**Instructions for Creating Masks of Xray Data**

**\*\* Before starting, you will need to know which dataset you will be masking (ImageToken), which server the dataset is on (ServerLocation), and which slices of the data you will mask (whichz).**

1. **Open Matlab**
2. **Set dataset-specific parameters by typing**

>> ImageToken = ‘dyer15’ %add your image token here instead of ‘dyer15’ but put it in single quotes!

>> ServerLocation = ‘openconnecto.me’ %add your server location here instead of ‘openconnecto.me’ but put it in single quotes!

>> zrange = [100, 1700]; % change 100 and 1700 to the number of the starting and ending image in the stack you will create a mask for.

1. **Add the “ManualMaskGeneration” folder to your Matlab path** by typing

>> pathtool

Add this folder (and all of its subdirectories/contents) to your working path.

1. Create a new folder called **ImageToken**\_ServerLocation\_Masks\_**Date** (with the name of the **ImageToken** and **ServerLocation** for the dataset you are working on and the cuurent **Date**)
2. In the Matlab GUI, **set your current location** to the location of this new folder /ImageToken\_ServerLocation\_Masks\_Date
3. Open the ocpMatlab API by typing

>> cajal3d

1. Now, **call the mask labeling function** by typing

>> manualmasking(imageToken,serverLocation,zrange)

1. Once you run this function a figure window will pop up. You will **click on the upper left corner of the brain tissue with the cross hair, then go clockwise and click on each corner until you create a polygon around the region of interest (brain tissue).** See the figures on the next page for an example.
2. After you select all four corners, when you move your cursor over each corner you will see a small circle. If you click this circle and hold it down, you can **move the corner to adjust the polygon** (if you make a mistake placing the corner originally).
3. After you adjust the polygon to enclose the tissue, **double click the region to save the mask.**
4. After computing a mask for all images indexed by whichz, zip the folder where are the .tiff images are stored. Voila! You are done!
5. **Notes:**
   * Try your best to not select any of the background (not tissue).
   * Since the region must be a polygon, you will probably have to cut a small amount of tissue from the bottom side. That is ok… there are no cells there.
   * Make sure not to include the white and black lines on the left side.

**EXAMPLE SCREENSHOTS**

**A. Initial Figure Window**



**B. After clicking the first and second corners**



**C. After clicking all four corners around the tissue sample (the boundary of the region appears in blue)**

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**D. Dragging the corner outwards **

**E. Example of bottom boundary (zoomed in). Make sure you cut away the boundary. It is ok if you cut off a small bit of tissue on edges. Also, make sure you get rid of the white and black lines on the left side. **