HIST.275 History of the US/Mexico Border

Narrative-Based Mapmaking: Learning Omeka and Neatline

Introduction: What are Omeka and Neatline?

For our next technology assignment, students will engage in the realm of narrative-based mapmaking to add their own contributions to a well-annotated, digital narrative map installation borne from class-wide collaboration. We will use a tool called **Omeka** which is an open source web publishing platform that is commonly used for digital scholarly projects. You can think of it as a **content management system**, or a **website builder**, that is suited well for dealing with academic data.

Generally speaking, Omeka is great for storing various forms of data a.k.a. records as it encourages record collecting and categorizing in an intuitive interface called Omeka Site Manager; it's like an online museum

In addition to an intuitive interface to create and organize records, Omeka comes with a plugin called **Neatline**. Neatline's capabilities include features for "creating interactive editions of visual materials - maps, paintings, photographs, and anything else that can be captured as an image. Neatline adds a **digital map-making environment** to Omeka that makes it easy to represent geospatial information as a collection of "records" plotted on a map, which can be bound together into interactive exhibits that tell stories and make arguments."

In the coming sections, you'll walk through the basic functionalities of Omeka and Neatline, getting a sense for what's possible with this powerful geographic annotation toolset.

Beyond this brief class collaborative assignment, you can feel free to use aspects of this guide toward your final project!

Setup

For this class assignment, Elena and Kha have already done most of the heavylifting concerning setting up an Omeka website for the class and creating the initial Neatline "exhibit" (webpage where our class collaborative map will live) that everyone will add to.

To elaborate, we've set up a base map layer that displays terrain, as well as a default zoom on the map to a section of the Rio Grande, called viewport (the scope of the map that a user will be plopped into when they visit the webpage). It's loaded with some example annotations too. Take a look here: https://borders.carletonds.com/neatline/fullscreen/us-mexico-border-narrative-map.

Your **role** through this guide is to:

(1) **accept the invitation to create a user account** with the HIST.275 Omeka website. Check your spam mail inbox for the subject title "Activate your account with the HIST 275 repository;" or contact Elena or Kha if you did not receive an email.

(2) **learn how to add a record contribution** to the U.S.-Mexico Border Narrative Map exhibit.

Tutorial: Adding Records to Neatline (est. completion time: 35 min.)

In this tutorial, you'll learn how to create different kinds of vectors (annotation items), style them, and link them to data you've uploaded in the context of the collaborative class assignment.

A vector, or any element of annotation, is called a Record in Neatline. Every Record has the following components:

|			
define title, description	linkage to Omeka Item	tools to draw vectors, symbols, physical representations	style options re: pop-up descriptions, colors, opacities, vector sizing, dates, imagery, visibility
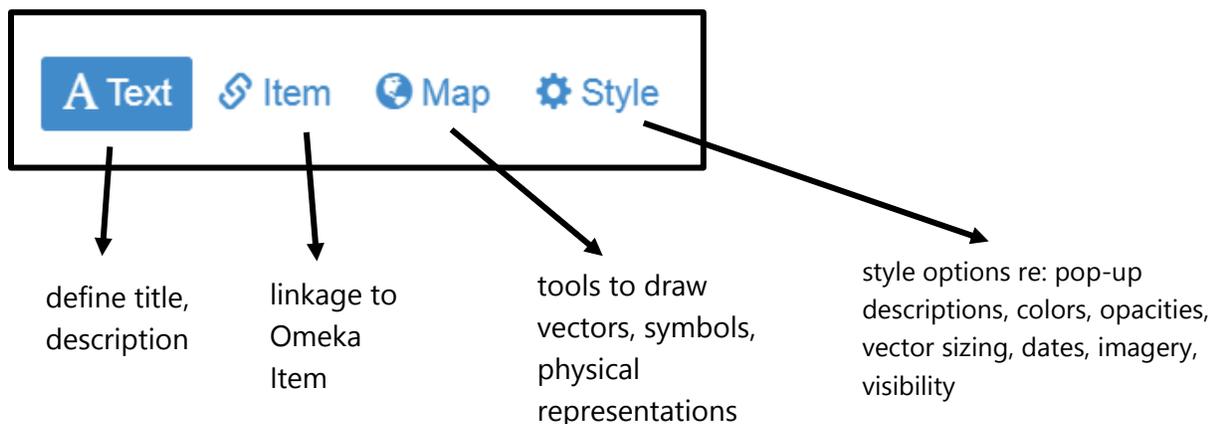
Notice that each Record is either linked to an Omeka Item, i.e. a piece of data uploaded by someone and then stored in the website's database, or it is not.

Go ahead and log in to your user account at https://borders.carletonds.com/admin. Once your logged in, click on the Neatline tab on the left side navigation bar and then click the title U.S.-Mexico Border Narrative Map.

Records that aren't linked to Omeka Items

First let's get the hang of creating a few different *un-linked* Records. You can add a new Record any time by clicking the [New Record] button on the left side pane. When creating a new Record, you'll automatically start on the [A Text] tab of the Record's components.

- **Line**
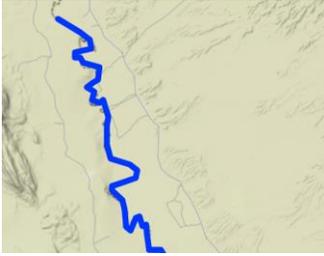
The Line type is useful for highlighting and outlining 1-D natural formations and other divisions, such as rivers. Here's how to make a similar Record to the example outline of the Rio Grande, demonstrating the Line type:

➤ On the `A Text` tab, fill in the `Title` field as "2019 US-Mexico Border / Rio Grande – [your initials]" and the `Body` field as the description that you would like to appear when a user clicks on the Record on the map.

➤ On the `⚙ Style` tab, switch the `Presenter` to `Static Bubble`. Set the `Colors` to the desired colors for when the Record is clicked on (selected) vs. unselected using the color picker; though only the `Stroke Color` and `Stroke Color (Selected)` matter here because the Line Type is a "stroke" with no "fill." Similarly, in the `Opacities` section, the `Fill Opacity Unselected and Selected` do not have any effect. In `Dimensions`, you can set `Stroke Width`, i.e. the line's thickness.

➤ On the `⊕ Map` tab, select the `Draw Line` option under `Drawing Tools`. Then click on the desired map area, along the Rio Grande, to begin drawing points along your Line vector. Double-click when you are done drawing.

➢ Voilà! You've added a Line Record! Now, if you scroll to the bottom to the left side pane, you can click the ⬚ Delete button to delete the test Record you just made. We'll try to delete our test/tutorial Records after making them to avoid cluttering the map installation.

▪ **Polygon**

The Polygon type is useful for highlighting and outline groups or categories, such as the area where a native group has lived. Here's how to make a similar Record to example Polygon for Test Group #1 demonstrating the Polygon type:

➢ On the `A Text` tab, fill in the `Title` field as "Test Group #1 – [your initials]" and the `Body` field as the description that you would like to appear when a user clicks on the Record on the map.

➢ On the `⚙ Style` tab, switch the `Presenter` to `Static Bubble`. Set the `Colors` to the desired colors for when the Record is clicked on (selected) vs. unselected using the color picker; note that `Fill Color` and `Fill Color (Selected)` control the fill of the shape and `Stroke Color` and `Stroke Color (Selected)` control the outlining borders of the shape this time. In the `Opacities` section, the Fill and Stroke demarcations have similar effect. In `Dimensions`, you can set `Stroke Width`, i.e. border thickness.

➢ On the `🌐 Map` tab, select the `Draw Polygon` option under `Drawing Tools`. Then click on the desired map area, somewhere along Rio Grande, to begin drawing points to define your Polygon vector. Double-click when you are done drawing and have connected your beginning point to the end point.

➢ Voilà! You've added a Polygon Record! Don't forget to click the ⬚ Delete button to delete the test Record you just made once you feel comfortable with the Polygon-creating process.

➢ If any point during drawing you want to edit or delete a completed shape you've drawn, there are several options under the Drawing Tools section of the `🌐 Map` tab for you to choose from: `Modify Shape, Rotate Shape, Resize Shape, Drag Shape, Delete Shape.`

➢ Additionally, you can try selecting `Draw Regular Polygon` instead of `Draw Polygon` to create a polygon shape with equivalent sides / non-freeform.

- **Point/Pin/Icon**

The Point type can be used to represent iconography, an image at a fixed point, or a circular/radial grouping. **NOTE**: the Point type doesn't scale across different levels of zoom on
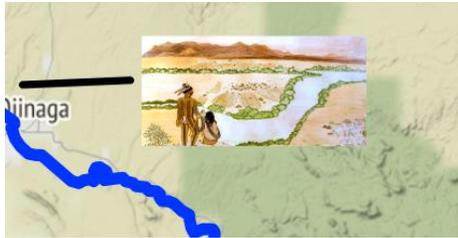
the map like the Line and Polygon, which means that an image will assume static dimensions while other vectors scale. Thus it might be helpful for the user if your Point Record is only visible in a certain zoom range (we will discuss this later). For now, here's how to make a similar Record, a displayed image, to the example titled "Test Image" demonstrating the Point type:

➢ On the `A Text` tab, fill in the `Title` field as "Test Image – [your initials]." This time we'll add in a URL to the Record's description. Click the Edit HTML blue link next to `Body` field which should open up a HTML editing window. Type in a text description, then highlight your text, then click the ⌐⌐ icon to link to the picture URL (you can use: https://cdn.theatlantic.com/assets/media/img/mt/2017/10/Pict1_Ursinia_calendulifolia/lead_720_405.jpg?mod=1533691909). Click on ⛶ icon to exit the HTML editor. *In the HTML editor, you can style the textual descriptions of a Record with color, bolding, underlining, linking, etc. and even add images.*

➢ On the ⚙ Style tab, switch the `Presenter` to `Static Bubble`. The `Colors` section will not affect the Record this time because we are displaying an image a so its settings don't matter. In the `Opacities` section, only `Fill` demarcations will prove an effect. In `Dimensions`, you can set `Point Radius` i.e. the image size. Most importantly, you'll want to go to the `Imagery` section to set `Point Image` as the image's public URL (usually ends in .png or .jpg); you can use https://cdn.theatlantic.com/assets/media/img/mt/2017/10/Pict1_Ursinia_calendulifolia/lead_720_405.jpg?mod=1533691909 here.

➢ On the ⊕ Map tab, select the `Draw Point` option under `Drawing Tools`. Then click on the desired map area, somewhere along Rio Grande, to draw the singular point where your image will be displayed, centered at that fixed point. You can also add lines or polygons around the image if you like. Now, you should see your image appear on the map as pictured below.

➢ Don't delete this test record just yet!

- **A Few Notes on Visibility**

The `Exhibit` Elena and I have created has 12 levels of zoom ranging from levels 1 to 12 (although an `Exhibit` can have up to 20!). Lower numbers represent a more zoomed out view and higher numbers, a more zoomed in view (microscopic). For example, level 5 zoom displays the U.S. and level 10 zoom displays the town of Ojinaga.

In the class collaborative `Exhibit`, we'll refrain from setting the `Visibility` of individual `Records`, as we want all `Records` to be visible at all zoom levels. However, it's worth noting for final projects purposes that we have the option to define the `Visibility` components for an individual `Record`.

Visibility

Min Zoom (Use Current) **?** → the min. level of zoom at which the Record is visible (lowest zoom level / maximum zoom out for Record)

Max Zoom (Use Current) **?** → the max. level of zoom at which the Record is visible (highest zoom level / maximum zoom in for Record)

Default Focus (Use Current) **?** → the fixed lat./long. point the map snaps to when a Record is selected

Default Zoom (Use Current) **?** → the zoom level the map orients to when a Record is selected

Use Current Viewport as Default **?**

For any of the `Visibility` components, clicking the Use Current link will set the component in question—either `Zoom` or `Focus`—to the component's value in the current viewport (where the map is currently focused OR the level of zoom the map is oriented).

➢ Try altering the visibility of your test Point `Record` to have it appear at a certain zoom range only.

➢ Try altering the default focus of your test Point `Record` to snap the map to a certain focus extent when clicked on.

➢ Delete the test record when you feel comfortable with Visibility!

Records that are linked to Omeka Items

We've familiarized ourselves with the different types of `Records` we can add to a Neatline `Exhibit`! Now, let's try linking a Record to an `Omeka Item`.

- ➢ The first step is creating an `Omeka Item`. Go to http://borders.carletonds.com/admin/ > click on the Items tab on the left side panel > click the green `Add an Item` button.
  - o On the `Add an Item` screen, fill in a couple fields like `Title` and `Description` with whatever information you like for learning purposes.
  - o On the nav bar, click the `Files` tab and upload a test image of your choice.
  - o Check the `Public` check box under the large green `Add an Item` button on the right side panel to make your new Item publicly viewable. Then click the `Add an Item` button!
- ➢ The second step is to create a `Record` on the class's Neatline `Exhibit` that links to the `Omeka Item` you've just created.
  - o Go to the Neatline `Exhibit`'s editor by clicking `Neatline` on the left side panel and clicking the "U.S.-Mexico Border Narrative Map" title.
  - o Add a new `Record` and define the `Text, Map,` and `Style` tabs as you like.
  - o Lastly, switch to the `Item` tab and select your newly created `Omeka Item` from the dropdown.
- ➢ On the map, you'll notice that when you select your new `Record`, the pop-up pulls information that you entered while creating the associated `Omeka Item`, including images! There's even a link to `View the Item in Omeka`, which brings users to a unique webpage just for the `Omeka Item`.

Linking Records to the Timeline

As a final exercise, we will link the test `Record` you just made (that's associated with an Omeka Item) to the `Timeline` widget.

- ➢ In the editing pane for your test `Record`, switch to the `Style` tab. Under the `Groups` section, type in `SIMILE Timeline` into the `Widget` field.
- ➢ Now scroll down to the `Dates` section. Explore how the visibility of the `Record` and the look of the timeline is affected as you edit the `Start Date, End Date, Before Date, and After Date` fields. For more information on the functionality and accepted date formats of each field, you can click the blue question mark next to each field name.
- ➢ Try scrolling horizontally through the timeline to view the dated `Records`.
- ➢ Don't forget to delete this test record as well!

Adding Your Own Event Nomination as a Record

TO-DO: Your last task in this tutorial is to go ahead and add your own event nomination as a `Record` to contribute toward the class collaborative U.S.-Mexico Border Narrative Map Neatline `Exhibit`. After you're done adding your `Record`, check out your contribution here: https://borders.carletonds.com/neatline/fullscreen/us-mexico-border-narrative-map.

Happy Neatlining ☺!

Further Exploration: How to Set Up Your Own Neatline Exhibit

If you come to find you like Omeka and Neatline and think it might be a useful tool for your final project, I encourage you to read further to learn about how to set up your own `Exhibit`.

At http://borders.carletonds.com/admin/neatline, you can click the green `Create an Exhibit` button. There are a few important fields to address on the Exhibit creation screen:

- ➢ `Title` – Exhibit title
- ➢ `Narrative` – Exhibit description
- ➢ `Widgets` – Select `SIMILE timeline` to incorporate a timeline into the Exhibit
- ➢ `Enabled Spatial Layers` – Users are allowed to switch between base map layers while viewing an Exhibit. Neatline offers a few options out of the box; some are political map layers and other are terrain layers
- ➢ `Default Spatial Layer` – The spatial layer that should be visible by default when the Exhibit starts
- ➢ `Zoom Levels` – The number of zoom levels available for the project; 12 is a good number
- ➢ `WMS Address` – the URL for a dynamic map layer to use instead of Neatline's out-of-the-box options (URL must come from https://mapwarper.net/, Neatline's partner organization; ask Kha for help with this if you decide to go down this custom maps route!)
- ➢ `WMS Layers` – the name of the mapwarper custom map you want to use a base layer
- ➢ `Spatial Querying` – Make sure this box is checked yes.
- ➢ `Public` – Make sure this box is checked yes so that the Exhibit is publicly available.

Once you successfully create an `Exhibit`, you can visit the `Exhibit`'s editor to add `Records` as expected. In addition to the `Records` tab on the editor's top navigation bar, there is also a `Styles` and `Plugins` tab. The `Styles` tab will allow you to reset the default focus and zoom of the overall `Exhibit` upon webpage load. The Plugins tab will allow you to turn on `SIMILE Timeline` plugin and edit the `Timeline`'s design.

Feel free to ask Kha any additional questions about Omeka and Neatline if they come up!