Importance of GIS Repositories

Douglas Burns
Beyond the Numbers
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douglas.burns2@unt.edu
CONVERSATION
Importance of GIS

- Scarcity
- *Why Geography Matters... More Than Ever*, Harm de Blij
- Data tied to place → informs
- Location Analytics (Esri)
  - Competitive edge
  - Increasing the margins
- Popularization of maps (ca. 2000s)
Importance of GIS Repositories

• Problem:
  • Ephemeral nature
  • Historical “backlog”
    • Analog?
  • Educational / research value
  • Government accountability
    • Office of Science and Technology Policy (2013)
  • Democratized access for policy
Recent Advances

• Fiber-optic networks improve speed
• Removal of Selective Availability for GPS
• LiDAR and orthoimagery
  • Size in GBs*
  • Unmanned Aerial Vehicles
• REST + Server
  • Real-time / geofence
• Mobile devices
Availability & Maintenance

Patchwork... Linked...?
Availability & Maintenance

- Patchwork... Linked... ~2%
- Is the data proprietary?
- Is the data timely?
- How often is the data updated?
  - Server vs. direct download
- Compatibility / format?*
- How is the data accessed?
- Is the data the right scale?
- Standards?
Availability & Maintenance

- GeoBlacklight \((\text{EarthWorks})\)
- DSpace
- Local: proprietary or in-house
- Esri:
  - Open Data
  - ArcGIS Online
  - Server
  - Portal*

ArcGIS Open Data
Examples: Government

- Census
  → Economic Census
- Federal Reserve Bank data
- Data.gov
- World Bank data *(example later)*
- TNRIS (plus other states)
- The National Map (USGS)
- CIA World Fact Book†
- United Nations†
Examples: Industry

- ReferenceUSA
- PolicyMap*
- World Resources Institute
- ProQuest*
- ThomsonONE*
- International Monetary Fund (IMF)
- DataPlanet
- SocialExplorer*
- OECD Statistics*

➔ URISA GISCorps and OpenStreetMap
Examples: Academia

- EarthWorks
- PLEIADES
- Portal to Texas History / Digital Library
- MIT*
- Harvard*
- Texas A&M

- University of Oregon
- University of Wisconsin
- University of Texas – Austin
Practical Example

• World Bank data:
  ▪ Represents annual % growth GDP
  ▪ Represents 2007 – 2015
  ▪ Natively in tabular format
  ▪ “converted” into GIS-friendly format
  ▪ There are many metrics – this is just one
  ▪ You can see changes in geo-context:
    ▪ Ebola in West Africa (Liberia)
    ▪ Crimea Annexation: Ukraine & Russia
    ▪ Post-Gaddafi/Arab Spring Libya
    ▪ Turmoil in South Sudan
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Issues & Challenges

• Overhead
• Training
• Implementation
• Future skills development
• Duplication of data?
• Community buy-in
• Data life cycle
• Enterprise vs. open source
• Analog data
Conclusion

• Start a dialog
  • Data needs to be wanted...
  • In order to be prioritized...
  • In order to be used.
  • So start thinking about GIS -
  • Non-GIS people, too!
• Decisions ➔ driven by data ➔ Location!
  • Includes historical data
• Caveat: GIS will not be the only tool
THE TRUTH IS OUT THERE
DATA