Geography 360
Principles of Cartography

April 7, 2006

Outlines

- 9:30-9:40 Dot density map
  - When to use dot map
  - The effect of unit value of dots
  - The effect of size of enumeration units

- 9:40-9:50 Choosing the right projection
  - Principles
  - Map projection for world population map
  - Exercises

- 9:50-10:20 In-class discussion

Dot density map

- When to use dot map
- The effect of unit value of dots
- The effect of size of enumeration units

When not to use dot map?

- Number of elephants in Africa
- Number of AIDS cases in South Africa
- Tonnage shipped at ports in the U.S.
- Wheat harvested in Kansas

Unit value of dots

- Too large unit value → small # dots → emptiness
  - Good/bad things about emptiness?
- Too small unit value → large # dots → crowdedness
  - Good/bad things about crowdedness?
- Should find the right balance such that problems can be avoided

Size of enumeration units

- Where jobs are in Seattle? Compare
  - Case 1: enumeration unit = census tract
  - Case 2: enumeration unit = county

- How would you argue for the smaller enumeration unit given random placement of computer mapping? Any alternative with working with large enumeration unit?

Choosing the right map projection

- Minimize the distortion
  - Portraying the conterminous U.S.
  - Where are standard lines?

- Match with intended map uses
  - Why conformal for navigator?

Map projection for world population distribution map

- Class? {cylindrical, conic, planar}
- Property? {equivalent, equidistant, conformal}
- Aspect? {equatorial, polar, oblique}

Class/property matrix

	Equal-area	Conformal	Equidistant
Cylindrical	A1	A2	A3
Conic	C1	C2	C3
Planar	D1	D2	D3

a.Agricultural regions in Russia
b.World ocean currents map
c.Natural resources in Africa
d.Proximity map of Seattle

ICD1: Map Projection

Time	Activities
9:50- 9:55	Three persons form one group
9:55-10:00	Decide which question to answer (each group should work on the same question)
10:00-10:05	Write essay on the question
10:05-10:10	"Written comment"
10:10-10:15	"Verbal comment"
10:15-10:20	Wrap-up