

17. Summary



Many local, state, and federal government agencies produce and rely upon geographic data to support their day-to-day operations. The **National Spatial Data Infrastructure (NSDI)** is meant to foster cooperation among agencies to reduce costs and increase the quality and availability of public data in the U.S. The key components of NSDI include standards, metadata, data, a clearinghouse for data dissemination, and partnerships. The seven **framework data themes** have been described as "the data backbone of the NSDI" (FGDC, 1997, p. v). This chapter and the next review the origins, characteristics and status of the framework themes. In comparison with some other developed countries, framework data are fragmentary in the U.S., largely because mapping activities at various levels of government remain inadequately coordinated.

Chapter 6 considers two of the seven framework themes: geodetic control and orthoimagery. It discusses the impact of high-accuracy satellite positioning on accuracy standards for the National Spatial Reference System--the U.S.' horizontal and vertical control networks. The chapter stresses the fact that **much framework data is derived, directly or indirectly, from aerial imagery**. Geospatial professionals understand how photogrammetrists compile planimetrically-correct vector data by stereoscopic analysis of aerial imagery. They also understand how orthoimages are produced and used to help keep vector data current, among other uses.

The most ambitious attempt to implement a nationwide collection of framework data is the USGS' **National Map**. Composed of some of the digital data products described in this chapter and those that follow, the proposed National Map is to include high resolution (1 m) digital orthoimagery, variable resolution (10-30 m) digital elevation data, vector transportation, hydrography, and boundaries, medium resolution (30 m) land characterization data derived from satellite imagery, and geographic names. These data are to be seamless (unlike the more than 50,000 sheets that comprise the 7.5-minute topographic quadrangle series) and continuously updated. Meanwhile, in 2005, USGS announced that two of its three National Mapping Centers (in Reston, Virginia and Rolla, Missouri) would be closed, and over 300 jobs eliminated. Although funding for the Rolla center was subsequently restored by Congress, it remains to be seen whether USGS will be sufficiently resourced to fulfill its quest for a National Map.



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The Nature of Geographic Information

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