Bridgemapper

# Topic

Bridgemapper ([www.bridgemapper.com](http://www.bridgemapper.com)) is an interactive web map that showcases the bridges that have been personally visited, photographed, and documented over the past 25 years.

# Map Objectives

At the time Bridgemapper was first being developed in 2007, there were no interactive map-based approaches to locating bridges. Bridge information was only available through lists and static maps. Bridgemapper was launched in 2008, but its web mapping technology stack (Flash, Map Channels, and MySQL) has since become obsolete and too difficult to maintain.

My goal with developing the new Bridgemapper is to upgrade the web map to a modern, manageable technology stack, while still providing users with the same main goal of researching bridges – especially historic bridges – across the United States.

As with the legacy site, the bridges will be symbolized by their design type (thru truss, pony truss, deck truss, arch, suspension, beam, etc.). Data will be clustered so that the map remains legible. Users will be able to search for a specific bridge by its name and will be able to click a bridge to get a photo and more information about it.

Furthermore, since the theme of this year's NACIS conference is "Mapping Change", a new time slider functionality will allow users to scroll through time to see which bridges existed in a specific year. This new functionality will help to illustrate when and where certain types of bridges were most common.

# Mapping Scenario

A typical user would be a bridge historian or enthusiast interested in learning more about the bridges in a particular area at a particular time. The user would already be familiar with the technical specifics of bridge design and would be visiting the site to learn about a specific bridge or learn about the bridges in a particular location and time in greater detail.

The user is expected to interact with the map in the following ways:

* View a spatial distribution of bridges across the United States, symbolized by their design type
* Zoom and pan
* Search for a specific location
* Search for a specific bridge by name
* Click a bridge to see a photo, technical specifics, and notes about its historical significance
* Scroll a time slider bar to see which types of bridges exist in a particular year and when and where bridges of a specific type are appearing or disappearing.

# Data Sources

Bridge data will be stored in a CSV file with latitude and longitude data, various attributes including the bridge name, year built, year demolished, notes, and photo path and name. It will be imported onto the map as point data.

The site's content manager will maintain the bridge data in a spreadsheet program (Microsoft Excel or Google Spreadsheets), export it as a CSV file, and upload it to the site.

Photos will be stored on [www.bridgemapper.com/photos](http://www.bridgemapper.com/photos). A sample is included in the lab-06 directory.

County outlines may be added for reference. One possible source is <https://www.census.gov/geo/maps-data/data/cbf/cbf_counties.html>.

# Technology Stack

The CSV data will be imported into the map via the Omnivore plugin.

The map will use the Leaflet JavaScript library for the primary map development and the Mapbox JavaScript library to support point clustering and searching (geocoding) functionality.

The site will initially be hosted on GitHub pages (skeetidot.github.io/bridgemapper) , with the hopes of ultimately hosting it on my own web server ([www.bridgemapper.com](http://www.bridgemapper.com)).