

5. Maps – the Cartographic Projections

Cartography

Cartography is a science studying possibilities how to display globular shape of the Earth to the flat drawing area.

Map

The **Map** is a basic cartographic work and together with the globe represents the world around us. The map provides 2-D graphic, transparent, distorted flat miniature of the Earth's surface by using captions (marks), symbols and colours.

Maps are used by geographers, geologists, foresters, constructors, tourists, navigators and fliers.

The Earth's surface is very complex and complicated. It's needed to simplify it. **Generalization** is the process of simplifying, selecting and representing information of a map.

Cartographic projections

The cartographic projections are methods of displaying the Earth's surface – globular shape to the flat drawing area (3D world to 2D map). Distortion occurs in that process and it is a basic feature of geographic maps

Cartographic projections according to the distortion:

1. **conform projections** = angles are the same => appropriate for navigation, flights, etc.
2. **equivalent projections** = areas are the same
3. **equidistant projections** = distances are the same

Keywords

cartography, flat drawing area, generalization, distortion, conform/equivalent/equidistant projections

Figure 1: Conform projection

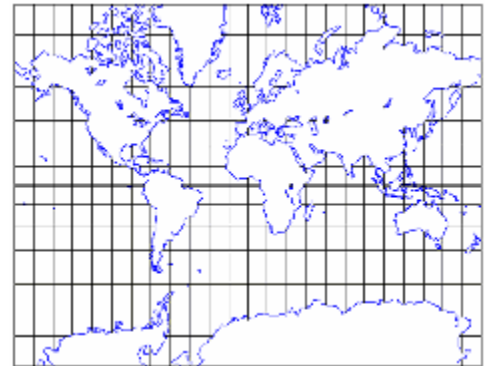


Figure 2: Equivalent projection

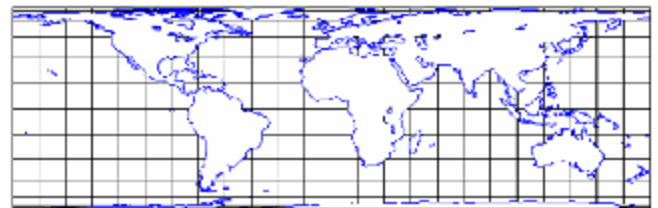


Figure 3: Equidistant projection

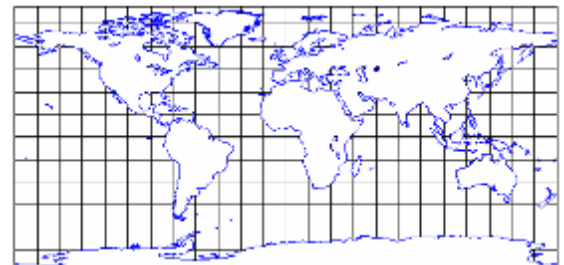


Figure 4: Mercator projection

