WHAT IS CARTOGRAPHY?

WHAT IS A MAP?
What is a Map?

Session Objectives:
At the conclusion of this session, you will be able to:

• Discuss the characteristics of map and what separates it from a graphic.
Cartography is about representation.

strictly (and broadly) speaking cartography is about how to best represent geographic features and attributes.
Cartography is about communication

- **data**: “a collection of facts”

- **information**: “a message received and understood that reduces the recipient’s uncertainty”

- “**data**, when well-communicated, becomes **information**”
Cartography is science and art

- **science**: “communicates the data accurately”
- **art**: “communicates the data effectively (and sometimes persuasively)”
What is a map?

“a carefully designed instrument for recording, calculating, displaying, analyzing, and in general understanding the inter-relation of things in their spatial relationship”
What does a map do?

“adds to the geographical understanding of the viewer”
When does an image become a map?
Are graphics maps?

TIGER/Line 1997 CDs
What about cartographic license?

“…symbolic abstractions or representations – of real world phenomena”
(www.Colorado.edu)
How much can we generalize?
“not to scale?”

Legend
- Hotel
- Restaurant
- Sight, Attraction, Theatre
- Retail
- Editor’s Choice

MapEasy’s Guidemap to
San Francisco
A Location Map and Guidebook in one
The unique experience guide to San Francisco

- Knox Art Museum
- Tate Hotel ($$$)
  Great views!
- Grant Park
  A great place for a picnic!
- Musicworld
  CDs, tapes and records!
- Cafe Lalo ($)
  Romantic spot for coffee!

Taylor Boulevard
17th Street
King Street
18th Street

Cartography
What is a map?
WHAT MAKES A MAP A MAP?
What makes a map a map?

... all maps are concerned with 2 fundamental elements of reality:

location

attributes at locations
What makes a map a map?

...*location* (positions in a 2-dimensional space, as in x,y), and...

...*attributes at locations* (some qualities or magnitudes, such as temperature, language, or land status).
What makes a map a map?

...from these two fundamental elements, topological and metrical properties can be identified and derived, such as...

*distance, direction, adjacency, pattern, network, interaction*
What makes a map a map?

...a map has a defined dimensional relationship between reality and the map; this relationship is called...

scale
What makes a map a map?

...maps involve *transformations*, commonly one that “transforms” a 3-dimensional surface (the earth) to a 2-dimensional surface (flat map sheet)
What makes a map a map?

...maps are abstractions of reality, thus maps portray only data that have been chosen to fit the use of the map, and these data are subjected to classification and simplification to enhance their comprehension...in other words...map data are abstracted and generalized
What makes a map a map?

...maps portray data by using various kinds of marks, such as points, lines, *colors*, patterns which require the user to compare the *symbols* to those in the legend