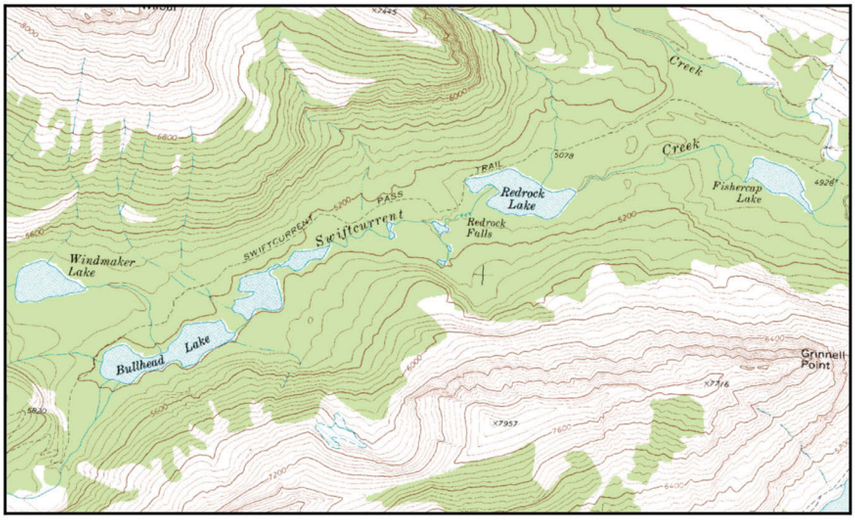
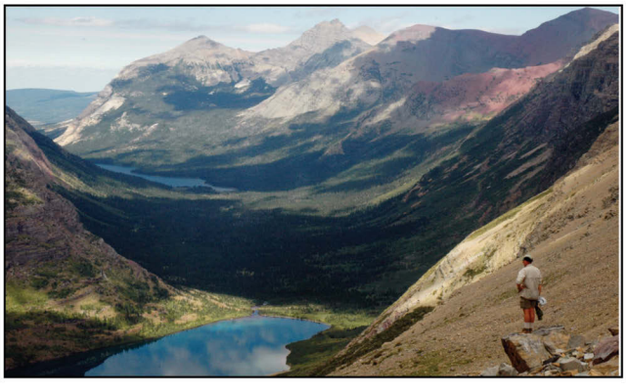
Color Figures

Just to Make Clear "Where the Roots Come From": A Response to Mark Denil's "Manifestos"

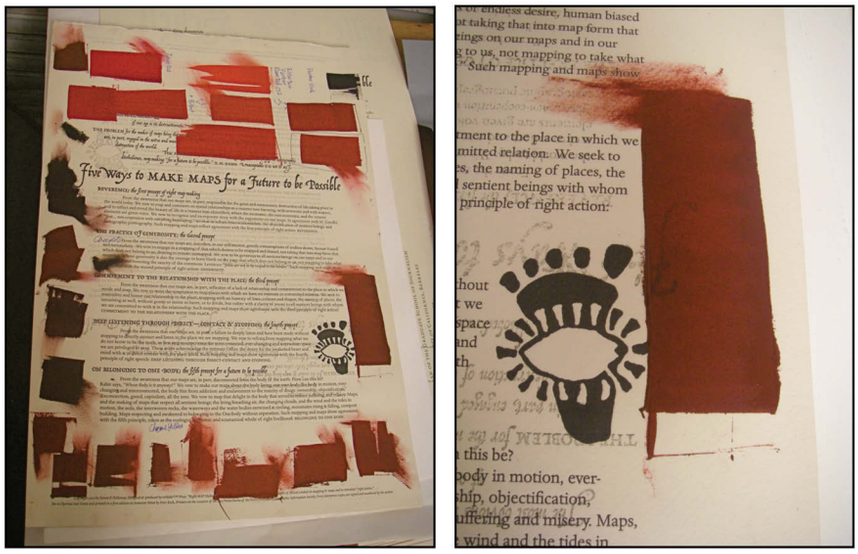
Steven R. Holloway



71/2 minute USGS Quad, northern Montana



Along the Highline trail in Glacier-Waterton International Peace Park



Colour mixing draws for the broadside, this is not CMYK!

Automation and the Map Label Placement Problem: A Comparison of Two GIS Implementations of Label Placement

Jill Phelps Kern and Cynthia A. Brewer

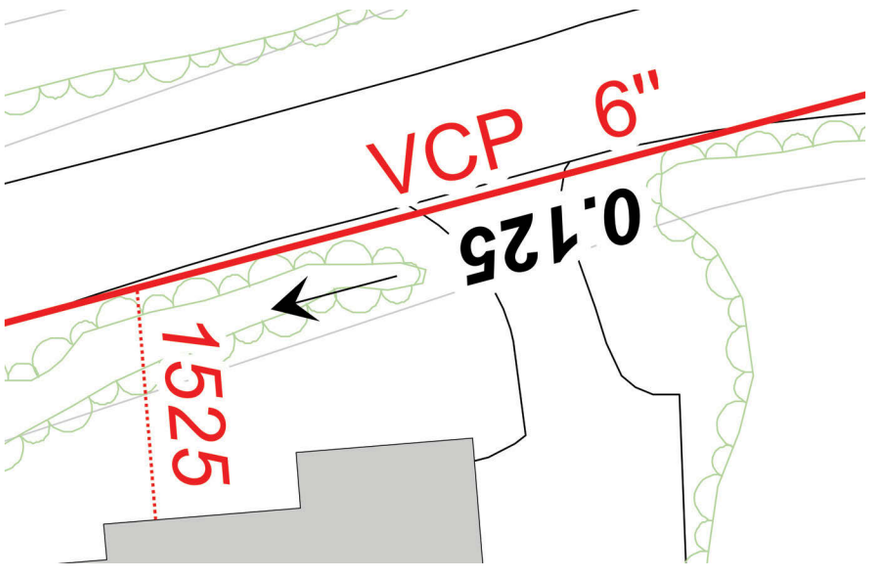


Figure 2. Sewer main with inverted slope label and arrow.

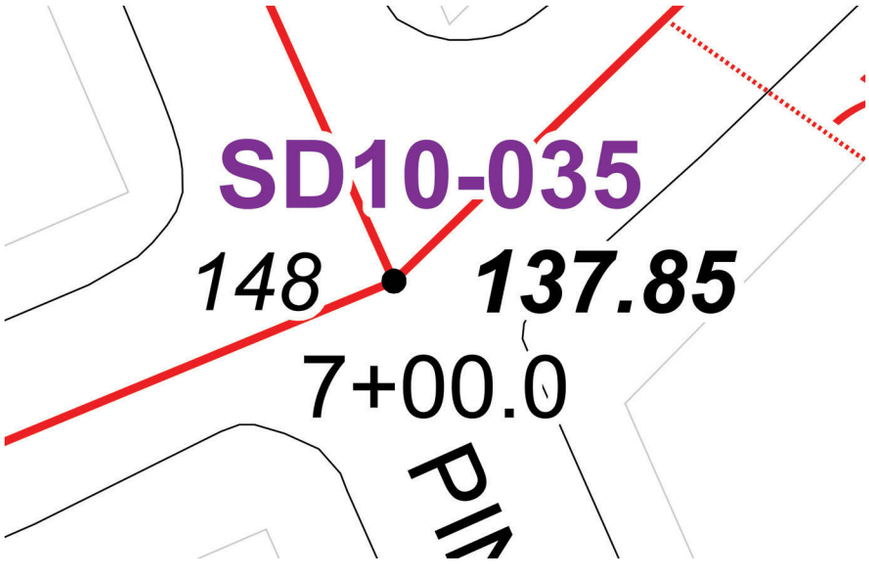


Figure 3. Ideal sewer manhole label positioning.

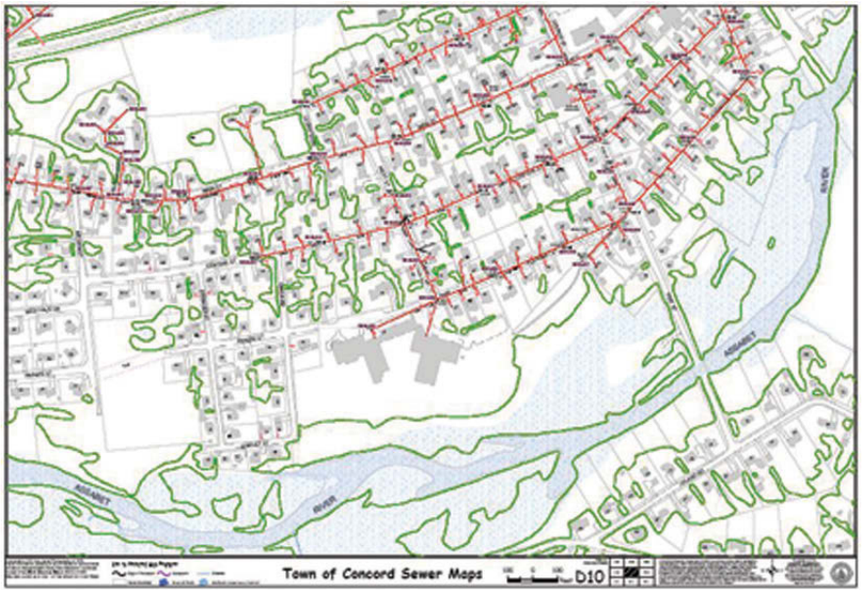


Figure 4. Sewer map book page D10.

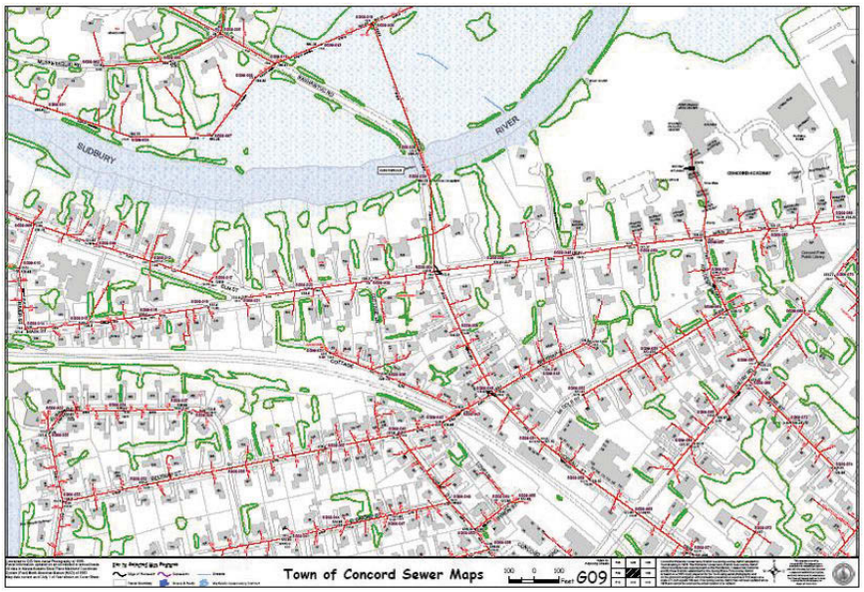


Figure 5. Sewer map book page G09.

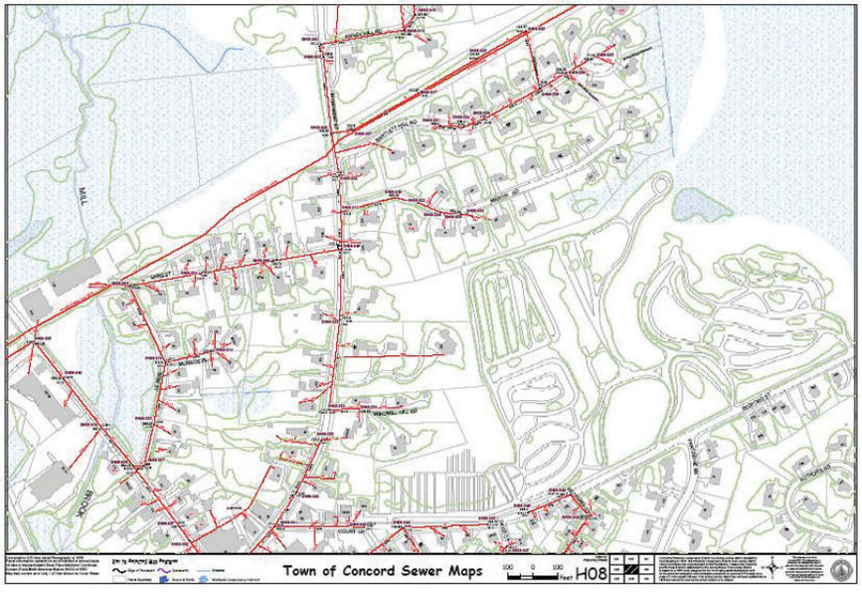


Figure 6. Sewer map book page H08.

Addressing Map Interface Usability: Learning from the Lakeshore Nature Preserve Interactive Map

Robert E. Roth and Mark Harrower

Figure 1. The Lakeshore Nature Preserve Interactive Map (www.lakeshorepreserve.wisc.edu).

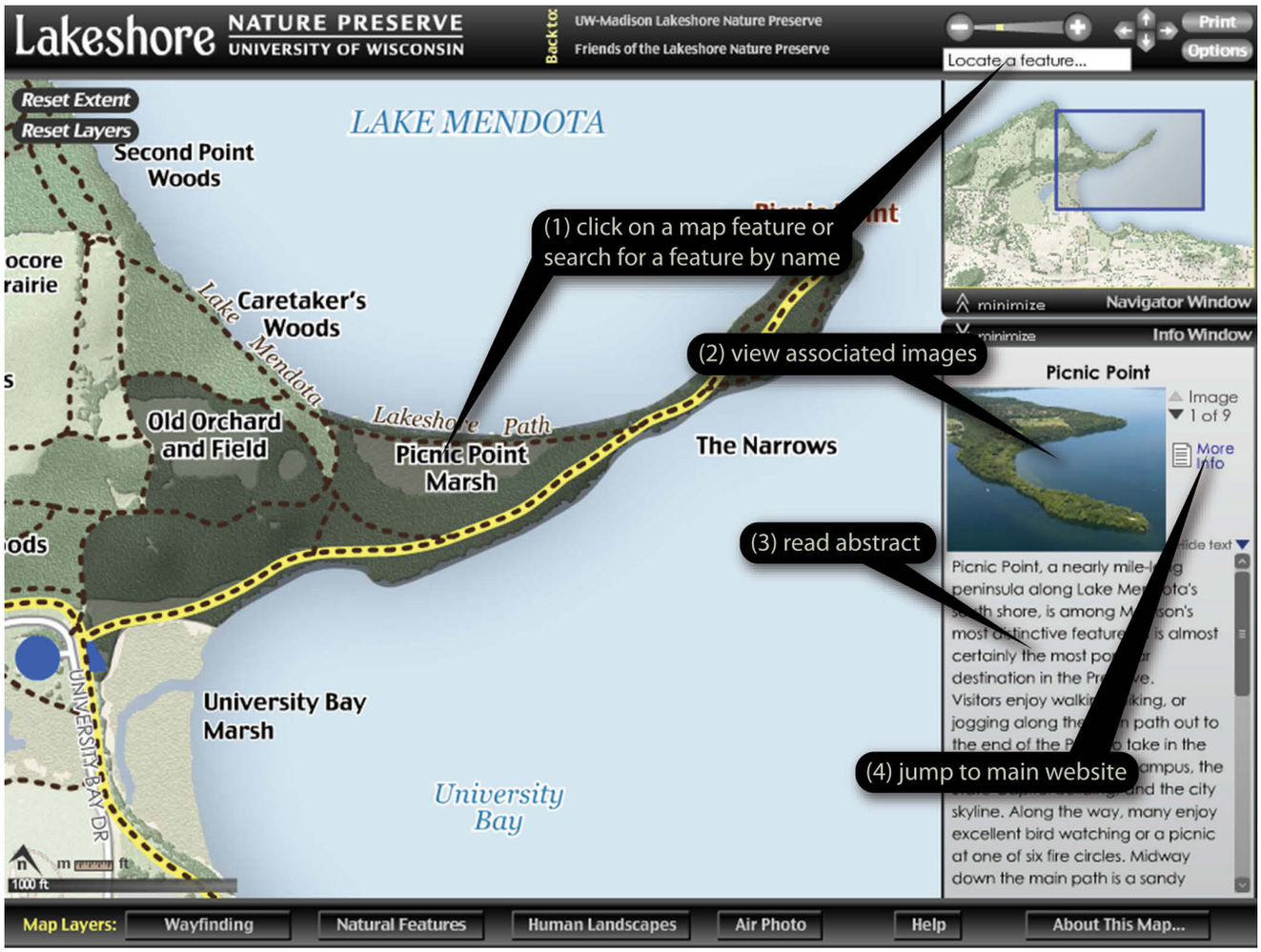


Figure 4. Navigation for the map interface, following Shneiderman's (1996, 337) "overview first, zoom and filter, then details-on-demand" mantra.

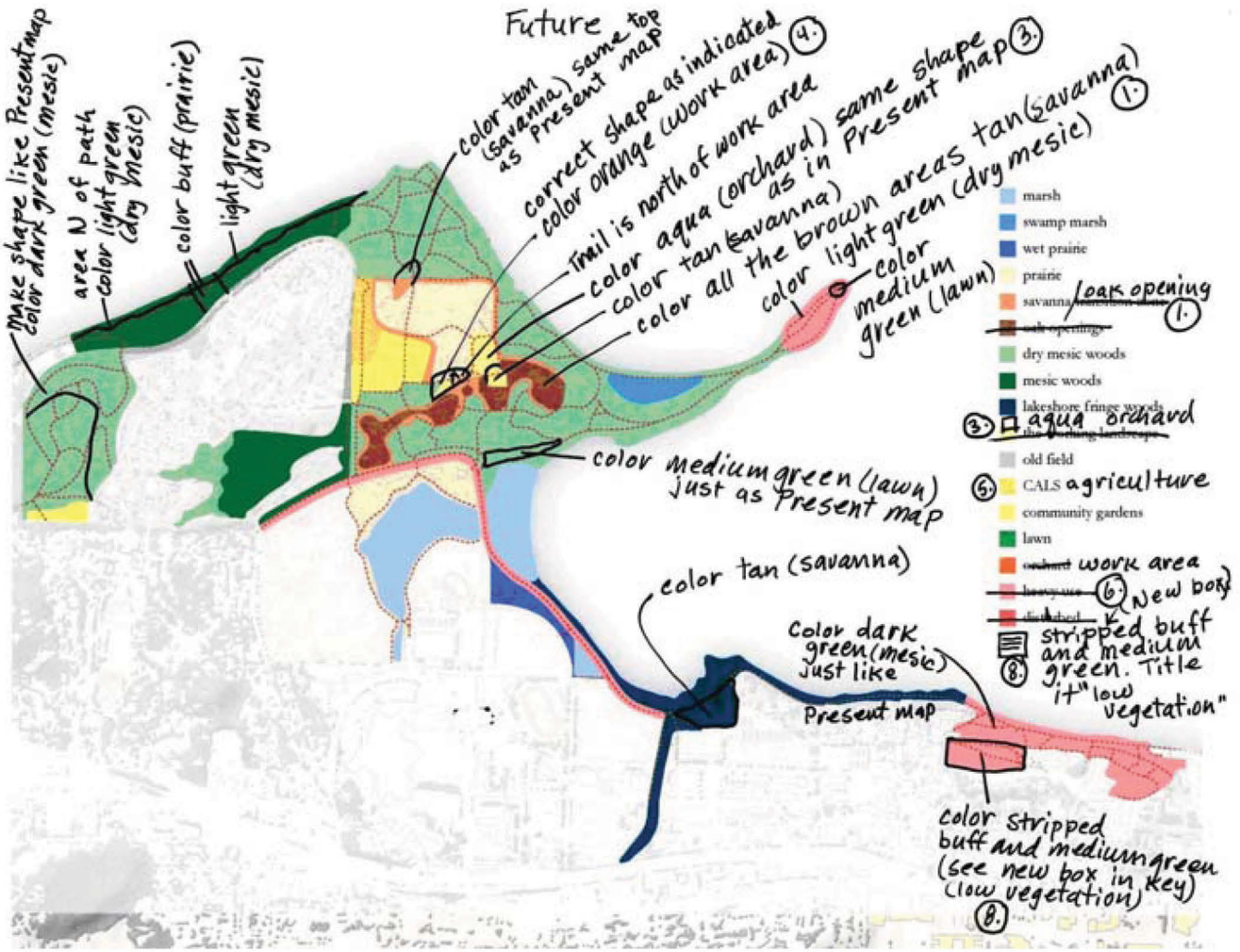


Figure 7. An annotated mockup circulated in an informal assessment email showing revisions and comments to the future vegetation layer.

Figure 10. Initial designs for the layer visibility button (top-left), the tear-away menu button (top-right), and the minimize window button (bottom).

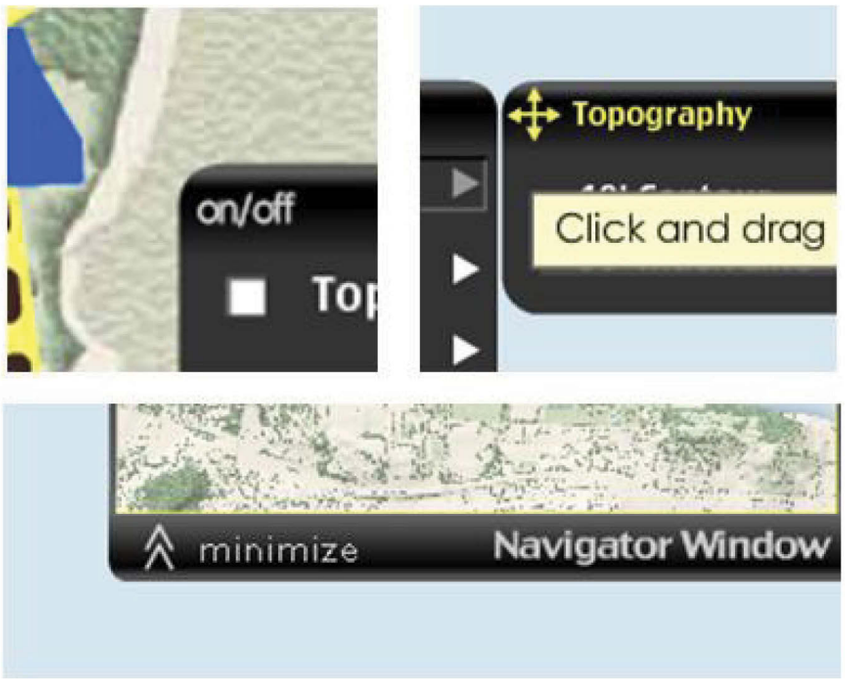


Figure 11. Redesigns for the layer visibility button (top-left), the tear-away menu button (top-right), and the minimize window button (bottom) added words to explain the function of the widget and sometimes did away with the vague icon altogether. Tool tips (top-right, in yellow) also appear after pausing over a widget for one second to further prompt the user about the widget's function.

Building a Web Site at the University of Chicago Map Collection

Christopher Winters

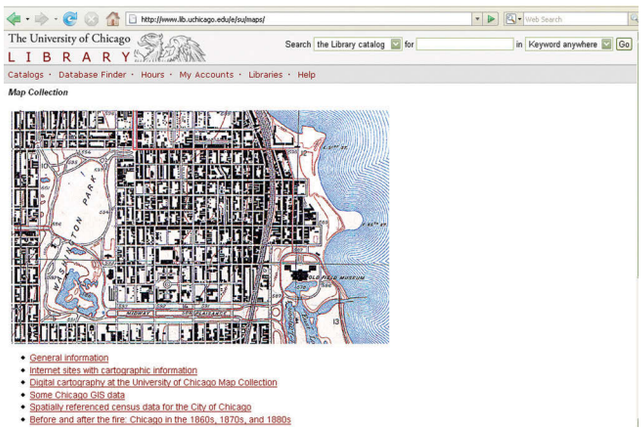


Figure 1. Screen shot of the University of Chicago Library Map Collection home Web site.

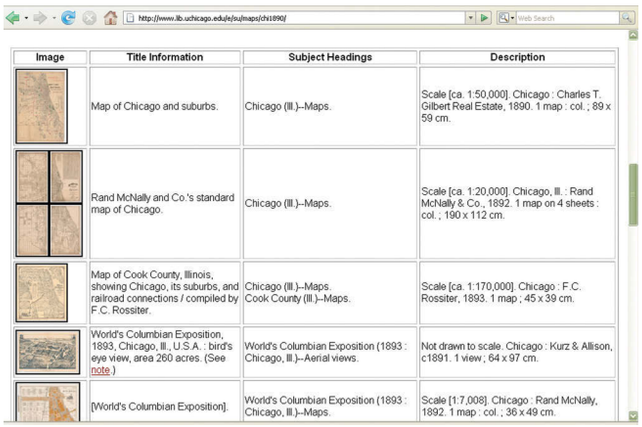


Figure 2. Screen shot of University of Chicago Library Map Collection online index with metadata fields.

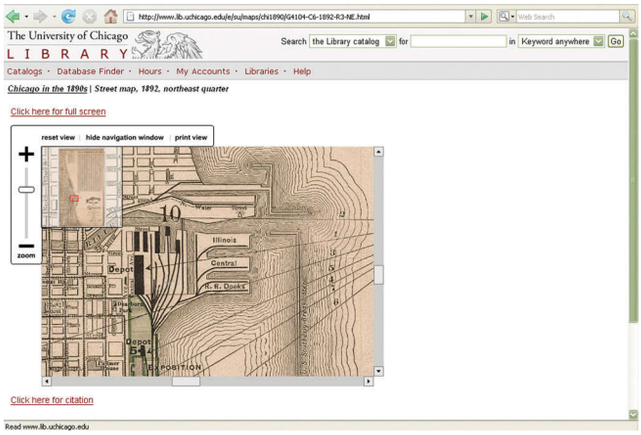


Figure 3. Screen shot of University of Chicago Library Map Collection online map of Chicago showing Zoomify capabilities.

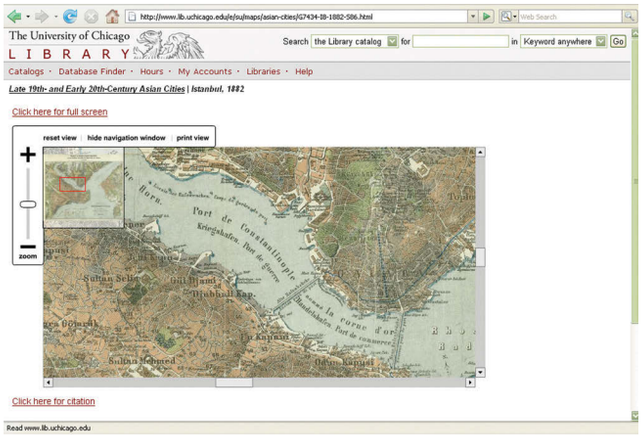


Figure 4. Screen shot of University of Chicago Library Map Collection online map of Istanbul showing Zoomify capabilities.

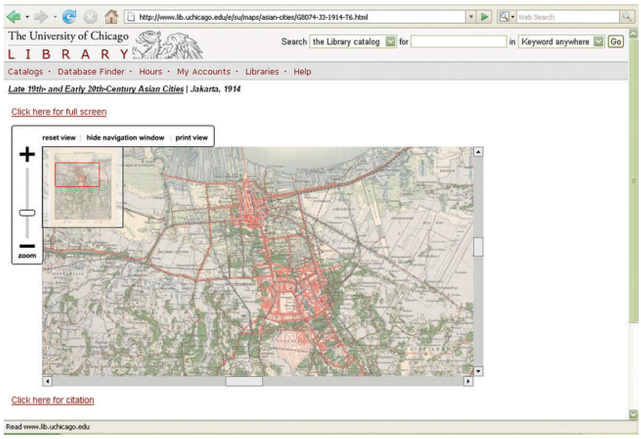
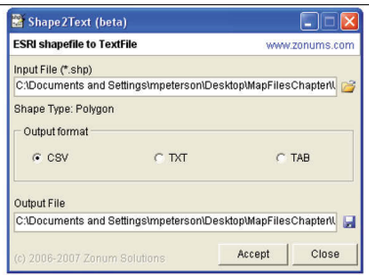


Figure 5. Screen shot of University of Chicago Library Map Collection online map of Jakarta.

Choropleth Google Maps

Michael Peterson




```
12      Nodes
-122.9679783  48.44379451
-123.0952329  48.47942282
-123.1597199  48.52184222
-123.1698993  48.56256471
-123.1410538  48.62364712
-123.1037214  48.60837712
-123.0120949  48.55747774
-123.0086988  48.53371932
-122.9679800  48.52693332
-123.0222711  48.51335968
-123.0188829  48.48960517
-122.9679783  48.44379451
```

```
<poly linecolor="#008800" linewidth="4" lineopacity = "1.0" fillcolor=
"#FFCC00" fillopacity = "0.5" html="State">
  <point lat="-122.9679783421" lng="48.4437945085"/>
  <point lat="-123.0952328681" lng="48.4794228153"/>
  <point lat="-123.1597199251" lng="48.5218422237"/>
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  <point lat="-123.1410538081" lng="48.6236471212"/>
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  <point lat="-123.0188828947" lng="48.4896051705"/>
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</poly>
```
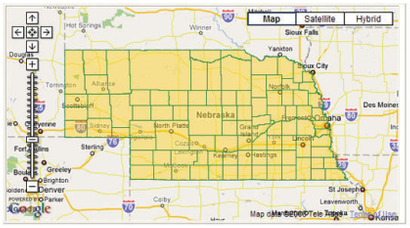

*Figure 1. The Shape2Text conversion process leading to the creation of an XML file. The program asks for the location of the *.shp file, the output format, and the output location. A single polygon with 12 points (nodes) is shown in the upper-right. These points are then converted into the proper XML poly format using the Excel concatenate function.*




```
// Put the population data for the counties into the popdata array
      popdata = new Array
(33185,6931,372,783,492,5668,11132,2185,3354,43954,7341,8595,25963,8819,3811,5934,9865,
50,892,3710,8812,267135,35865,749,656,497,35279,7954,5171,3705,7247,4650,15747,2804,299

// Find the min and max population values for the 93 counties after doing a non-linear
      var min=100000000;
      var max=-100000000;
      for (var i = 0; i < 93; i++) {
        popdata[i] = Math.log(popdata[i])
        if (popdata[i] < min) { min=popdata[i] }
        if (popdata[i] > max) { max=popdata[i] }
       }
// Find the range in the data values
        var range = max-min
// Compute the opacity for each county, a value between 0 and 1
        opacities = new Array ()
        for (var i = 0; i < 93; i++) {
          opacities[i] = 1-((max - popdata[i]) / range)
       }
```

Figure 2. A shapefile map of Nebraska by county mapped with Google Maps after line coordinate thinning with MapShaper and conversion to a text file by Shape2Text. The state border between the shapefile and the Google Map matches nearly perfectly, although the underlying map from Google may have errors along the border as with the discontinuity in the railroad line that is visible in the enlarged map.

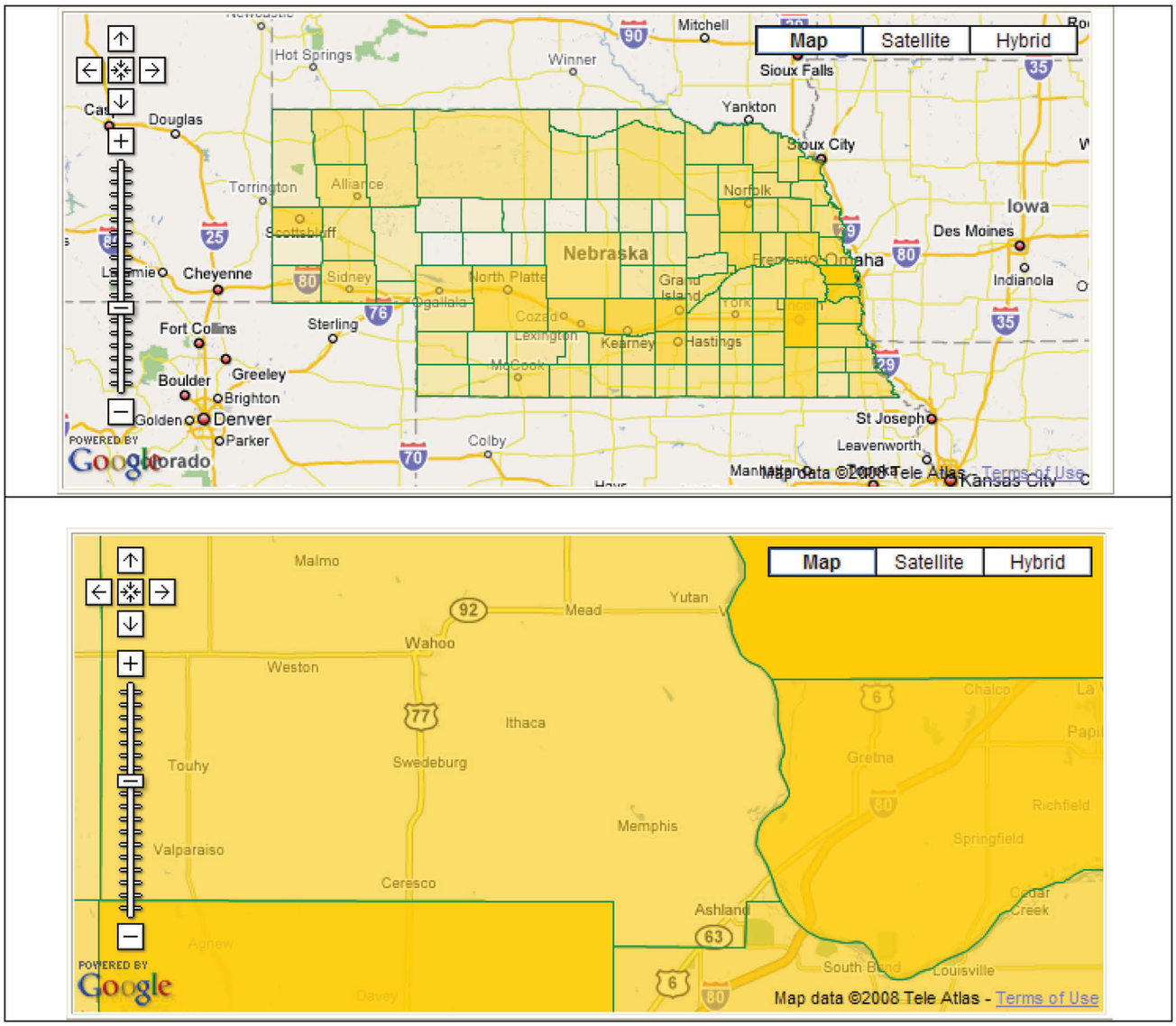


Figure 3. A population map of Nebraska. The opacity of the color that is assigned to each county is proportional to its population. The data have been converted to a log value to compensate for the skewed population distribution caused by the two largest cities, Omaha and Lincoln. The zoomed-in map on the bottom shows that place locations are visible in the less populated counties that have been assigned a lower opacity value.