

1. Overview



Chapters 6 and 7 consider the origins and characteristics of the **framework data themes** that make up the United States' proposed National Spatial Data Infrastructure (NSDI). Chapter 6 discussed the geodetic control and orthoimagery themes. **This chapter describes the origins, characteristics, and current status of the elevation, transportation, hydrography, governmental units, and cadastral themes.**

Objectives

Students who successfully complete Chapter 7 should be able to:

1. given a regular or irregular array of spot elevations, construct a triangulated irregular network, interpolate contour intervals and draw contour lines;
2. compare vector and raster representations of terrain elevation;
3. acquire and view digital elevation data from the National Elevation Dataset;
4. calculate an interpolated spot elevation based on neighboring elevations;
5. contrast the characteristics of three global elevation data products;
6. describe the characteristics and current status of the NSDI hydrography, transportation, and governmental units themes as implemented in USGS' National Map; and
7. interpret the size and relative location of a land parcel designated in terms of the U.S. Public Land Survey System.

"Try This!" Activities

Take a minute to complete any of the Try This activities that you encounter throughout the chapter. These are fun, thought provoking exercises to help you better understand the ideas presented in the chapter.



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our [Geospatial Education Program Office](#).

The Nature of Geographic Information

Chapters

- ▶ Chapter 1: Data and Information
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- ▶ Chapter 3: Census Data and Thematic Maps
- ▶ Chapter 4: TIGER, Topology and Geocoding
- ▶ Chapter 5: Land Surveying and GPS
- ▶ Chapter 6: National Spatial Data Infrastructure I
- ▼ Chapter 7: National Spatial Data Infrastructure II
 - **1. Overview**
 - 2. Theme: Elevation
 - 3. Vector and Raster Approaches
 - 4. Contours
 - 5. Contouring By Hand
 - 6. Digital Line Graph (DLG)
 - 7. Digital Elevation Model (DEM)
 - 8. Interpolation
 - 9. Slope
 - 10. Relief Shading
 - 11. Lidar
 - 12. Global Elevation Data
 - 13. Bathymetry

- 14. Statistical Surfaces
- 15. Theme: Hydrography
- 16. Theme: Transportation
- 17. Theme: Governmental Units
- 18. Theme: Cadastral
- 19. Summary
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- ▶ [Chapter 8: Remotely Sensed Image Data](#)
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