2D EM montage tile stitching

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David Alston (david.alston@louisville.edu

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# Overview

This document plus the code it comes with is designed to stitch 2D EM images taken as individual tiles. The code takes a folder of tifs plus an .idoc/.mdoc file and builds a custom tile configuration file for use with the FIJI grid stitching plugin (Preibisch, S., Saalfeld, S., & Tomancak, P. (2009). Globally optimal stitching of tiled 3D microscopic image acquisitions. Bioinformatics, 25(11), 1463–1465). The final output is a stitched image that can be opened with FIJI, and then saved to a .tif itself.

# Creating the tile configuration file

1. First, open MATLAB and switch your current folder to the one with the tile configuration script (build2DTileConfigForStitchingFromDOC.m):A screenshot of a computer

   AI-generated content may be incorrect.

# Running the stitching plugin’

1. DEV output is img\_t1\_z1\_c1 (no extension). FIJI can load

# Notes and tips

* Overlap artifacts
  + During EM image collection there is an option to pick percent overlap (~10% for our images by default). Because of this overlap and the way that the tiles are blended (Linear Blending), you will end up with minor grid like artifacts where this overlap occurs: