Lecture 8: Toponymy, typography and map text
Dealing with text

• What text and language?
• What component: map, legend, reference frame, metadata
• What design elements: font, variation, color, spacing
• What text: selection
• Where: placement and design
• Where: rules of precedence and overlap
• Text as symbol
toponymy

• The study and practice of placing of place names on maps especially those derived from topographical features

• **Gazetteer**: A dictionary, listing, or index of geographic names

• **Board on Geographic Names**: a Federal body created in 1890 and established in its present form by Public Law in 1947 to maintain uniform geographic name usage throughout the Federal Government

• **GNIS**: USGS BGN data base containing all US domestic place names

• **GEOnet Names Server** (GNS) provides access to the National Geospatial-Intelligence Agency's (NGA) and the U.S. Board on Geographic Names' (BGN) database of foreign geographic feature names.
Place names matter

In mid-January 2010, the Islamic Solidarity Games—scheduled to take place in Tehran in April—were cancelled over a toponymic dispute. The Iranian organizers of the athletic competition insisted on labeling the body of water located between Iran and the Arabian Peninsula the “Persian Gulf” in their promotional materials. The event’s organizing committee, based in Saudi Arabia, refused to tolerate such effrontery, and called off the competition. Officials in Saudi Arabia, like those in many other Arabic-speaking countries, regard the term “Persian Gulf” as a form of Iranian cartographic imperialism. They prefer Arabian Gulf, and if that name cannot be used, they insist on a neutral term such as The “Arabo-Persian Gulf” or simply “The Gulf.”

This controversy reveals the deep cultural cleavage between Iran and the Arabic speaking realm. Most other bodies of water named for particular places do not inspire much animosity. The United States lodges no protests over the Gulf of Mexico; India does not object to the Arabian Sea; Malaysia has no problem with the South China Sea; Taiwan and Japan do not worry about the
The GNS is the official repository of standard spellings of all foreign geographic names, sanctioned by the United States Board on Geographic Names (US BGN).

The database also contains variant spellings (cross-references), which are useful for finding purposes, as well as non-Roman script spellings of many of these names.

All the geographic features in the database contain information about location, administrative division, and quality.

The database can be used for a variety of purposes, including establishing official spellings of foreign place names, cartography, GIS, GEOINT, and finding places.
Language
Map components: Text and toponyms
Text design
Selection
Placement and design
precedence
Text as symbol
Placement tools
Alignment and centering

A. Horizontal Alignment and Centering of Vertically Distributed Features

- Black Mountain (horizontally aligned to right)
- Black Mountain (horizontally centered)
- Black Mountain (horizontally aligned to left)

B. Vertical Alignment and Centering of Horizontally Distributed Features

- Black Mountain (vertically aligned to bottom)
- Black Mountain (vertically centered)
- Black Mountain (vertically aligned to top)
Text and Map Layout

A
- Edge of page
- Frame line

B
- Edge of page
- Frame line
- Neat line

C
- Edge of page
- Frame line acting as neat line

D
- Edge of page

TITLE

Legend

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Borders and neat lines

Map A: Neatline No Border

Map B: Neatline and Border

Map C: Border No Neatline

Neatlines and Borders:
A neatline delineates the extent of the data.
A border frames the map graphic.

Fran Evansko
July 12, 2004
Secondary Schools
Kenya, 1984

Religious or Private (%)

- 20.1 - 61.8
- 12.7 - 20.0
- 5.7 - 12.6
- 1.3 - 5.6
- 0.0 - 1.2


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Framing and placement
Insets: 2 types, plus location map
Location maps

State of Idaho With Moscow Inset
| A | Long Term Debt  
AVERAGE AGE, 2001  
Museums of Modern Art |
|---|---|
| B | Population Density  
New Hampshire, 2010  
Number of Chickens  
Harper County  
BIRTH RATE INCREASE  
1950 - 2000  
Subtitle horizontally centered below title |
Legend complexities

Legend:
- Red Development Zone
- Targeted Properties
- Escrow Properties
- Acquired Properties
- Bus Route
- Express Bus Route

Targeted Property
- Escrow Property
- Acquired Property
- Bus Route
- Express Bus Route
- Redevelopment Zone

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Splits

Poverty as Shown by Per Capita Income
South America 2015

Poverty
as Shown by Per Capita Income
South America
2015

Source: U.S. Department of Commerce,
National Trade Data Bank, May 6, 1999.
Space and layout
Creating label space
North Arrow or cartojunk?
Credits/Sources


**Data Source:** *ESRI Data & Maps*, 2007.

Source: United States Central Intelligence Agency.  
*Map File #505103 (547149) 2-82.*

**Data Source:** National Atlas of the United States,  


Source: Field Survey by Nigel Tufnel and David St. Hubbins, December, 2008.

Multiple lines are horizontally centered
## Fonts

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type Family</td>
<td>Type Style</td>
</tr>
<tr>
<td>Palatino</td>
<td>Roman</td>
</tr>
<tr>
<td>Helvetica</td>
<td>Bold</td>
</tr>
<tr>
<td>Bookman</td>
<td><em>Italic</em></td>
</tr>
<tr>
<td>Gill Sans</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typeface</td>
<td>Type Size</td>
</tr>
<tr>
<td>Palatino Roman</td>
<td>(Based on Palatino Roman)</td>
</tr>
<tr>
<td>Helvetica Bold</td>
<td>Six point</td>
</tr>
<tr>
<td>Bookman Italic</td>
<td>Ten point</td>
</tr>
<tr>
<td>Gill Sans Condensed</td>
<td>Fourteen point</td>
</tr>
</tbody>
</table>
Cheltanham provides an old-fashioned look.

Courier looks like a typewriter.

Times New Roman looks like a modern textbook.

Bookman looks like a primary school book as it is larger.

FORMAL: Times New Roman
INFORMAL: Kristen ITC
LIGHT: Bigmouth
DRAMATIC: SHOWCARD GOTHIC
MODERN: Tahoma
TRADITIONAL: Goudy Old Style
WARM: Script MT Bold
COOL: CASTELLAR
## Serifs

### A

<table>
<thead>
<tr>
<th>UPPERCASE</th>
<th>lowercase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title Case</td>
<td>Sentence case</td>
</tr>
</tbody>
</table>

- First letter of every word is uppercase
- Except for words like *in, on, or, of, per, by, for, with, the, and, over, etc.*
- First letter of sentence is uppercase

### B

- **Palatino** is serified
- **Helvetica** is sans serif
- **Bookman** is serified
- **Gill Sans** is sans serif

Serifs are circled
Kerning

\[ \text{AT} \rightarrow \text{AT} \]

\[ \text{OATS OATS OATS OATS} \]

\[ \text{none optical metrics manual} \]
Text path

- Right

Down, rotated

Some text warped to a curve.
Placename size
Points, lines, areas
Label highlights

A

B

C

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Line labels

A. Huntington Way

B. Trimble County

C. All American River

D. Long Creek
Curved labels

A mini tutorial for Inkscape

This tutorial shows how to use Inkscape’s text object and path tools to create curved text appropriate for geographic labels.

1. Open image
2. Add text object
3. Add better labels
4. Curve the path
5. Text on path
6. Hide the path

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Label extent
Summary

- Text makes a huge difference in a map’s perceived quality
- Multiple components
- Many design aspects
- Selection, placement and design of labels
- Rules of precedence and overlap
- Text is a symbol
- Keep numbers of fonts, colors and variants to a minimum