Let’s start here
While we zoom

- Detailed to generalized
- Features drop off
- Jaggies to blurry
- Extent increases
- Earth model matters more
- Different levels of interpretation possible
- Hard to convert measurements with RF

Some common map scales
Round numbers makes life easier

- 1:24 000
- 1:50 000
- 1:100 000
- 1:62 500
- 1:63 360
- 1:250 000
- 1:500 000
- 1: 1M

Zoom: New features at new scale
What happens as we generalize?

- Selection
- Simplification
- Combination
- Displacement
- Exaggeration

Simplicity, VA 17SQB2898706830

Just enlarging doesn't work

Intermediate Scales:
Simplicity gone!
On OSM

Coarse scales

Selection

- The number of features and labels we can display depends on the space available!
- Need to select features to display by some criterion, e.g. population size of villages
- Need to carefully assign and place labels

Simplification

Dawson City, 1 327
Montreal, 1 620 693
Bend, TX: Simplification

Combination

Fairhope, AL

A complex process
Displacement: Separation Point, WY

Hwy 217

Hwy 217 to canal = 10m
Without displacement, lines are not separable
- 10 m at 1:100,000 = 0.1 mm

Solution: Move the lines!
- 10m becomes 200m!

Exaggeration

Attribute generalization
Summary: generalization is necessary when scale changes

These things happen when we generalize:

- Selection
- Simplification
- Combination
- Displacement
- Exaggeration