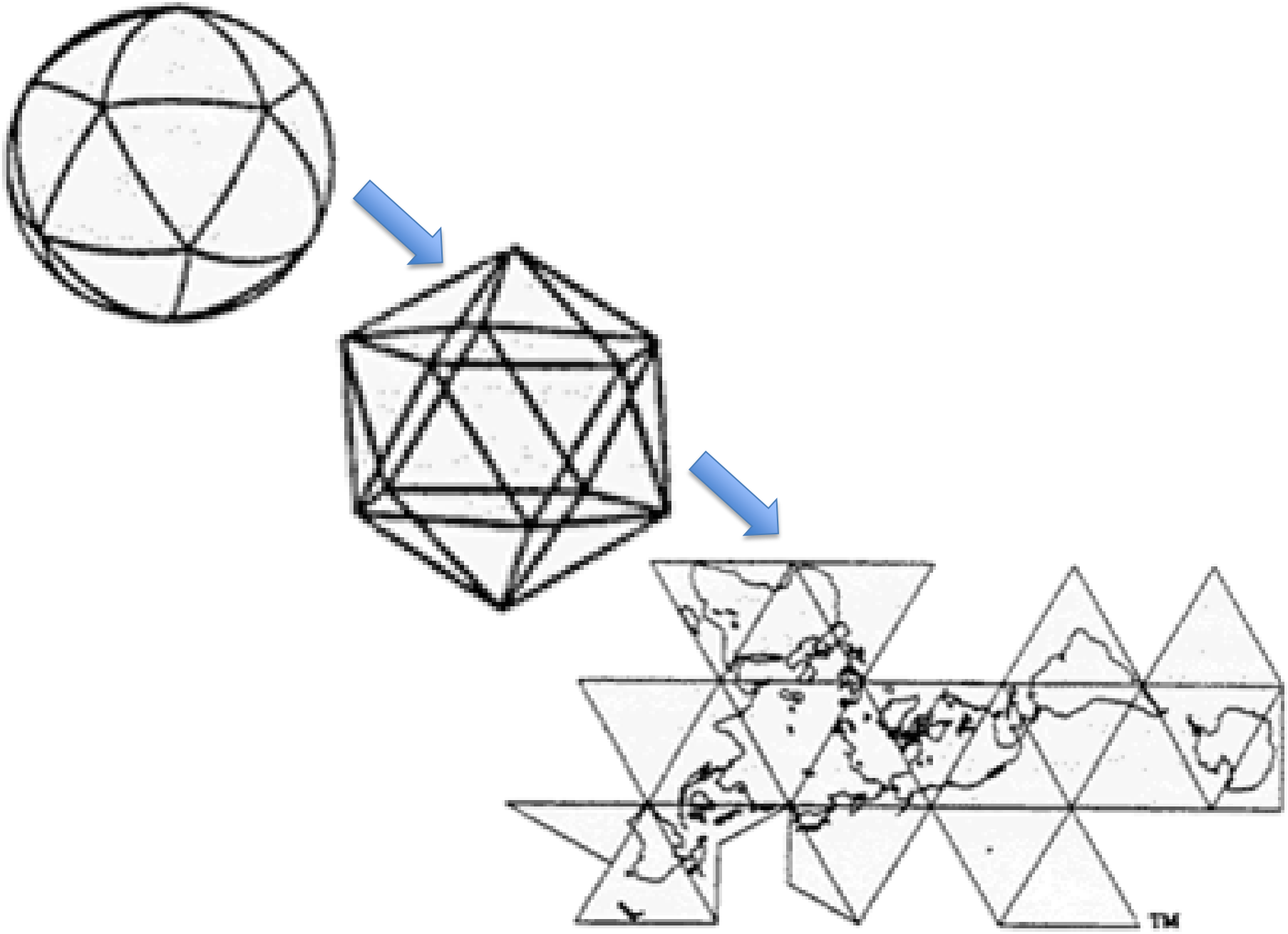


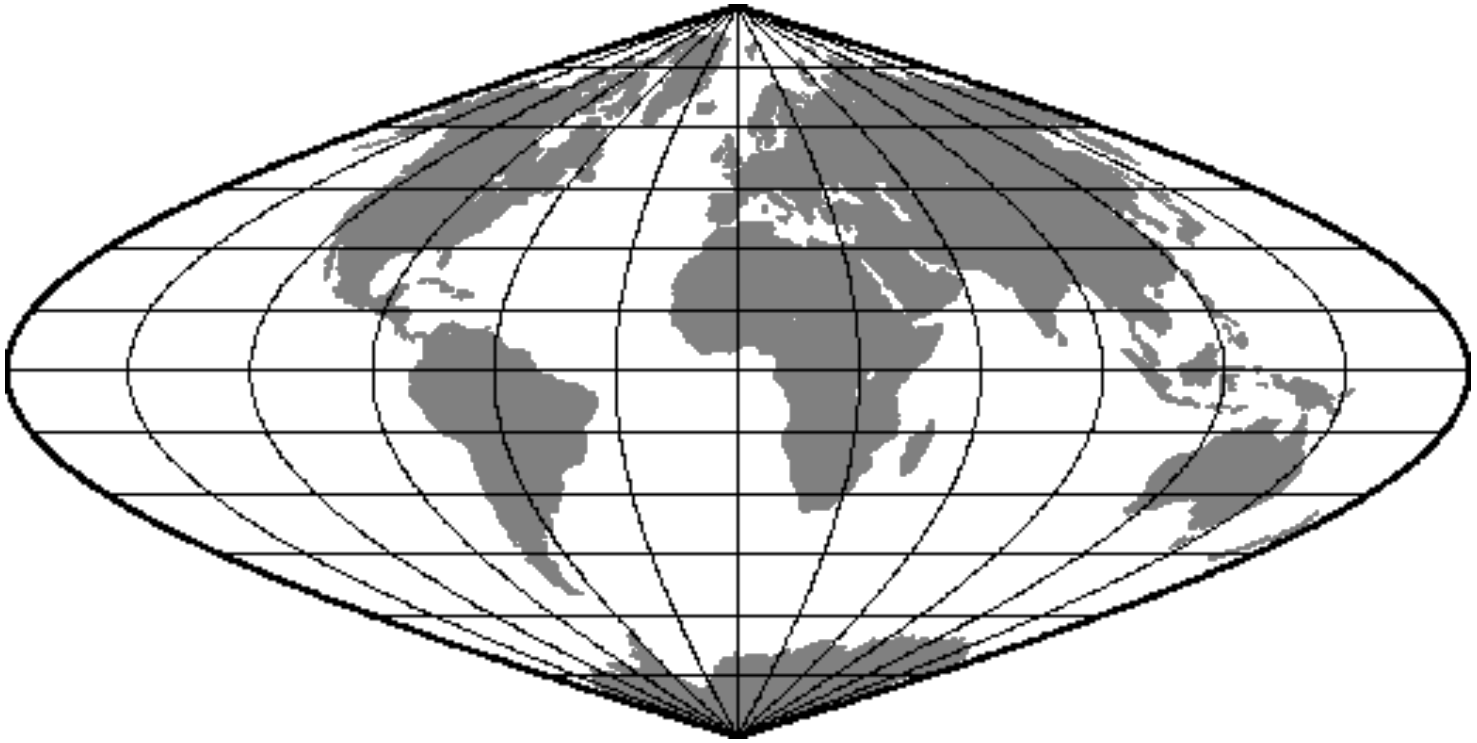
- **Azimuthal (Polar) Projections**
  - Most common use: show polar regions
  - Used in air navigation
  - Distortions—size; shape
  - Accuracies—distance; direction when passing through poles



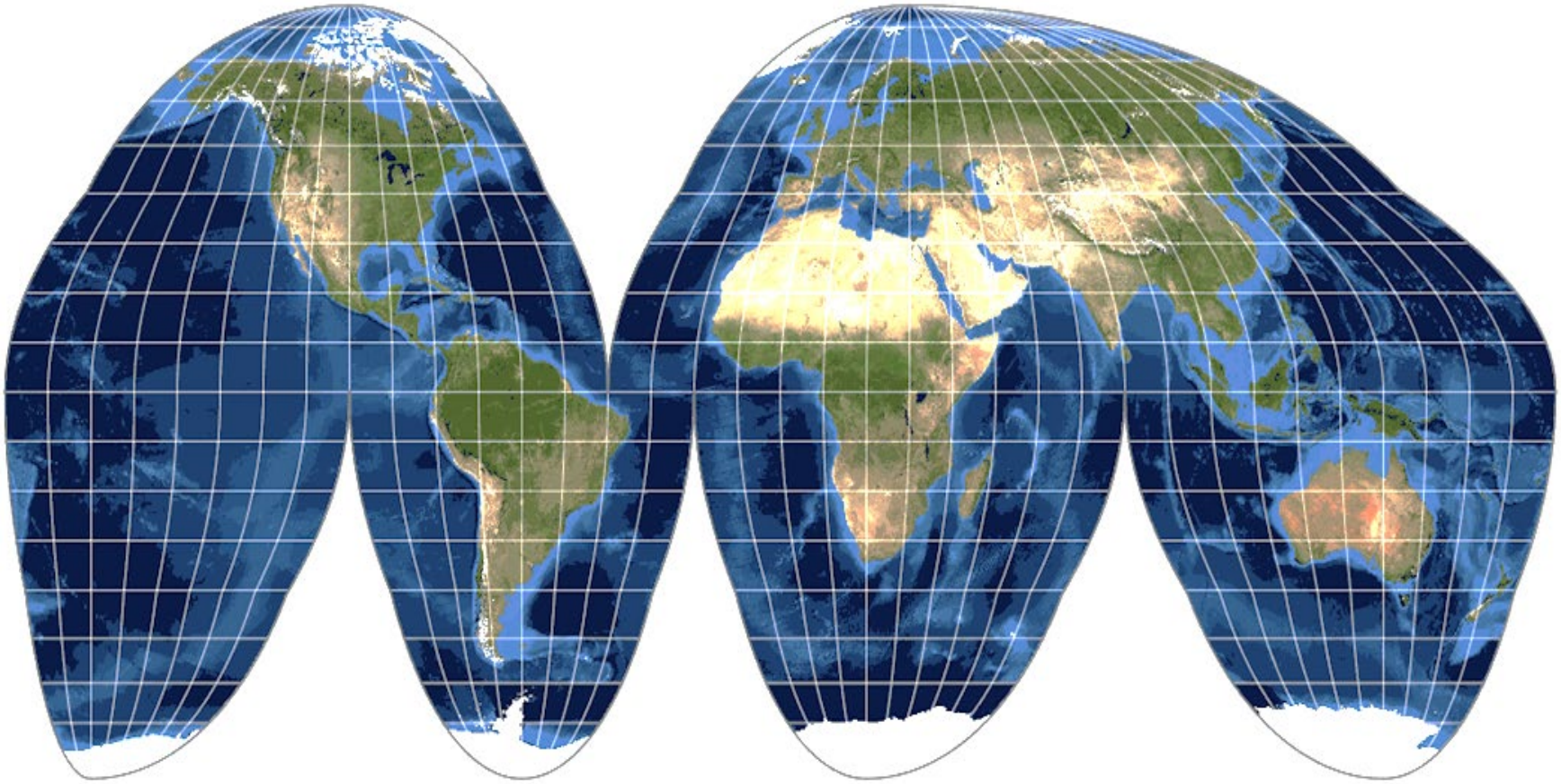
- **Fuller-Dymaxion**
  - Fuller was an educator, engineer, and architect.
  - He sought to display the entire world without distortion.
  - Dymaxion = Dynamic + Maximum + Tension = 'Doing More With Less'

Fuller-Dymaxion Creation

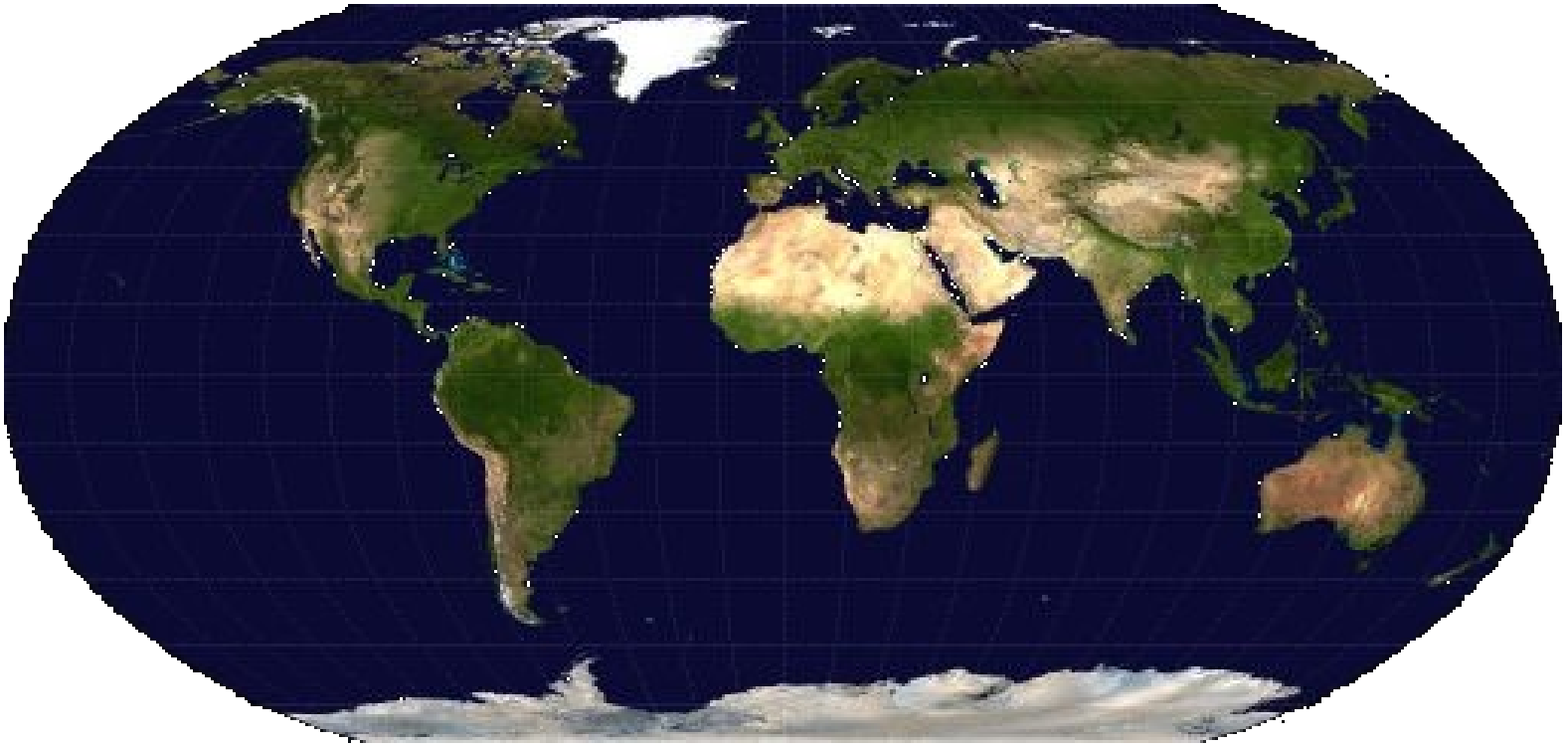




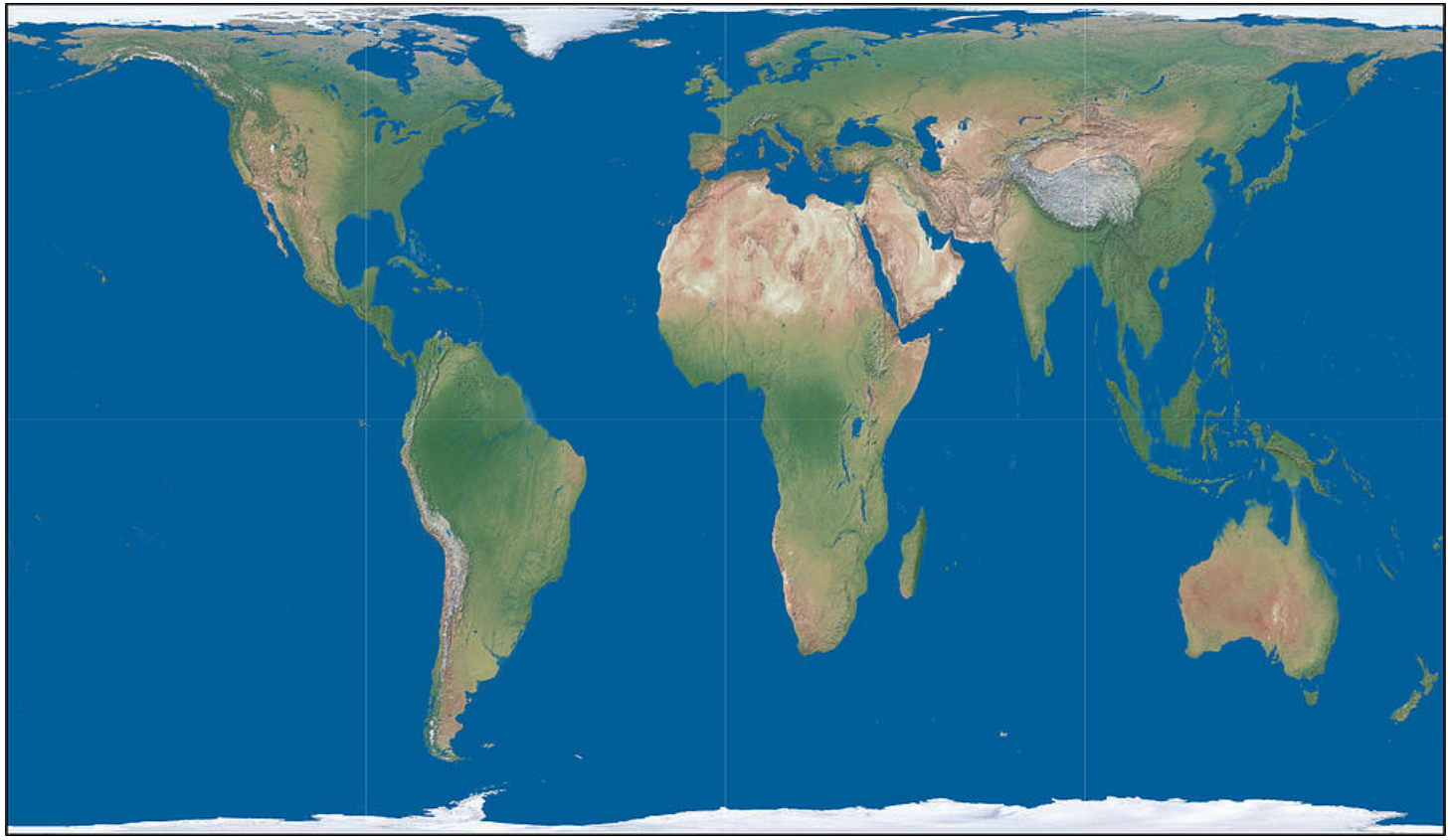
- **Sinusoidal Projection**
  - Parallels and central meridians are straight lines.
  - Shapes are accurate in the center but distorted toward the edge.
  - There are no lines of true distance.



- **Goode's Interrupted Equal Area Projection**
  - Also called a broken projection
  - Shows true sizes and shapes
  - Distortion—To keep shapes true, distances are very distorted!



- **Robinson Projection**
  - Shapes near the poles are flat.
  - Continents appear similar to the globe.
  - Minor distortions overall. Distances at poles are incorrect.
  - Most common projection.



Gall-Peters Projection

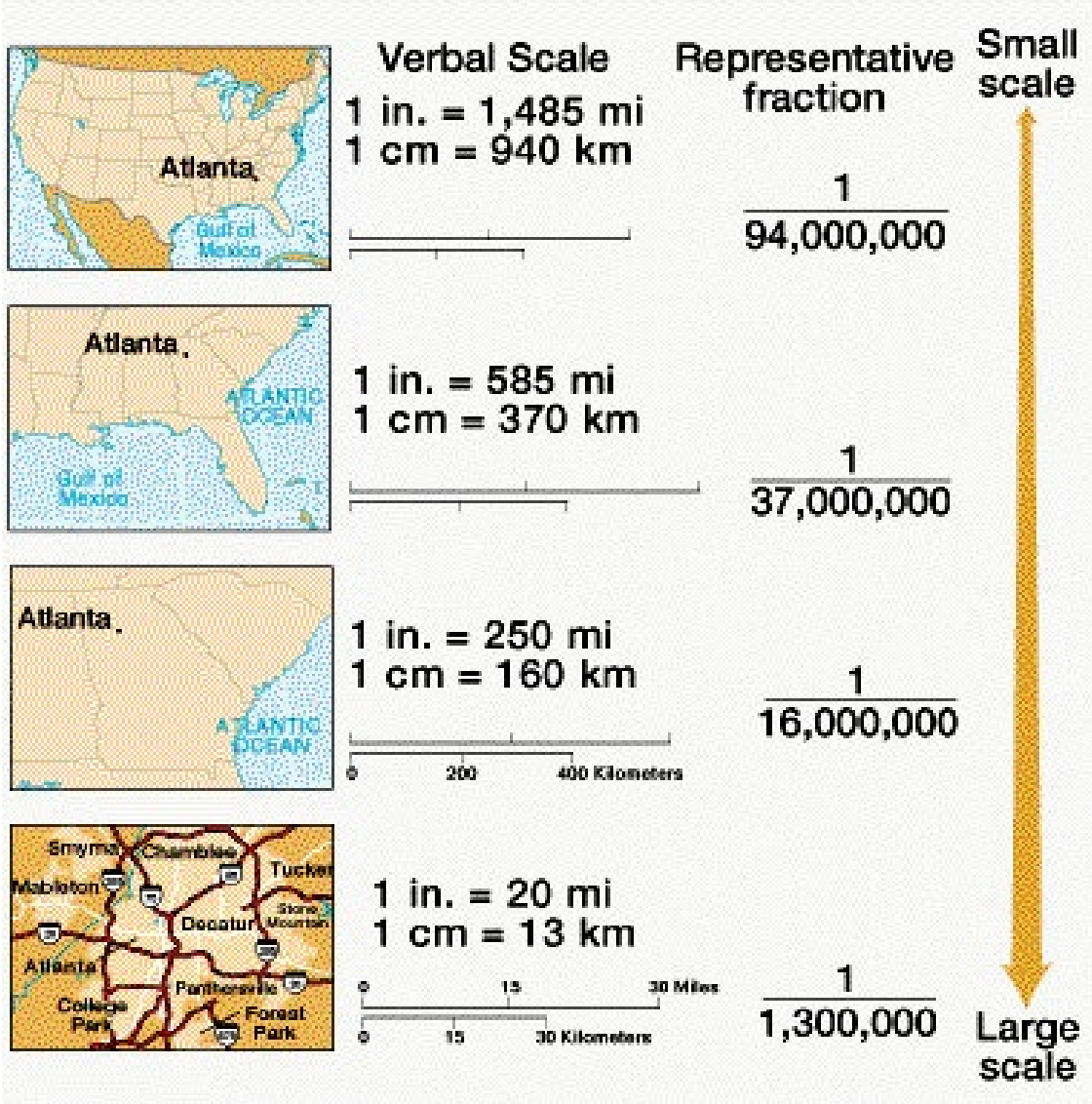
- Inaccurate shapes in many areas
- Area is accurate but shapes elongate
- Used more often by government bodies to study geopolitical relationships

Map Scale

In cartography, the science of mapmaking, scale is relationship between size on the map and actual size.

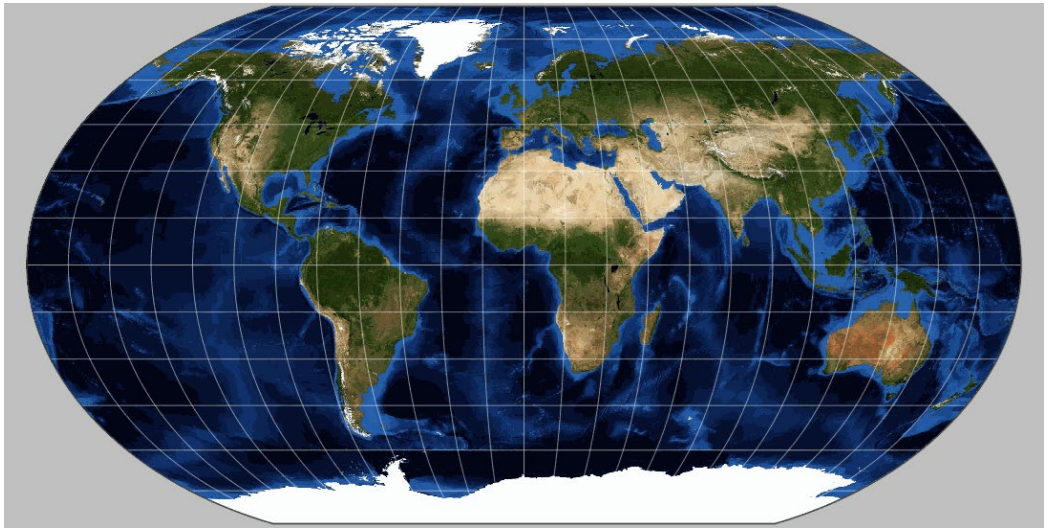
Scale can go from local to global.

Ways to express scale – fractions/ratios and verbally



Which of the following describes the map projection pictured below?

A. Mercator
B. Conic
C. Sinusoidal
D. Robinson
E. Fuller-Dymaxion



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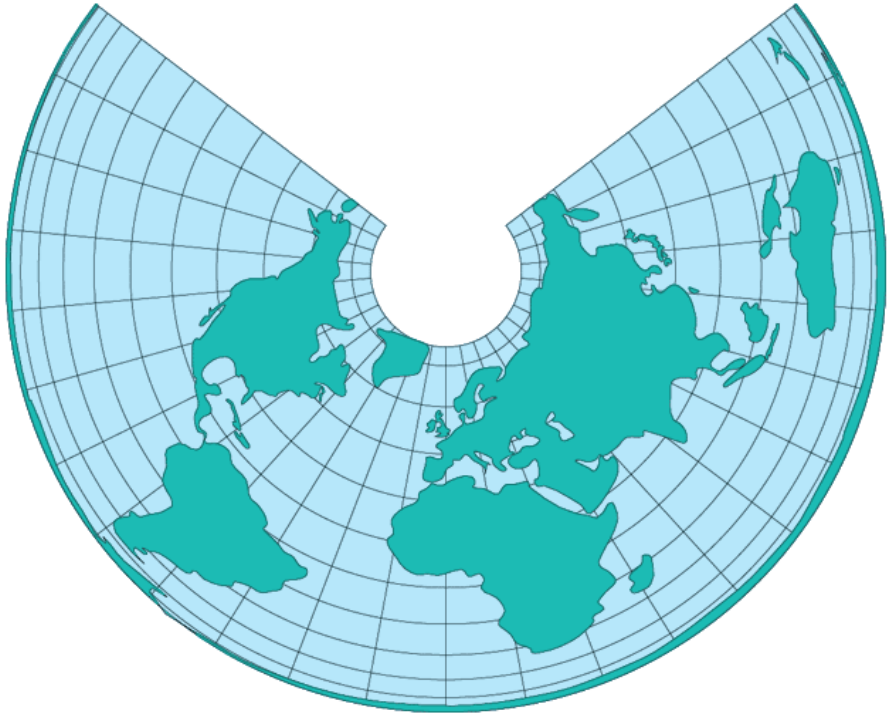

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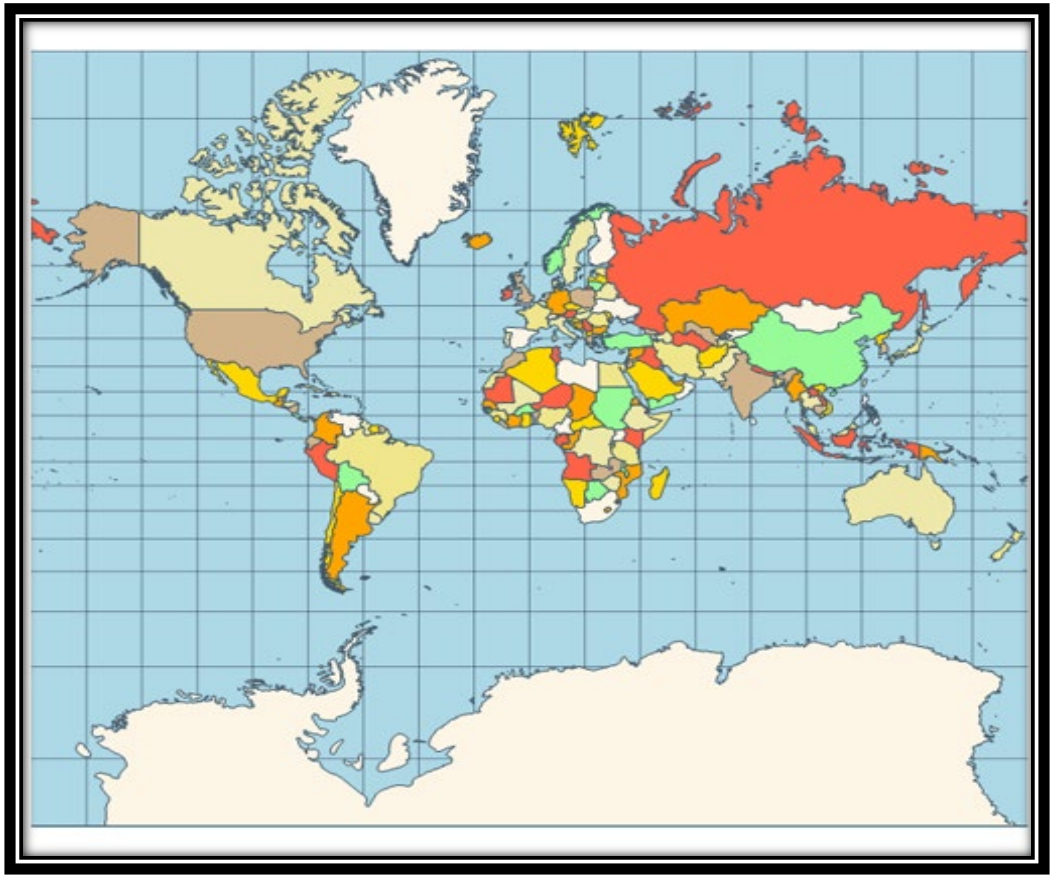

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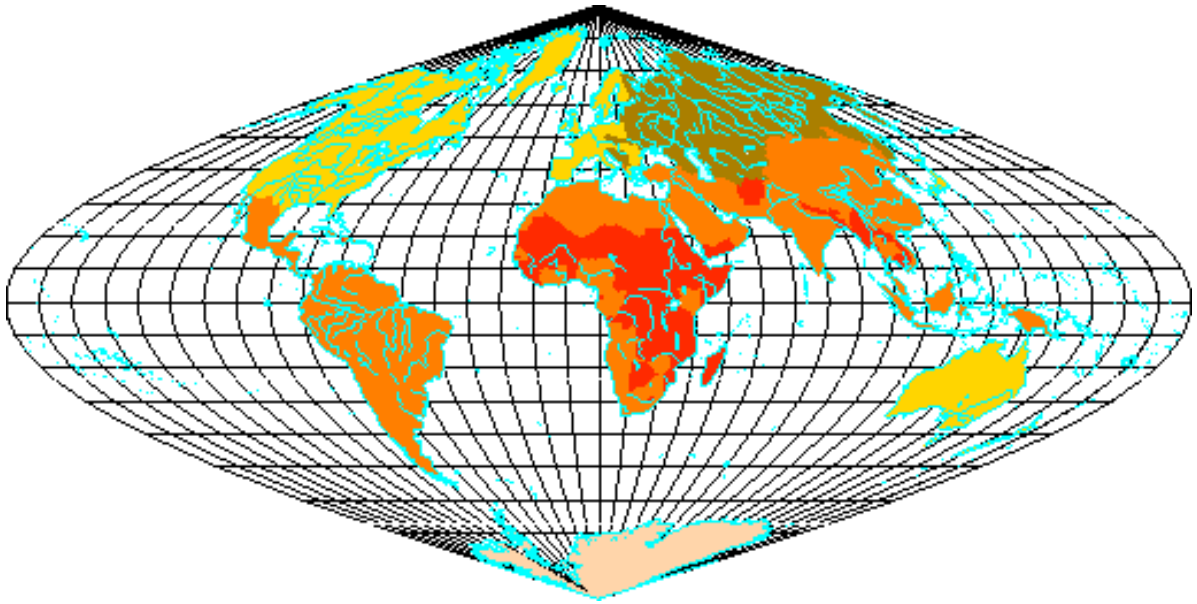

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Closing Video

[42 Maps That Explain the World]