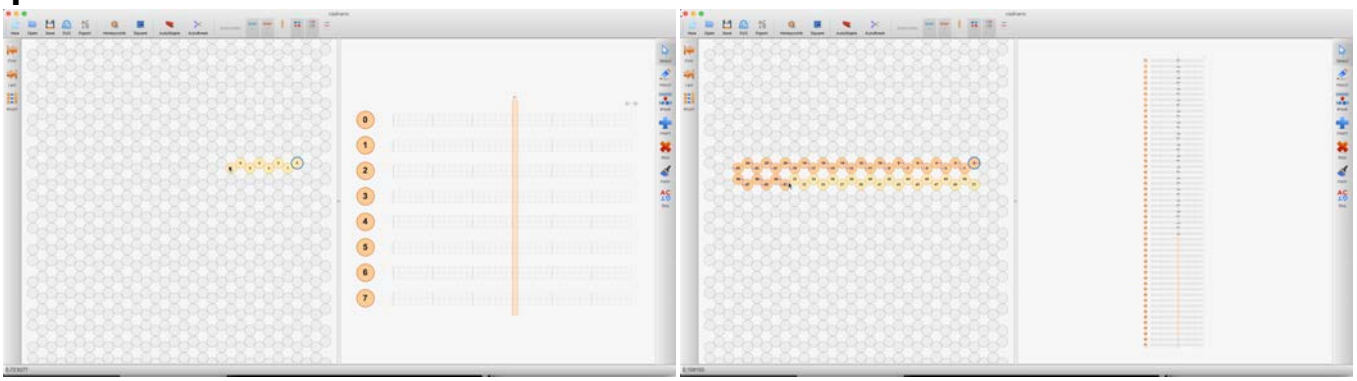
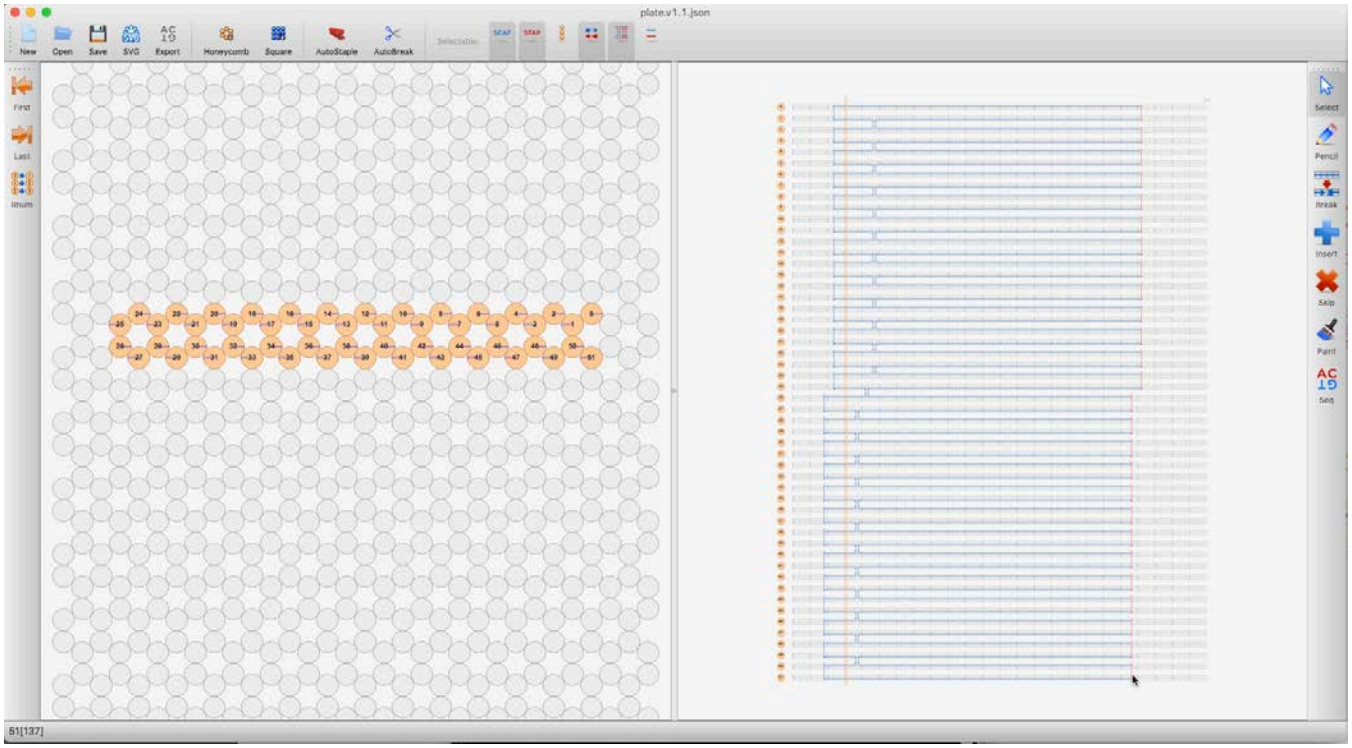
Tutorial 2: Flat plate with ssDNA handles

Step 1: Define cross-section



Step 2: Extrude the scaffold



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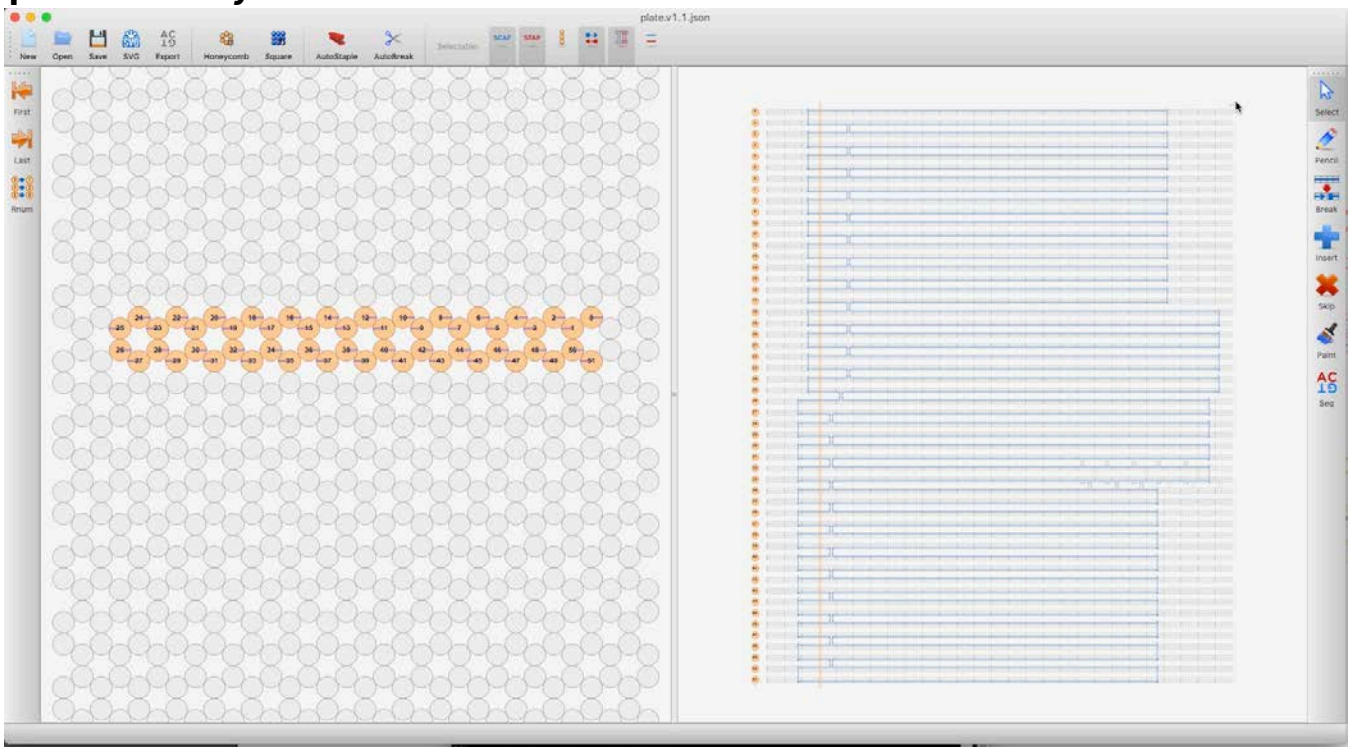
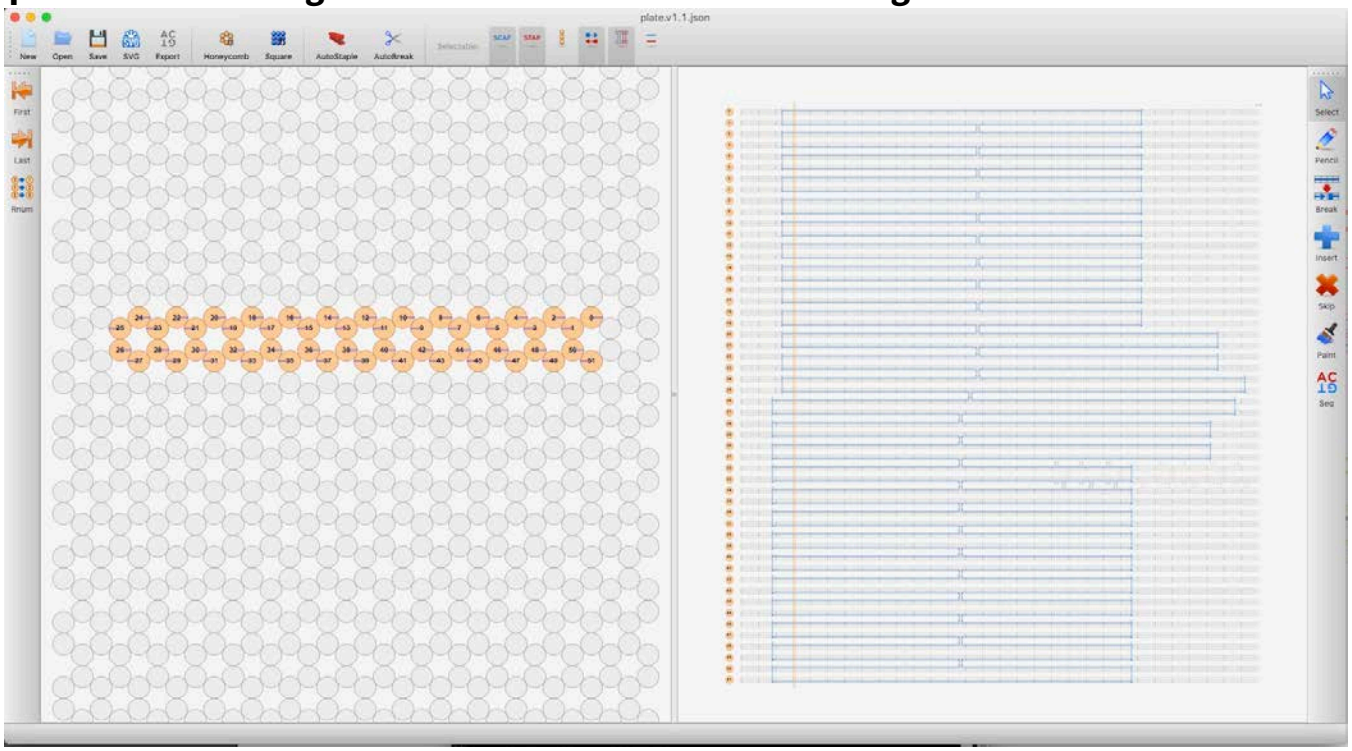
Step 3: Add an asymmetric domain



Step 4: Tweak the length to reach the desired scaffold length



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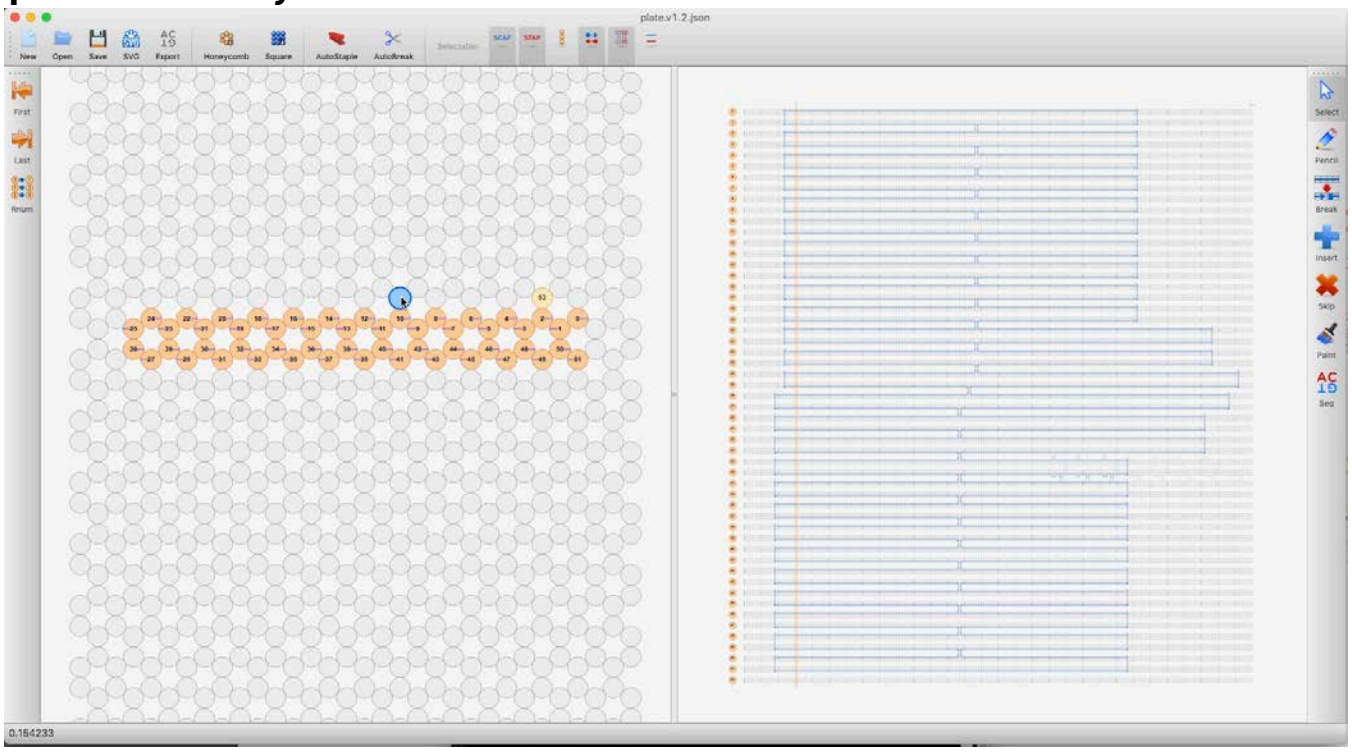
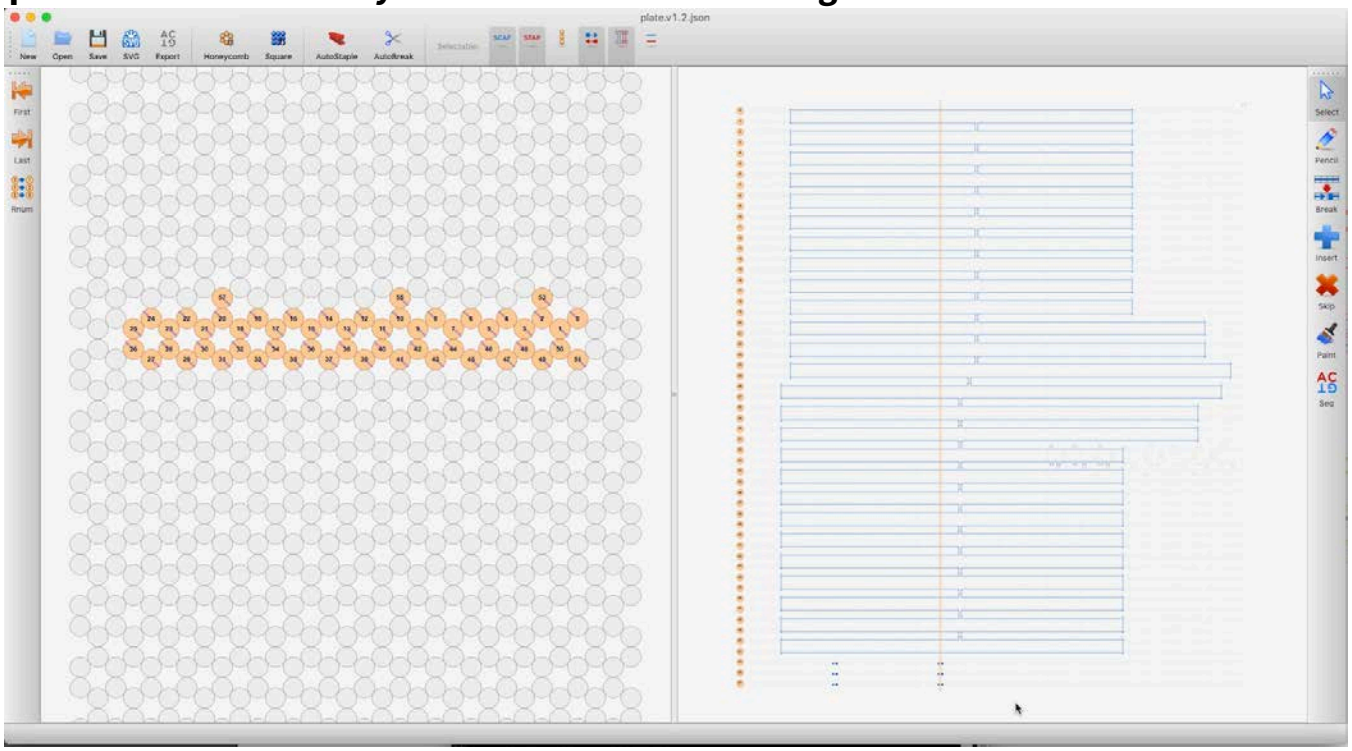
Step 5: Add “dummy” helices at desired ssDNA handle locations



Step 6: Place some dummy scaffold for handle routing



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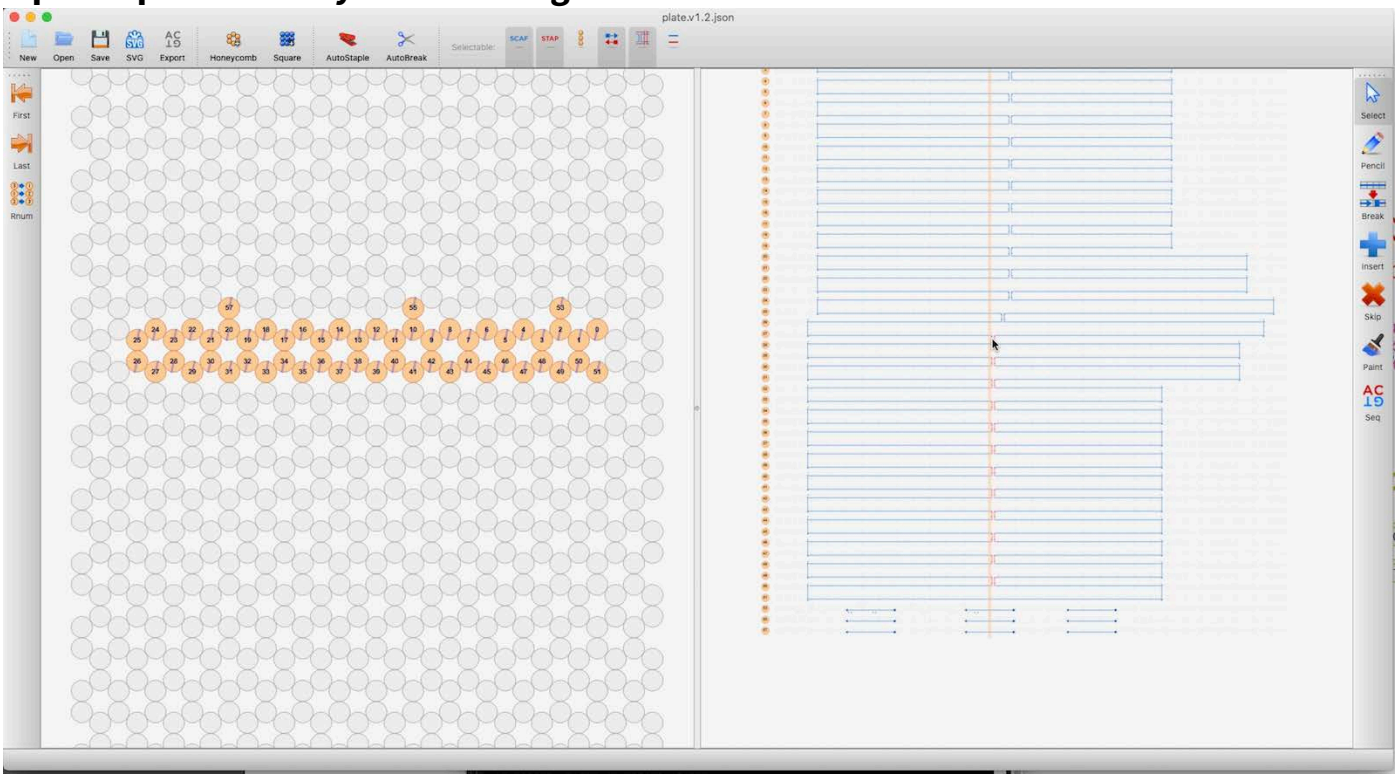
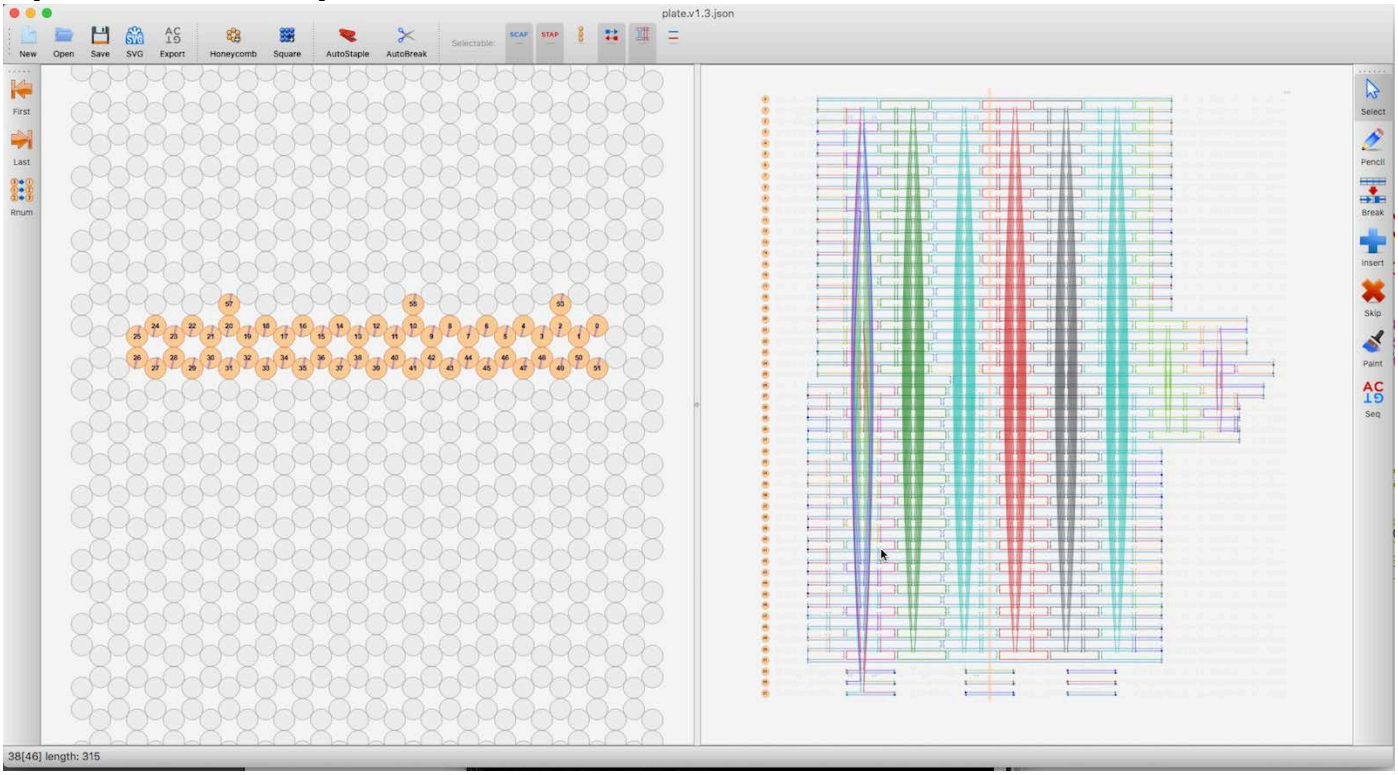
Step 7: Expand dummy scaffold lengths



Step 8: Click AutoStaple button



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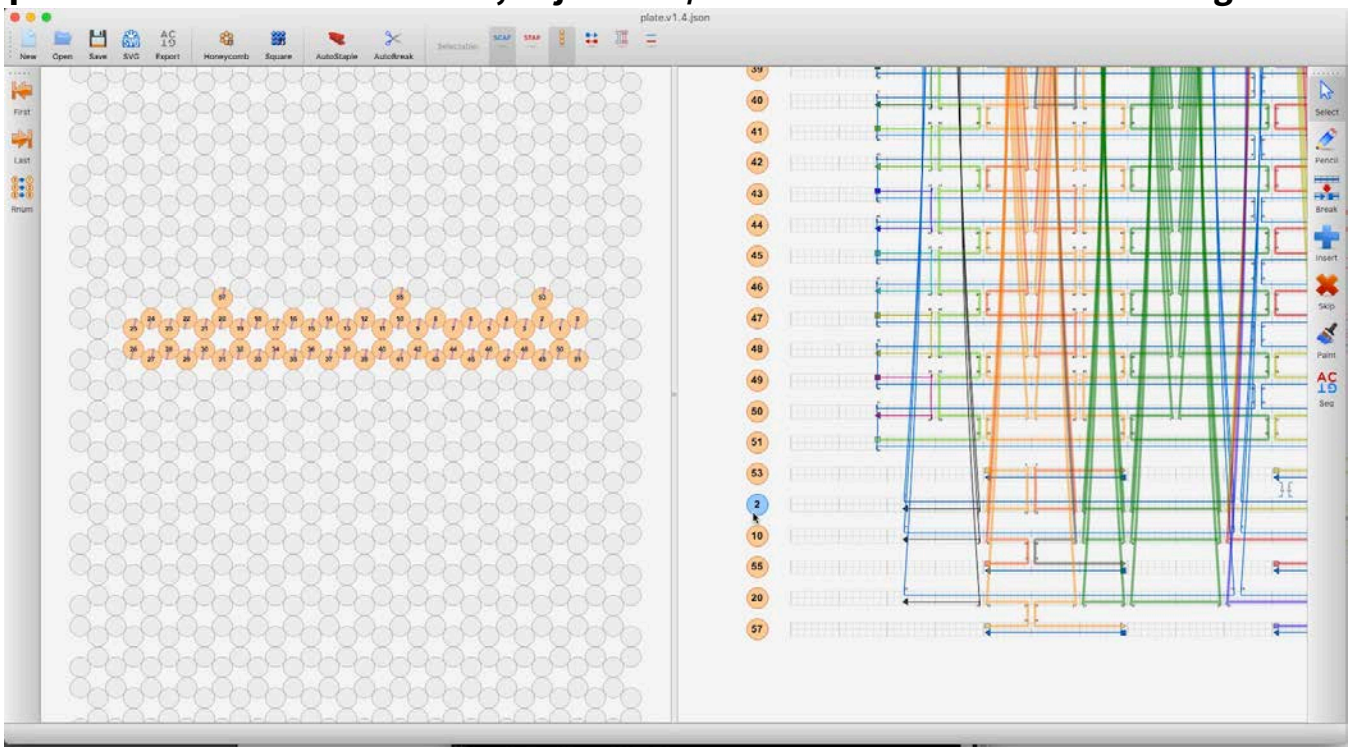
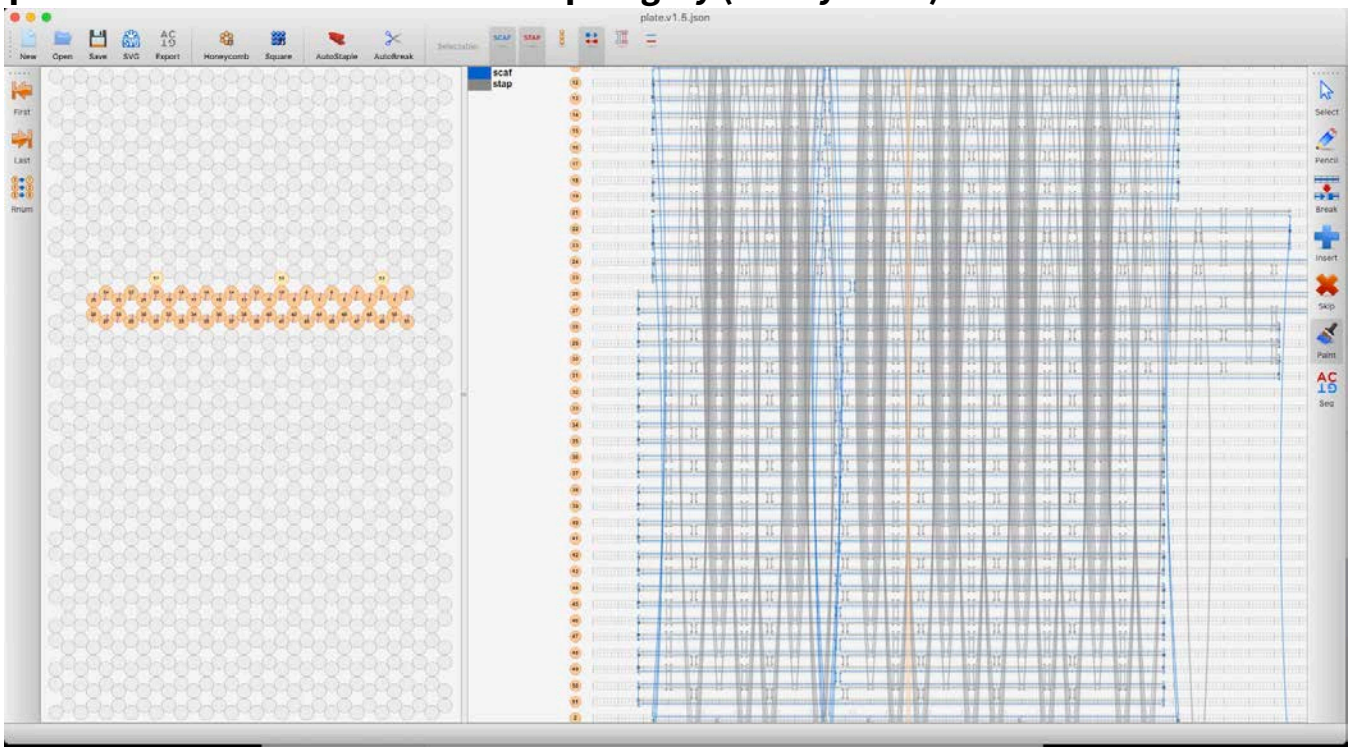
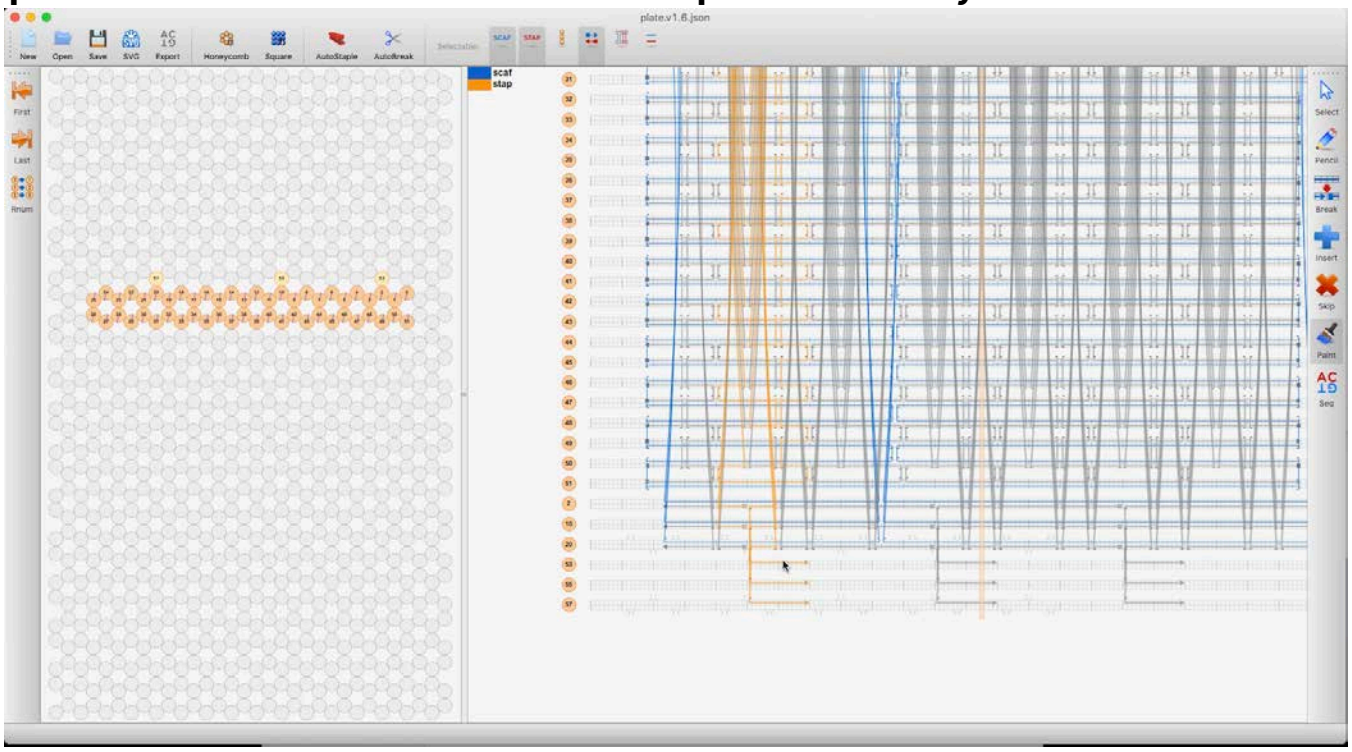
Step 9: Examine handle locations, adjust and/or remove extra ssDNA overhangs



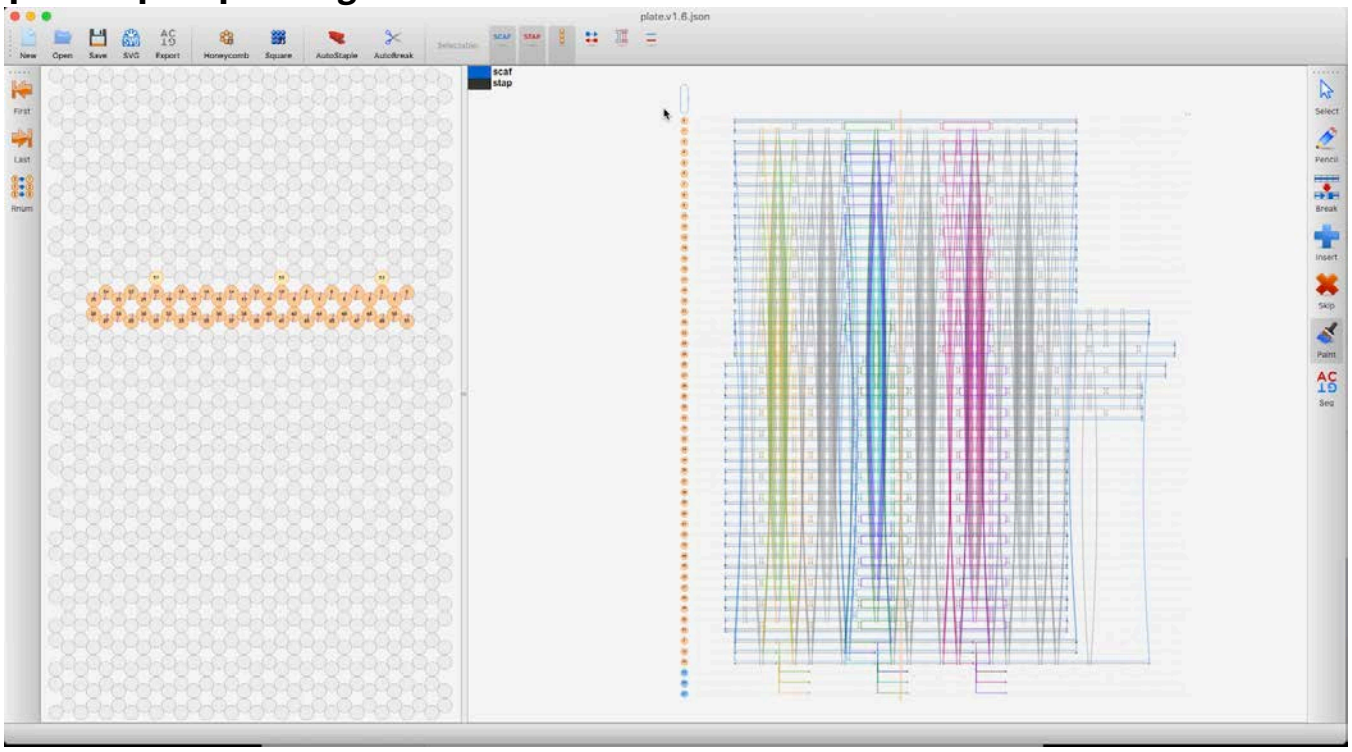
Step 10: Use Paint Tool to color all staples gray (or any color)



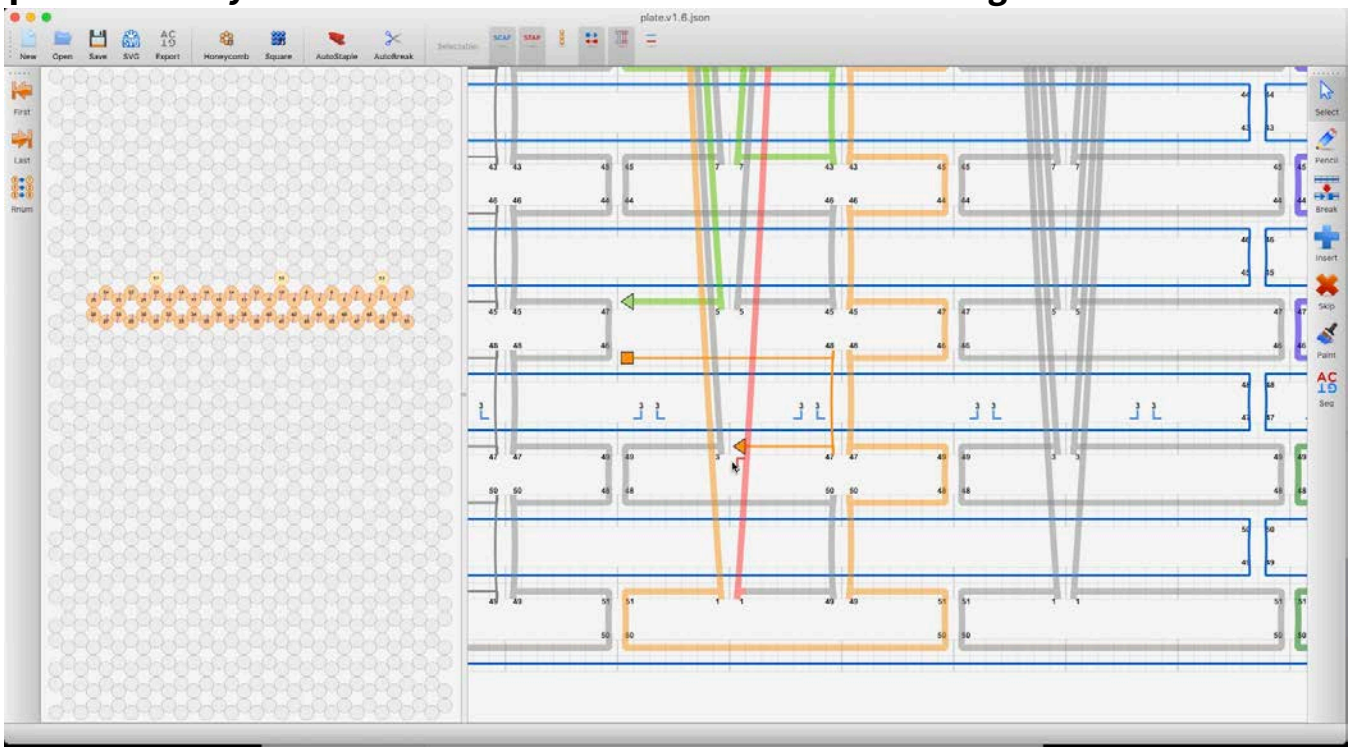
Step 11: Use Paint Tool to color handles a unique color for easy visualization



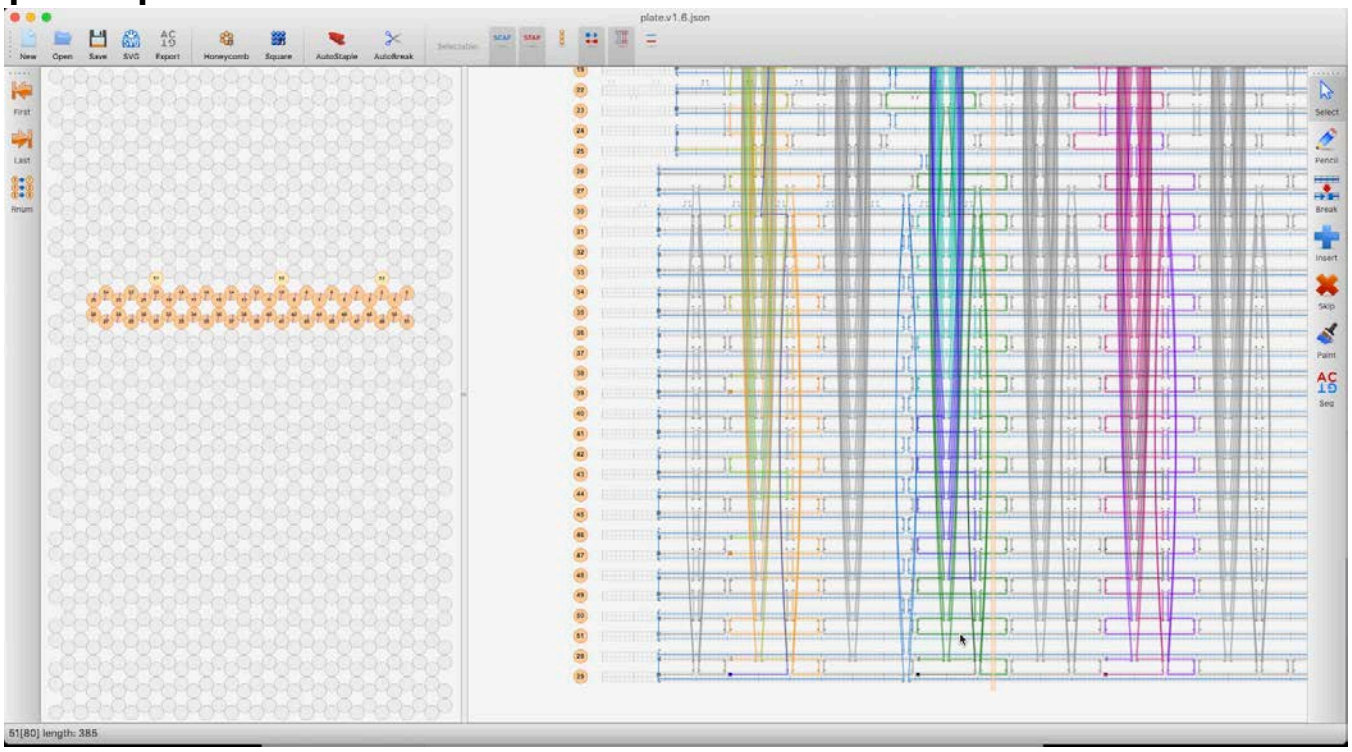
Step 12: Repeat painting for each handle



Step 13: Manually break handle so it has at least one 14-base segment



Step 14: Repeat for all handles



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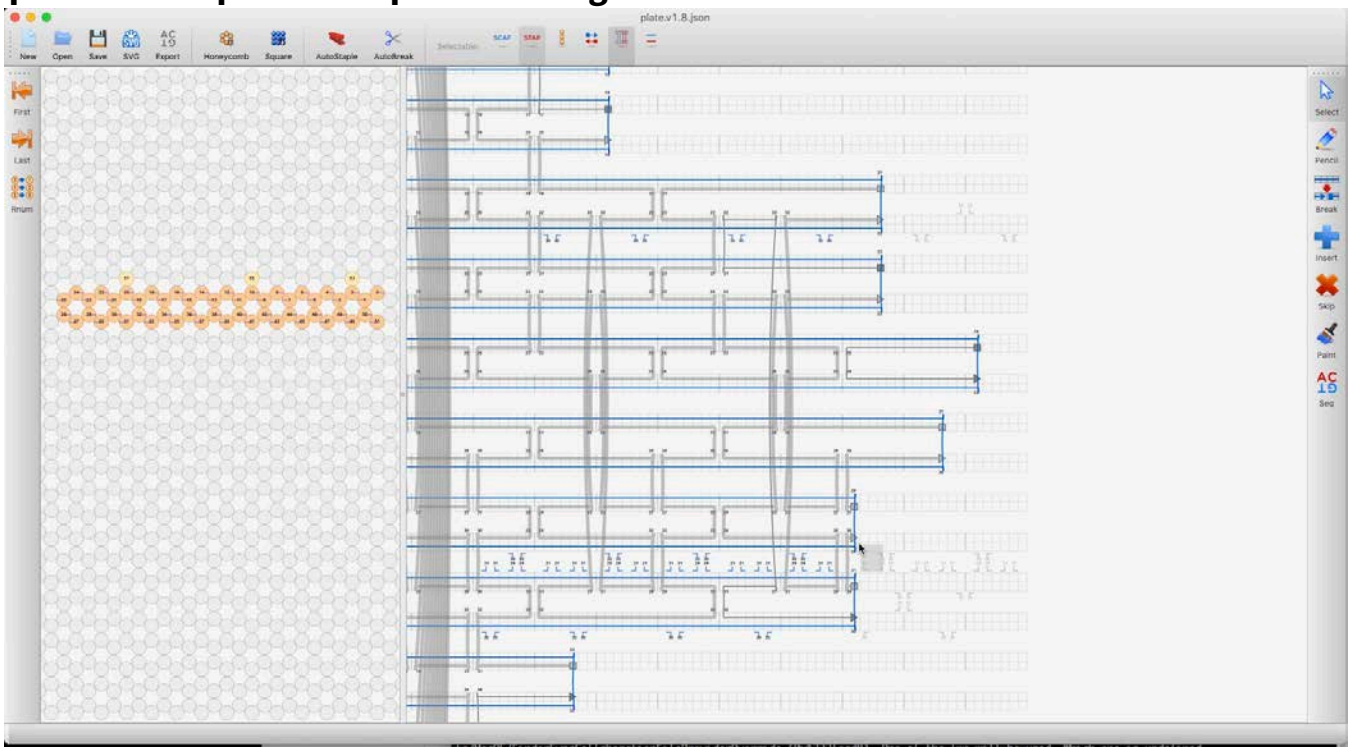
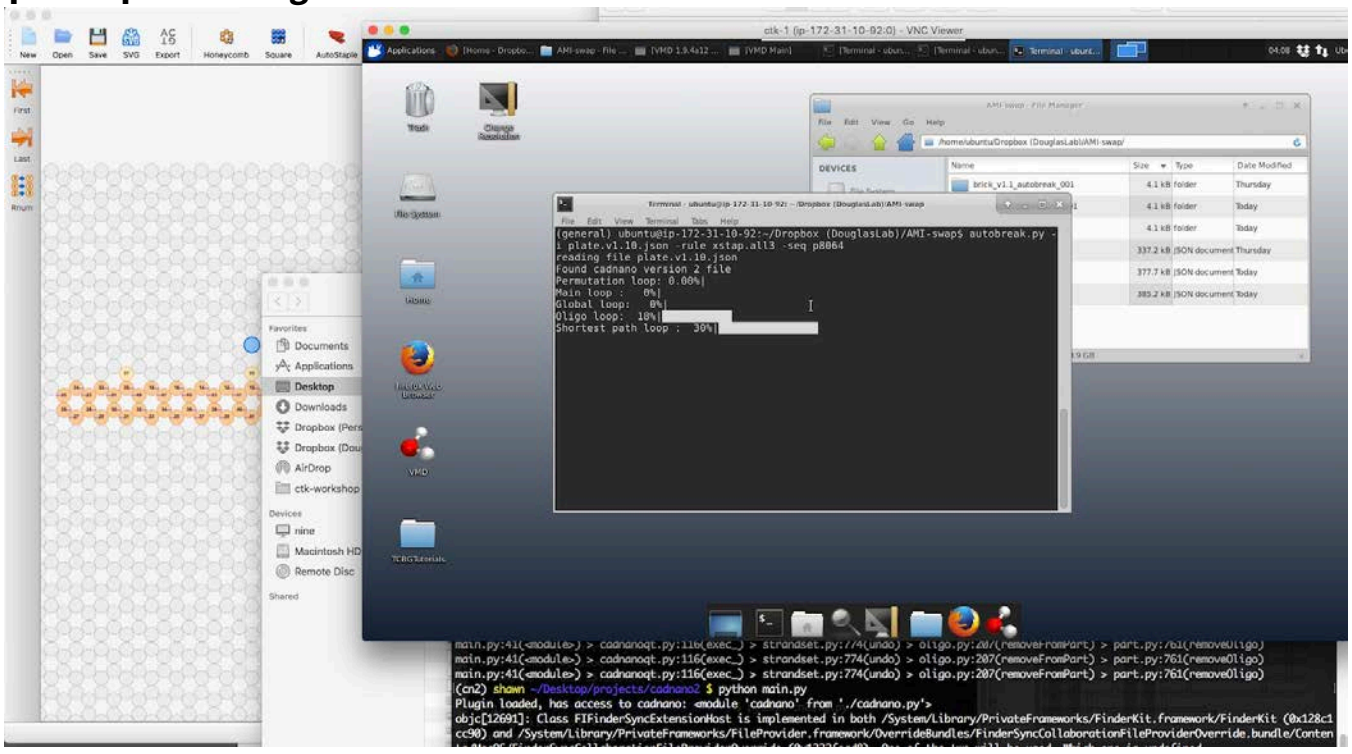
Step 15: Clean up short staples near edges



Step 16: Upload design to AMI and run AutoBreak



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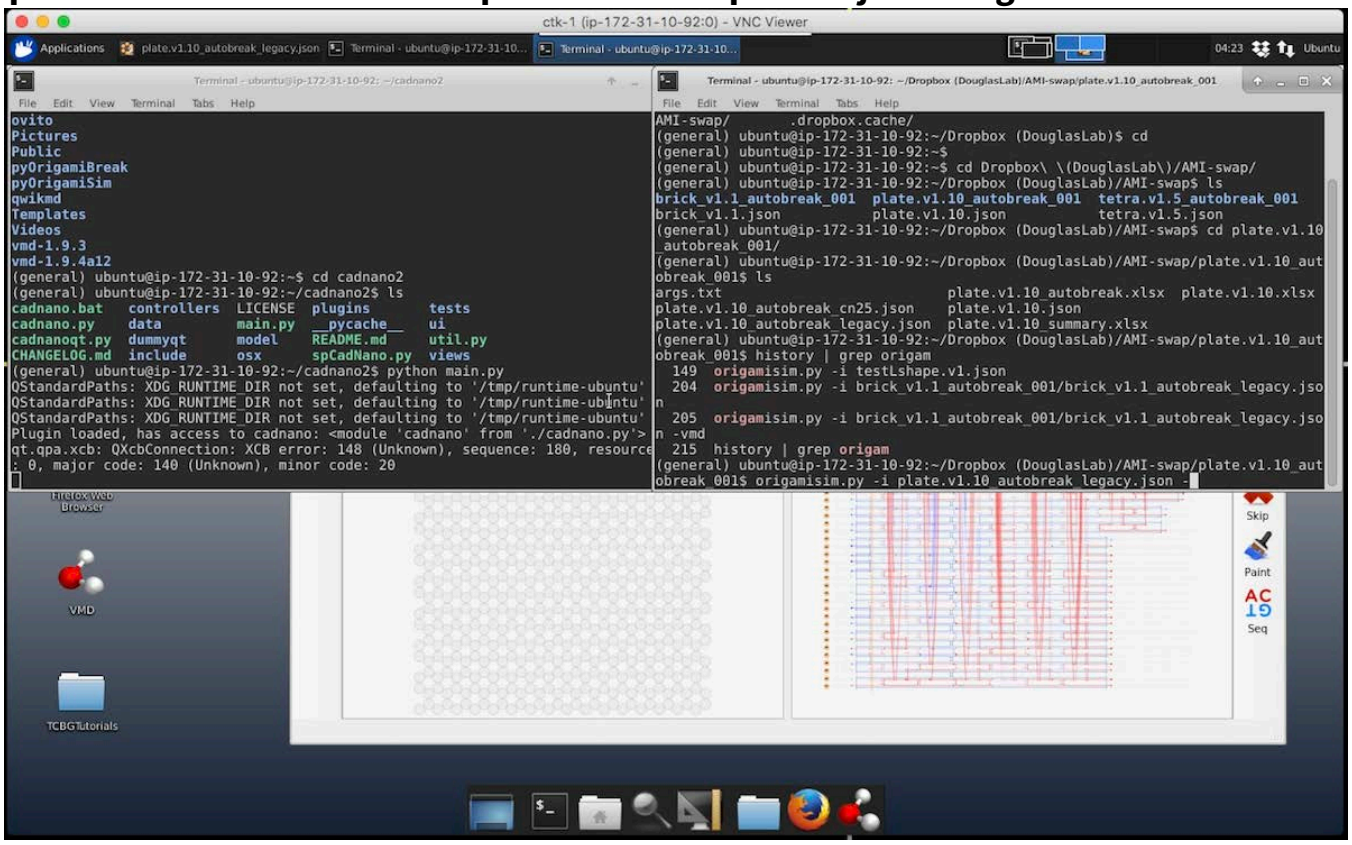
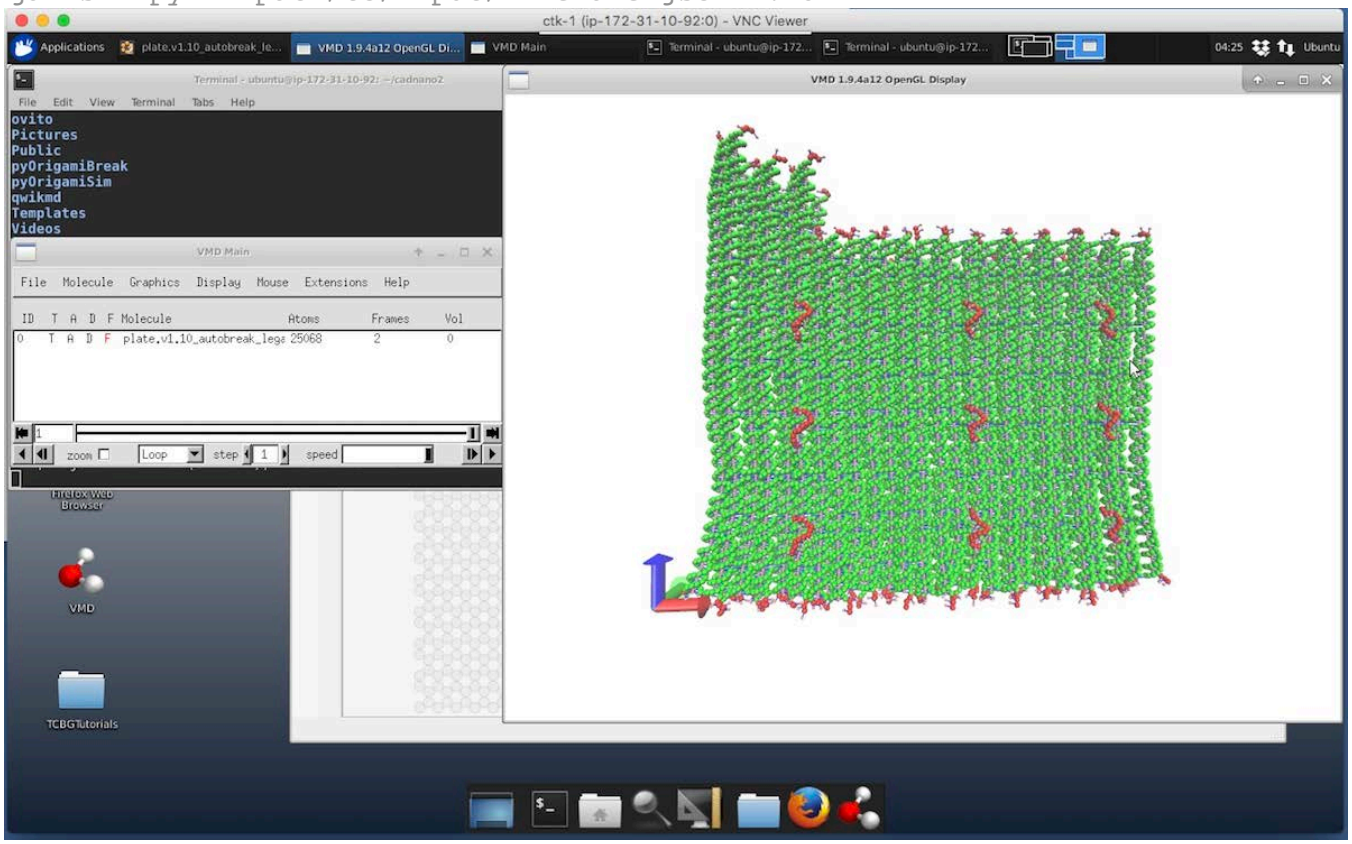
Step 17: Examine AutoBreak output for blue staples. Adjust design as needed.



Step 18: Run OrigamiSim.py to make structure prediction.

```
origamisim.py -i path/to/input/filename.json -vmd
```



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Step 19: Watch VMD live output. Break early if any issues arise.