GEOG 176 A
2015 Fall

Rui Zhu
ruizhu@geog.ucsb.edu
Lab 8: Accuracy

DUE:
2 p.m. Wednesday Dec 9th 2015
Lab 8: Accuracy

You will review previous assignments through the lens of accuracy. You will not need any software to do this, but you may want to reopen previous lab data and reports.

[location, field, object, network, event] content concepts

[granularity, accuracy] quality concepts
Lab 8: Accuracy

• Answer the question of correctness.

• Spatial accuracy
• Thematic accuracy

• Resource of error:
  Measurement or observation, and communication
  Error propagation (e.g. algorithms, computations...)
Lab 8: Accuracy

• How to assess accuracy?
  Key: ground truth!
  ➢ Precision of measurements
  ➢ Comparison with values from other sources

• The relation between accuracy and granularity
  Accuracy only makes sense in relation to determined granularity;
  Finer granularity ➔ Chances for errors is high
A brief final review -- Location

• Location: answer “where” question.

• Two ways to identify location: place-based and coordinate-based

• Location is a relation between figure and ground

• Spatial relations
A brief final review -- Field

- Field: answer "value of an attributes anywhere" questions
  
  - Every field is characterized by a **continuous** function
  
  - Two examples: Raster and Output of interpolation
A brief final review -- Object

• Object: answer questions about “properties and relations”

• Attribute table

• Have identity and bounded (boundary could be determined or undetermined)
A brief final review -- Network

• Network: answer "connections between objects" questions

• Nodes and edges

• Network itself does not have geometry
A brief final review -- Event

• Event: answer questions about “what is happening (past, present and future)”

• Change in field, objects, networks and events

• Events have fixed identities

• Events are described by properties and relations (temporal, thematic and spatial perspectives)
A brief final review – Granularity and Accuracy

• Granularity: answer question about “how detailed”
  ➢ Pixel size
  ➢ Decimals for numeric values
  ➢ Variety of nominal values
  ➢ Number of attributes
  ➢ Size of temporal intervals
  ➢ …

• Accuracy: answer question about “correctness”
  ➢ Measurement error
  ➢ Observation error
  ➢ Communication error
  ➢ Propagation of errors
  ➢ …
• Due for this lab is next week 2 p.m. Wednesday!
• Go to Thursday lecture for a detailed final review!
  • Bring scantron and cheat sheet!
• Conduct the final class survey to earn extra credits for your final!
TA Evaluation
Thank you very much!