16. Coordinate Transformations

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GIS specialists often need to transform data from one coordinate system and/or datum to another. For example, digital data produced by tracing paper maps over a digitizing tablet need to be transformed from the tablet's non-georeferenced plane coordinate system into a georeferenced plane or spherical coordinate system that can be **georegistered** with other digital data "layers." Raw image data produced by scanning the Earth's surface from space tend to be skewed geometrically as a result of satellite orbits and other factors; to be useful these too need to be transformed into georeferenced coordinate systems. Even the point data produced by GPS receivers, which are measured as latitude and longitude coordinates based upon the WGS84 datum, often need to be transformed to other coordinate systems or datums to match project specifications. **This section describes three categories of coordinate transformations: (1) plane coordinate transformations; (2) datum transformations; and (3) map projections.**

Students who successfully complete this section of Chapter 2 should be able to: ***recognize the kind of transformation that is appropriate to georegister two or more data sets.***

‹ 15. Control Points and Datum Shifts up 17. Plane Coordinate Transformations ›

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