Collecting and Manipulating Address Data

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Where Are We?
Introduction to the CATALIS Project

- The CATALIS Project
  - Clinton County
  - Automated
  - Topographic
  - Aspatial
  - Land
  - Information
  - System
The CATALIS Project

● A consortium of members which include:
  – County engineers office
  – County engineers tax map office
  – County auditors office
  – Regional planning commission
  – Building and zoning department
  – City engineers office
  – Emergency management agency
  – Realtors association
  – Soil and water conservation district
  – Health department
  – County bar association
Finding Your Place In The World:

Address Matching

- Address matching is a process that compares two addresses to determine if they are the same.
Example of Address Matching

- Question:
  Where is Pete’s Bar and Grill on Halpin Road?
Finding Your Place In The World:

Geocoding

- Geocoding. Address geocoding is a process that creates a theme based on address data that can be displayed with other themes in a view.
Example of Geocoding

- Question:
  Where are ALL of the famous Pete’s Bar & Grills?
Where Does The Data Come From?

The Stork?

Witchcraft?

Sometimes it just takes Work
Data Used for Address Searching

- TIGER Centerlines
  - Topologically Integrated Geographic Encoding Referencing

- Most common dataset containing address range information.
- Freely downloadable from ESRI’s web site in shape file format.
- Covers all of the US, Puerto Rico, The Virgin Islands of the United States, etc.
Difficulties Inherent With Address Range Data
Address Range Data…

- Does not necessarily point out the structure that represents the address.
- In rural counties, properties with long curvy drives will be most difficult to locate.
- Multiple addresses, associated with multiple structures at the end of long drives, will be difficult to locate.
The more rural the area, the less accurate TIGER data seems to be.
In Clinton County, the County Engineer’s Office maintains a record of each address they assign; this dated back several decades, and was continually kept up to date, in massive paper notebooks. A Microsoft Access Database was created and all of this data was made digital. This data included mileage points for road intersections, bridges, and municipal boundaries.
The Ultimate Solution…

Phase II

*Link this database with a layer of data in the GIS*

Since we obviously did not know where to place the new address node with any solid accuracy, FIELDWORK was required. A method was worked out to use our orthophotography grid as a basis for printed maps; then, we would print a report from the database that would provide all of the addresses for the road currently being checked. Notes were made on paper that allowed the nodes to be created in ArcView at the office and was automatically linked to the database.
Example of Printed Reference Material

Printed Map

Report
Save the Trees!

As you can imagine, this would have required hundreds of printed sheets.

The best solution was obviously a digital solution.
ESRI’s ArcPad & Compaq’s IPaq
ArcPad In Action…
ArcPad In Action
How?

The user adds a point to the addressnodes layer and fills in the link field. This field provides the link from the GIS Layer (addressnodes) to the Access database.

The data is then uploaded to the main GIS data repository.
Other Data Collected

- Road Name / Beginning & Ending.
- Land Use Information.
Conclusion

The process of field collecting address data can be a daunting one. There are company’s that collect address data *and more*. As with all data collection processes, be sure the application of the data fits with the data you collect before you start the work.
Thanks For Your Time!

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