

**Elements of the Global Model**
- Plate Polygons: about 1373 logical plate polygons, global coverage from Present Day to 240Ma.
- Deforming Zones: 5 regional networks (active period): North America (0-360Ma), Andes (0-450Ma), South East Asia (0-515Ma), South Atlantic (110-150Ma), African Interior (64-132Ma).
- Micro Blocks: 10 blocks in North America, and 15 South East Asia, a few in the South Atlantic.
- Features: tens of thousands of points, lines, and polygons.
- Data Management: the model is separated into 5 rotation sets, and about 8 feature sets, which become about 20 distinct layers.

**Regional zones of deformation**
- Present Day
- 17 Ma
- 35 Ma

**Overview of 3D Reconstruction**
- Referencing 3D reconstructions as a tool for plate reconstruction.
- Reconstruction and deformation within Topological Networks (Deforming Plates)
  - t_{n+1}
  - t_n
  - Instantaneous velocity field and strain rate on mesh
  - Follow (track) deformation (strain ...) of sample forward in time

**Interactive Plate Tectonic Reconstructions**
- The MacroStrat project at the University of Wisconsin-Madison, one of the EarthCube demonstration projects, is currently in its third year and has been used to flexibly combine data. The website (accessed by GPlates directly as a Web Service in an EarthCube demonstration project, see below).