



NEED A MAP?

MAPS, MAPPING AND GEOSPATIAL SERVICES IN THE LIBRARY

TECHNOLOGICAL SUPPORT

TECHNOLOGY ISSUES FOR MAPS

TECHNOLOGY FOR GEOSPATIAL SERVICES IN LIBRARIES

TERMS

- What is Geographic Information Systems (GIS)?
 - A system where we can visualize, question, analyze, and interpret geographic data to understand relationships, patterns, and trends.
- Geospatial Data or Spatial Data?
 - Data or information that has a geographic component to it. Spatial data is often accessed, manipulated or analyzed through GIS.

HARDWARE

- Hardware (Ideal System)
 - 3 to 4 ghz multiprocessor workstation, 64 bit
 - Memory is important 8 to 32 gigs memory
 - Great graphics card (example NVIDIA Quadro M4000)
 - Solid State Drive 512 gig
 - Large 2k to 4k multi-monitors
 - Large format color plotter (very large)
 - Servers if providing the data (NC State provides 10 Terabytes of data for GIS)

*Could go smaller, but sacrifice speed. HOWEVER, online software

SOFTWARE

- Software
 - Many software solutions for GIS. New powerful Cloud (online) systems too.
 - Examples (Some cloud, some desktop versions, subscriptions)
 - iGage (we use this at USU). Limitations.
 - ESRI's ArcGIS Online or ArcGIS Pro (Probably the most used)
 - A to Z Maps Online
 - Scribble Maps
 - GRASS
 - ENVI
 - Google Maps and Google Earth
 - DIY Maps
 - Mango
 - Mapbox
 - QGIS
 - MapSource (U.S. topos for GPS units)
 - World Atlas: Maps and Geography of the world
 - Whitebox GAT
 - Many others, some open source

ANOTHER IMPORTANT COMPONENT: DATA

- Data is the core of any GIS.
- Two primary types
 - Vector (Spatial data represented as points, lines and polygons)
 - Raster (Cell-based data such as aerial imagery and digital elevation)
- Data Preservation

What data do you have and what information is included with the data

PEOPLE

- Well-trained people knowledgeable in spatial analysis
- Well-trained people skilled in using GIS software
- Well-trained people willing to network with other GIS professionals
- My quick research – Trained librarians who can support service
- Example: Disciplines from Anthropology, Archeology, Politics, Economics, Social Sciences, Public Health, Food Studies, Landscape Architecture, Education, Biology, Marketing, Urban Planning, Others

FUTURE AND NEEDS

- Web/Online/Cloud Solutions
- Mobile Solutions
- 3D Printing
- More Open Source Solutions
- Instruction (Texas A&M has two dozen GIS instructors that teach over thirty GIS courses)
- Data Collection Support and Services
- Geospatial Analysis/Data Analysis (One of the most sought after positions)
- GIS Maker Space/Knowledge/Learning Center
- Better Marketing to Stake Holders & Support for Teaching and Research
- DIGITAL PRESERVATION – Archiving and Preserving