

## Plotting Utility Spec: Creating a Plot

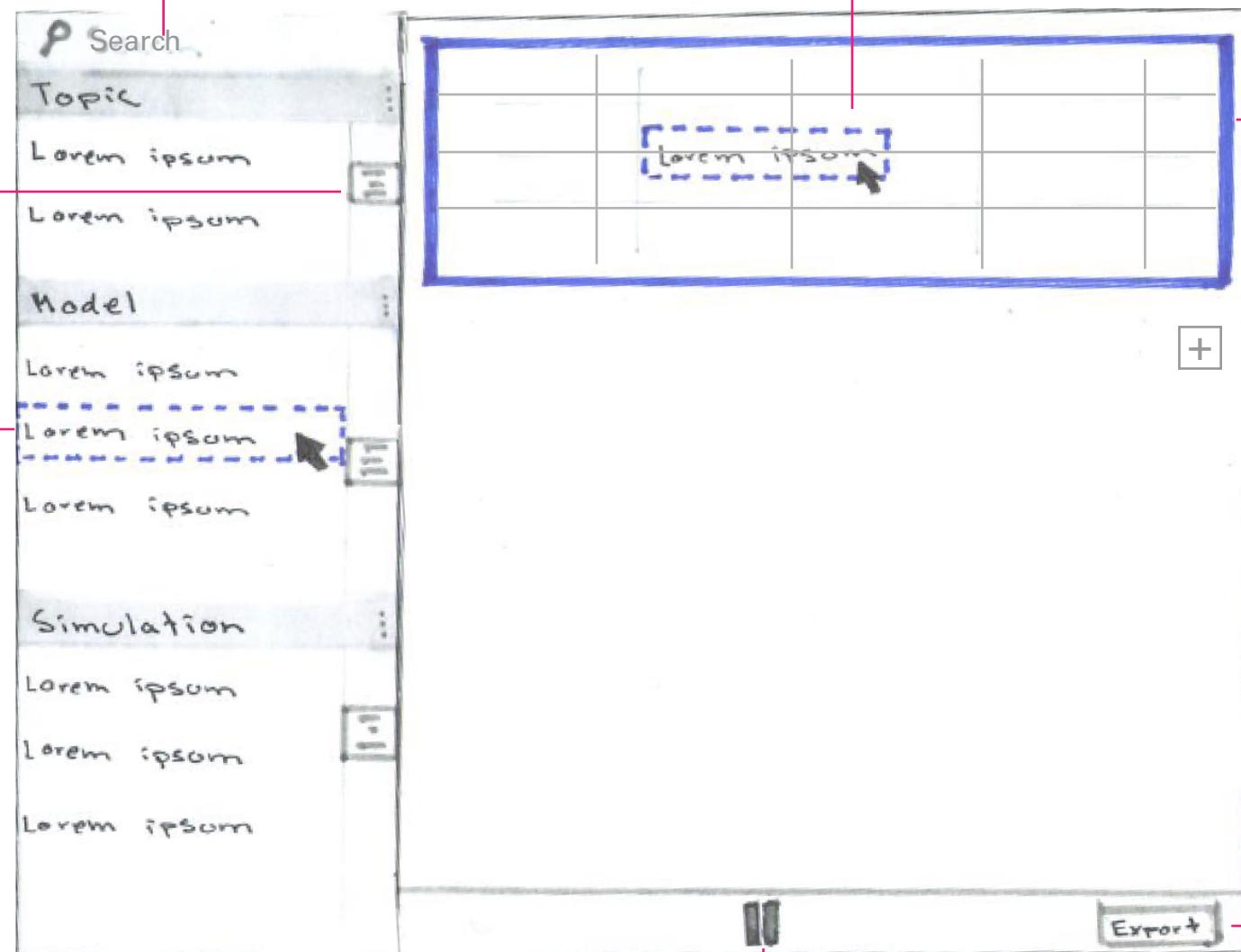
Documentation for the Plotting tool. Annotations in pink.

To add a plot, users open the Plotting widget under the Window menu. A blank plot screen opens, and users drag variables from the left column over to the empty plot.

Search autocompletes, and highlights matches (or grays out the non-matches) as user types. Or, hides non-matches.

Each section scrolls independently of the others. The section header can be grabbed and resized. The entire left column can be grabbed and shrunk toward the left.

2. Clicking on a variable causes a dotted blue border to appear around the variable name. The variable can then be dragged over to the graph (see Step 3.).



1. When plotting is opened, light grey lines appear to indicate the plot location (ignore blue until Step 3)

3. When a variable is dragged over the graph area, a blue border appears to indicate that the variable can be dropped there. Once the variable is released, the blue border disappears.

Pauses all plots. Turns to play icon when pressed.  
Pressing space bar could pause, too.

Pops up Export dialog (see page 6)

## Plotting Utility Spec: Two-variable Plot

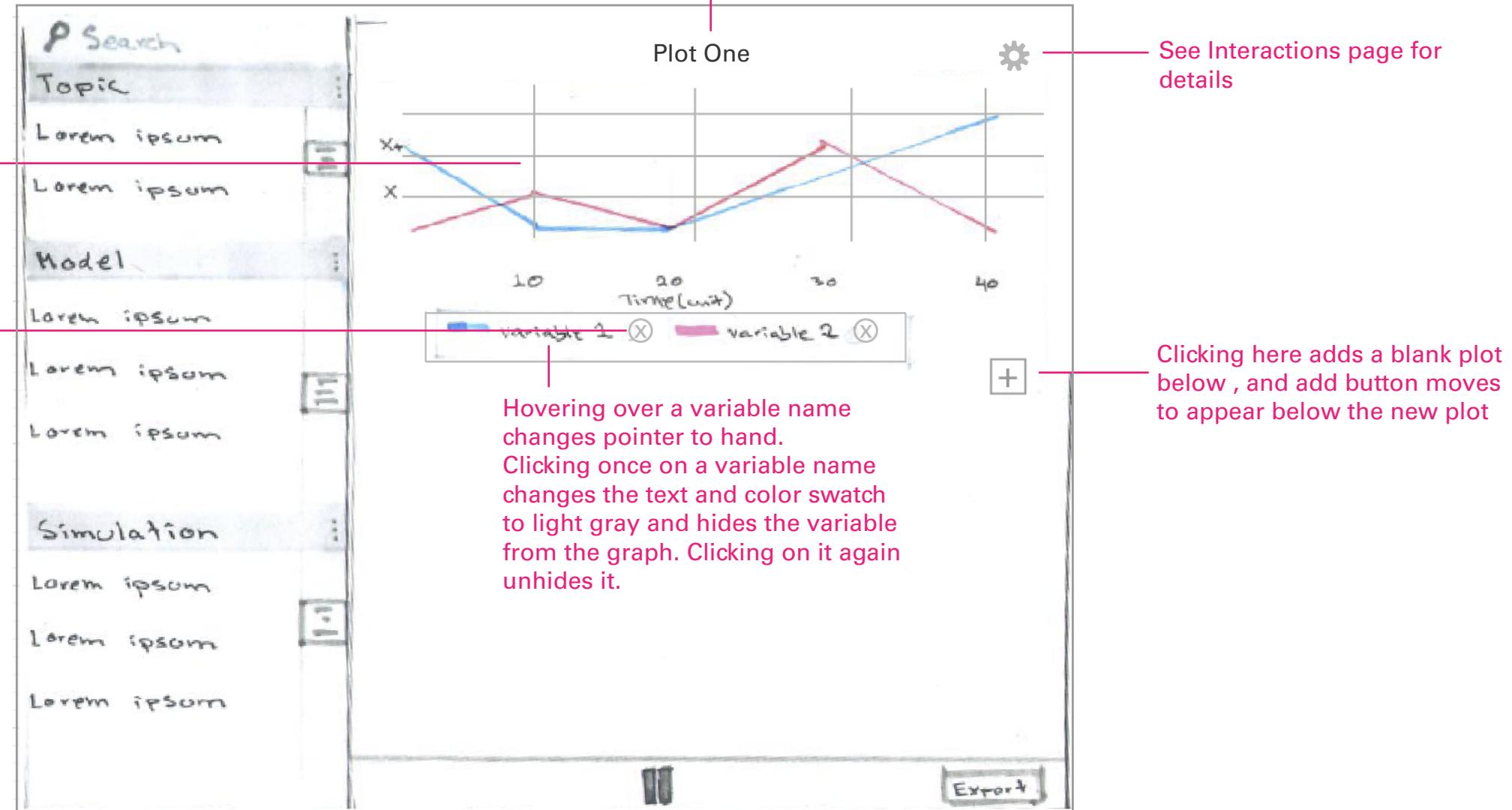
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Below is a plot with two variables .

We auto-assign a name. Hovering over the plot name changes the mouse pointer to a cursor, and the user can then click on the name and edit it. A box appears around the text, and a cursor at the start of the name, with the name highlighted. Pressing Enter “saves” the name.

As variables are dragged to the plot, the lines appear and the variable name is added to the key at the bottom. User can add as many variables as they want.

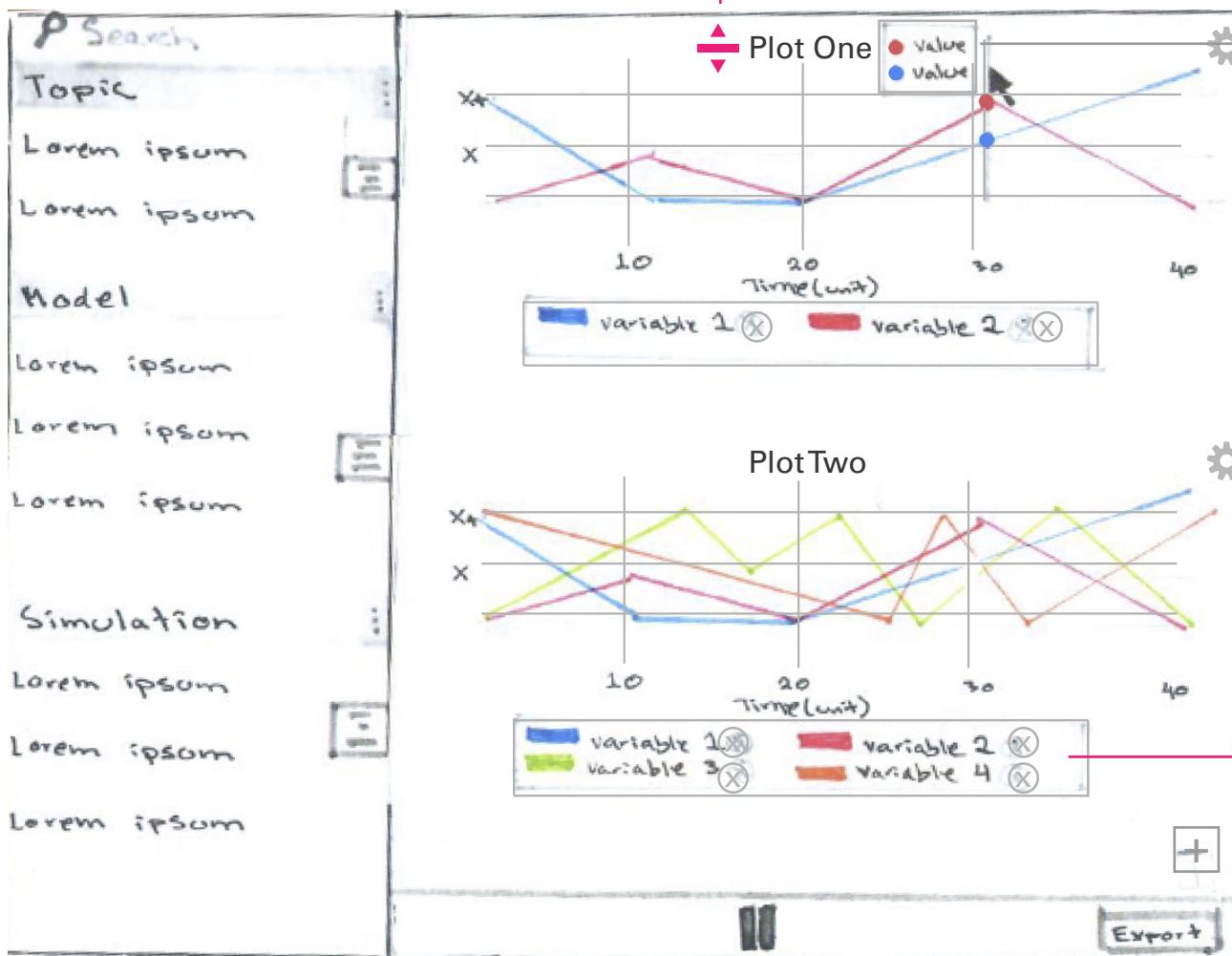
Clicking the X removes variable from key and from graph.  
If all are deleted, plot is just the grey lines.



# Plotting Utility Spec: Multiple Plots & Plot Markers

Documentation for the Plotting tool. Annotations in pink.

Once there are enough plots to fill the window, a scroll bar appears.

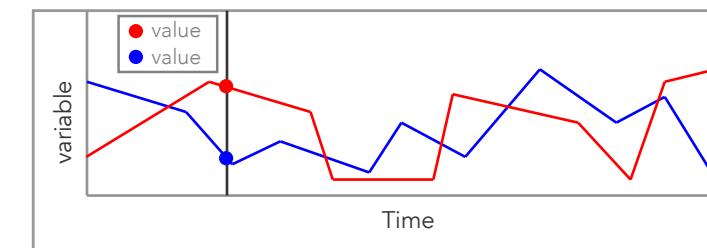


It would be neat if it were possible to drag the plots to rearrange them.

Hovering over a plot causes the “rearrange” icon to appear next to the plot title. The icon can be dragged to reorder the plots.

## Plot Markers

When the user hovers over the graph, the plot marker appears. The plot marker consists of a line that extends from the top of the plot (highest y-value) to the x-axis. The marker should be dark grey, or another color that does not interfere with the colors of the plot lines. As the marker is moved along the plot lines, a small circle (color corresponds to line color) appears where the vertical marker meets the plot line. A small box appears next to the top of the vertical marker, and follows as the marker is moved. This box reveals the value for each line at the current point on the line.



Additional variables are stacked

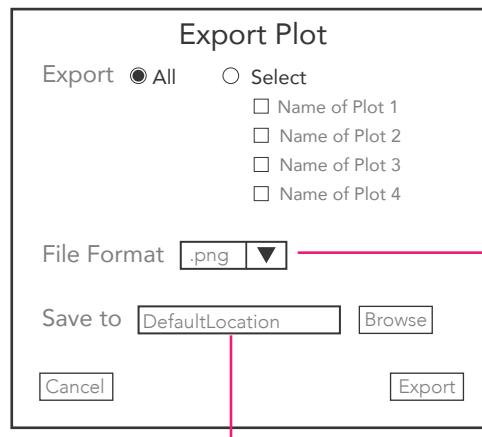
Hovering over a variable turns the pointer to a hand. Click/drag moves the variable to another plot (and removes it from the current plot). Clicking the variable “hides” it, so the dragging may prove too tricky

# Plotting Utility Spec: Interactions

Documentation for the Plotting tool. Annotations in pink.

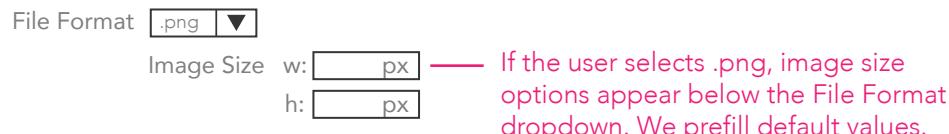
## Exporting Plot(s)

Pressing Export in the bottom right of the plotting utility opens this dialog. Once they press Export in the dialog, user gets confirmation pop-up saying that the plot(s) has/have been exported to the designated location. After closing that pop-up, user taken back to plots.



Include .CSV, .PDF, .PNG as options.  
See below for .PNG options

Be sure not to overwrite existing plots.  
Append a number.



If the user selects .png, image size  
options appear below the File Format  
dropdown. We prefill default values.

## Zooming

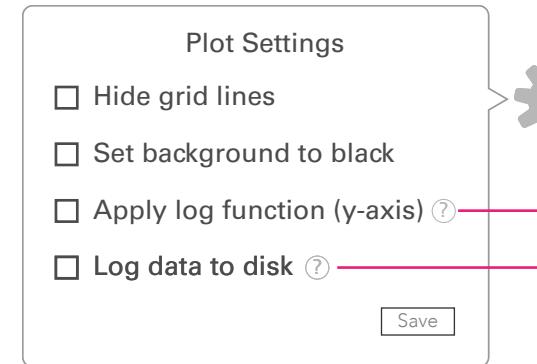
Zooming is accomplished by click on the plot, dragging the cursor to the desired location, and releasing. This will zoom in on the selected region. As the user drags, the area is highlighted. When the plot is zoomed, Reset appears in the bottom right corner of the plot. Clicking that resets the zoom.

## Deleting a Plot

Hovering anywhere over a plot reveals an X in the top left corner of the plot. Clicking the X deletes the plot.

## Plot Settings

When the user presses the Settings icon next to the graph, the popout below appears.



Clicking outside of the dialog, or on the Settings icon, closes the dialog

I'm not sure what the correct tooltip language is for these, but hovering over the question mark reveals a tooltip that briefly explains the setting

If the user checks the Log data box, we display the auto-assigned files name and save location below the checkbox:

Log data to disk ?  
Filename.csv  
Saved to: /location/picked/by/user

When a user elects to log data, we indicate this on the plot itself. Note, let's decide what that looks like once more of this is implemented. I'm not sure what the best way is, yet.

## Plotting Utility Spec: Future Features

Documentation for the Plotting tool. Annotations in pink.

### Editing Axis Name

The user can customize the name on either axis by double-clicking on the text. On hover, the cursor should change to a text cursor. On double-click, the axis name should become an editable text field with the current name of the axis highlighted. Hitting Enter confirms the change.

### Adding Annotations

Users can add annotations where ever they dang well please (within the bounds of the axes). Double-clicking in this region opens a text box with a blinking cursor, and a Save button. Once the annotation has been saved, it appears with a light grey X next to it for deleting.

Hovering over the annotation turns the cursor to the translate icon, and the annotation can be dragged to a new location. Double-clicking the annotations allows users to edit the text.



Sample Annotation Annotation with X to delete

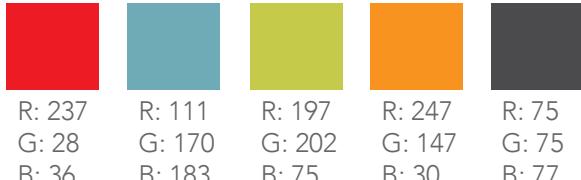
### Change Location of Key to Right of Plot

Offer Plotting of Different X Variables (not just time)

# Plotting Utility Spec: Color Scheme

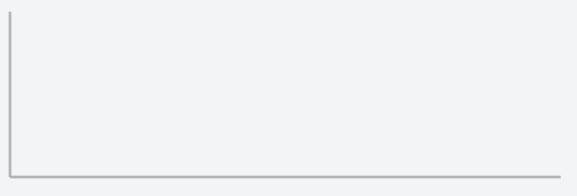
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## Line Colors



## Axes Color

R: 179  
G: 179  
B: 179



## Plot Background Color

R: 242  
G: 244  
B: 247

