NEED A MAP?
MAPS, MAPPING AND GEOSPATIAL SERVICES IN THE LIBRARY

TECHNOLOGICAL SUPPORT
TECHNOLOGY ISSUES FOR MAPS
TECHNOLOGY FOR GEOSPATIAL SERVICES IN LIBRARIES
• 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