

# GEOL 452/552

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## GIS for Geoscientists I

### Lecture 7a - chapter 3

1

## Today

- leftover from last lecture: labeling
- maplex labeling engine
- follow along: copy ch3\_class\_ex folder, run ch3\_class\_ex.mxd
- (should show a couple of iowa vector files from that folder)
- As per Feedback (Blackboard):
  - please stop me when go too fast during the follow-along exercise (others will thank you for it!). Interrupt me: "how do I get ....."
  - question on standard deviation classification: see *Geol 552 2011 log transform and std dev classification.pdf* on Bb home page
- lab (9:30) - start with HW3 (mini project I)

2

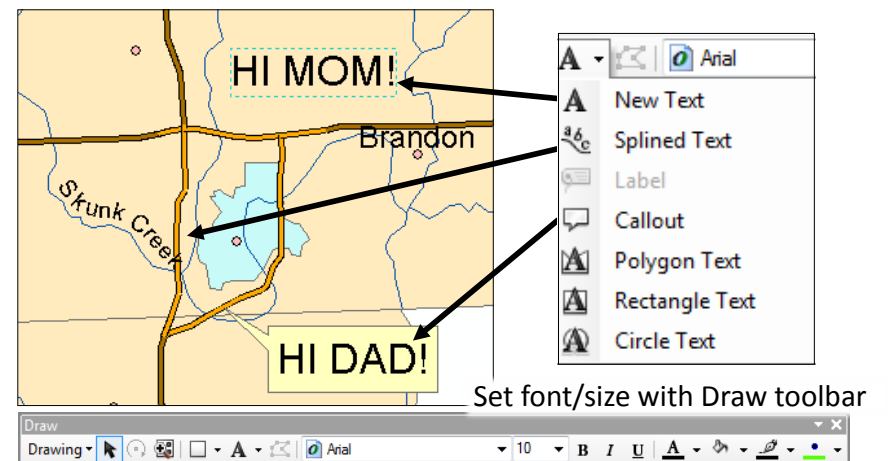
## Labeling Options

- Graphic text (Label in Draw toolbar)
  - Simple graphics placed/edited on layout by hand
- Dynamic labels
  - Label property set for each layer (On/Off, placement, label/feature conflict resolution)
  - Placed automatically for an entire layer using ArcMaps "AI" (labeling engine)
  - more control: Label Manager (Data frame - Labeling)
- Annotation
  - Converted on demand from dynamic labels
  - Can be saved and edited for exact placement

3

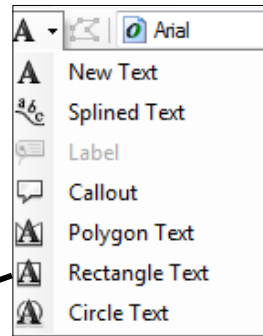
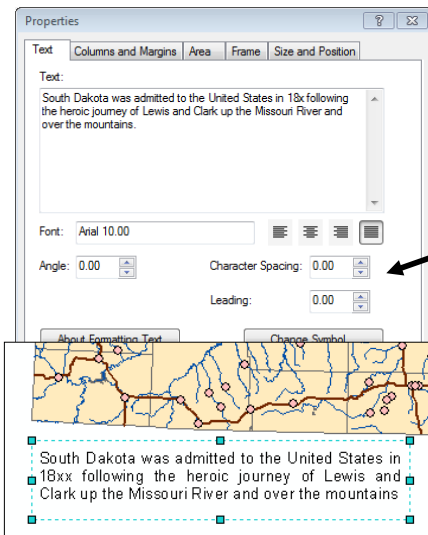
## Graphic text (manual)

Graphic text must be placed in Layout View



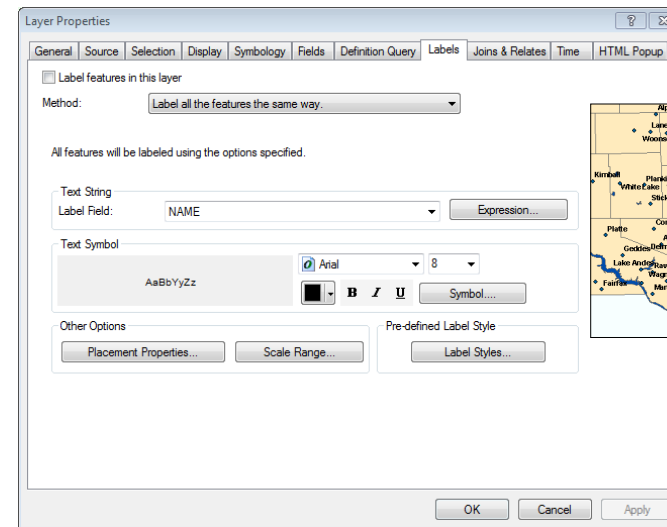
4

# Multi-line labels



Unlike normal Text this wraps around - use this to place the explanation text in a text box on your map in HW3

# Dynamic labels



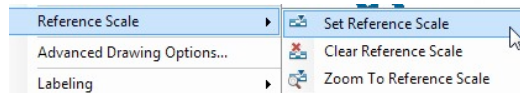
# Apparent size of dynamic labels



Sizes of labels and symbols are specified when they are created.

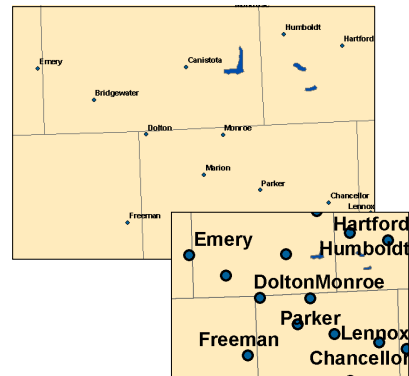
Default: remain the same size as the user zooms in and out. If specified as 10 pt. labels, they are always 10 pt. labels

But: you can set a data frame (not layer) to set the current scale as its **reference scale** (Right click on data frame - Reference scale - Set Reference Scale)



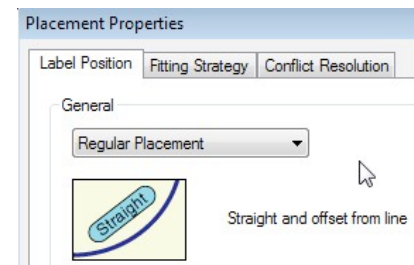
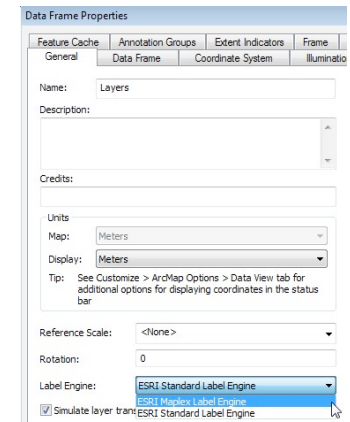
If the reference scale is set, zooming in in data mode makes labels bigger.

Clear Reference Scale to return to default behavior



# Maplex, the "deluxe" label engine

- smarter label placement properties, shows diagrams
- IN GIS lab: need to activate Maplex extension before it can be used
- Customize - extensions - check Maplex - Close
- Turn on Maplex:  
Data frame - General - Label Engine - **ESRI Maplex**
- **Rivers** - layer properties - Labels - Placement properties
- Label Position: set to River Placement
- Check: May place label horizontal ... and Spread characters
- May take a couple of seconds to show labels



### More options

The image shows three screenshots of the 'Placement Properties' dialog box in ArcGIS, illustrating various label placement options:

- Curved:** Curved and offset from line. Includes a 'River Placement' dropdown and a checked option 'May place label horizontal at secondary offset'.
- Repeat:** Repeat label. Includes an 'Interval...' field.
- Spread characters:** Spread characters. Includes a 'Limit...' field.
- Stacked Label:** Stack label.
- Overrun:** Overrun feature.
- Reduction:** Reduce font size.
- Abbreviation:** Abbreviate label.
- Minimum feature size for label:** Set to 0 Map Units.
- Weight:** Feature weight.
- Background label:** Background label (placed first).
- Remove duplicates:** Remove duplicates. Includes a 'Limits...' button.
- Label Buffer:** Set to 15 % font height. Includes a 'Hard constraint' checkbox.
- Never remove:** Never remove (allow overlap).

# Lab: Mini project I / HW 3

- Copy *GEOL552\data\HW3 - US census* into your student folder (U:\ArcGIS) and open *HW3\_start.mxd*
- instructions as pdf: *HW3\_2011\_instructions.pdf*, also on Blackboard
- Make a Word file *HW3\_yourname.doc*, for each step describe your methods and add screenshots
- some questions need text answers:

Name each layer by its classification. Make a screenshot of the data view (with the TOC) of each layer and another screen shot of the classification window (with the histogram showing roughly the 0 to 200,000 people range). (2 Pts for each of the five classification methods)

Comparing the 5 maps within your **Number of people group**. In your opinion, which of these POP2010 maps expresses the population distribution best and why?

1 pt

- Freeform map making Example : *HW3\_example\_map.pdf*
- due: before next Thursday

## Geol 552 - Mini project 1 - US Census data 2010 - population change

