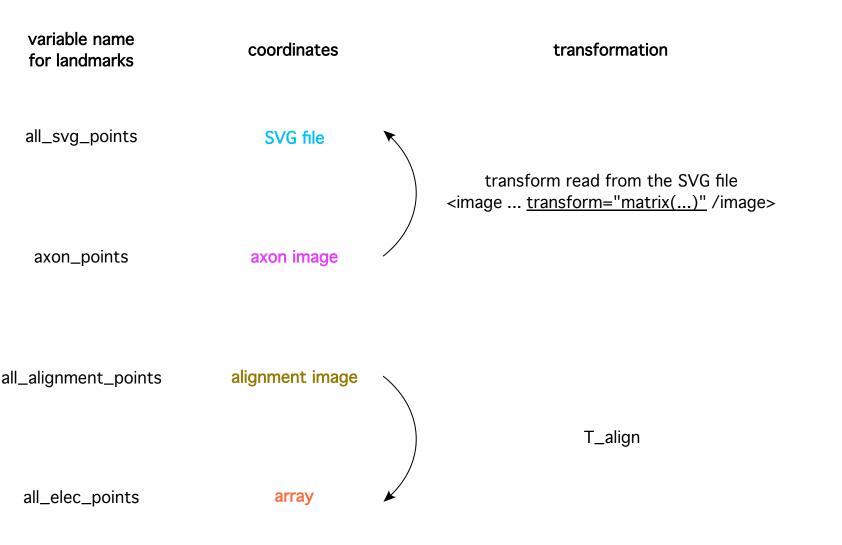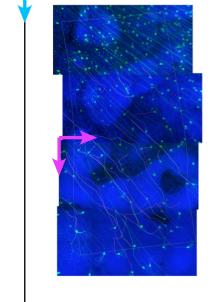This describes how a transformation is created between the SVG file coordinates and array coordinates.

The transformation is based on landmark points (usually cell bodies). First, landmarks in axon image coordinates are transformed to SVG coordinates. Second, landmarks in alignment image coordinates are transformed to array coordinates. Thirs, these landmark locations are used to construct a transform from SVG coordinates to array coordinates.
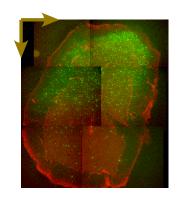
example of each coordinate system

SVG file

axon image

variable name
for landmarks

coordinates

transformation

all_svg_points

SVG file

transform read from the SVG file
<image ... transform="matrix(...)" /image>

axon_points

axon image

alignment image

all_alignment_points

alignment image

T_align

all_elec_points

array

array