



On-Demand Training: Background Images Transcript

Welcome to this Background Images video. You can download the Exercises workbook and data sets to follow along in your own copy of Tableau.

Tableau Desktop can bring in background images and plot data over those images like a background map. The basic steps involve importing the image and specifying a coordinate system by mapping both the X and Y axes to measures in the dataset.

Adding an Image

Adding an image must be done in regards to a specific dataset. For this video, we'll work with the Hong Kong MTR system. We have a partially completed Excel file with Line and Station data, as well as placeholder columns for X and Y

- As a note: Tableau needs things formatted in certain ways to bring in background images successfully
 - the X and Y fields need to be measures,
 - and there needs to be a scale assigned to each axis of the image.
 - The specific steps we'll follow in this video are not necessarily requirements, but they make the process work smoothly
- Before we do anything else, we'll record the dimensions of our image in the X and Y columns for our spreadsheet
 - Our image is 840 x 623, so we'll enter that and save the spreadsheet
- Now in Tableau, we'll connect to that data set and click on the sheet
- Next, go to the Map menu > Background Image > click on our dataset > and select Add Image
- We'll browse to our image file – we can use standard image types, including PDFs
- And Tableau automatically maps the axes to our fields, but we'll update the field to Y
- We'll specify the left and right as 0-840 and bottom and top numbers as 0-623
 - This essentially creates an axis along each dimension of the image which we can use to plot data later
 - We don't have to use the dimensions, this could be any scale, but the dimensions are convenient
 - If the image is a map, use the appropriate range of latitude and longitude
- On the option tab, we'll click "always show entire image" this keeps Tableau from adjusting the view, since we always want to see the whole MTR.

To bring the image into the view,

- Put the field mapped to the X axis to the Columns shelf
- and the field mapped to the Y axis to the Rows shelf

Generating Coordinates from the Image

Next, we need to know the X and Y coordinates for each place we'll want to plot data. For us, that's the Island Line

- Right click on the first station and select Annotate > Point
 - We can increase the size here and hit ok
- These coordinates need to be entered into the dataset, replacing the dimensions as we go
- To move to the next station, simply click and drag where the point annotation is pointing to
 - In the interests of time, I'll paste in all the relevant values into the spreadsheet – this dataset is available for download under the video

Plotting Points on the Image

Now that we have our dataset with the stations' coordinate data, we can plot them

- Let's remove our annotation – right click, remove
- And now that we've saved the Excel workbook with all of those station's coordinate data, right click on the data source and select Refresh
- This brings in the coordinates we entered for X and Y
- However, we're currently plotting X and Y as sums, so our image looks pretty odd
- Let's break out the data by bringing Station to Detail. This will create a mark for each station,
- Then add Line to color
 - We can make them solid circles
 - And edit the colors, matching the legend with green and purple, we can even add a black halo
- For some images, it might make sense to zoom and pan like this, showing only the area relevant to the points
 - We can right click on the axis and uncheck show header to remove those axes from the view

Then we have a nice clean background image with our points plotted!

Conclusion

Thank you for watching this Background images training video. We invite you to continue with the On-Demand videos to learn more about using Tableau.