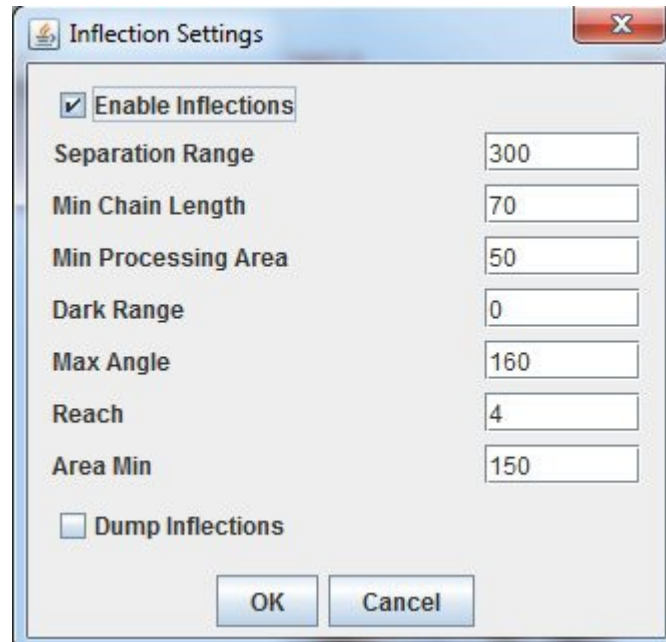


Inflection Segmentation is intended to use inflection points to split object masks. It will do this in an iterative fashion by finding two closest points and drawing a blank line between them. If this does not result in two objects of minimum size, the iteration of the split is aborted. If it succeeds, the two objects will be reprocessed.

These are the settings for Inflection processing



The Separation Range is the maximum distance between two inflection points.

The Min Chain Length is the minimum distances between the two inflection points in either direction on the chain. The program will adjust this if necessary to be 1/3 of the chain length to allow for different sizes of masks.

The Min Processing Area is the minimum size that will be processed by the Inflection.

The Dark Range is the darkest pixel between the two inflection points. This is normally set to zero. The process will examine the mid point of the line between the inflection points and require that that point belongs to the mask.

The Max Angle is the largest angle that can be assigned as an inflection point. The larger the angle, the more points are detected.

The Reach is the range used for the number of chain codes before and after the selected code to determine the inflection angle. Normally this is 4 – 6.

The Area Min is the minimum area for masks created by the division.

The Dump Inflections will flag the process to dump intermediate data and text for analysis.

The Enable Inflections is a flag for the general segmentation process to turn the inflection process on or off.

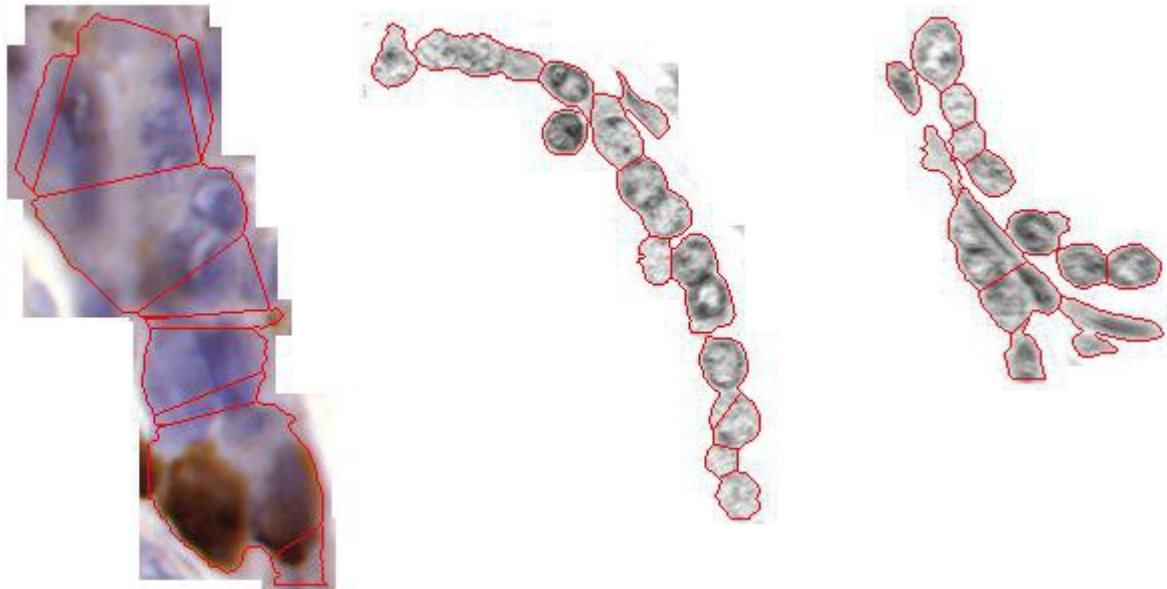
Notes:

1. For large objects, a small Min Chain Length may result in attempts to split the object between adjacent points that will only split off a small slice of the edge. This will cause the inflection process to stop.
2. For small objects, the Min Chain Length may automatically be reduced to 1/3 of the chain length. This will allow for a sufficiently large length for larger objects while still splitting smaller objects.
3. A Max Angle over 170 may result in very many smaller inflections being detected. This may result in more significant slicing of mask.
4. The process begins with an algorithm that removes any chain pixels which do not have more

than 2 adjacent pixels that belong to the interior of the mask. This may result in splitting some objects. The Inflection algorithm will check to see if there are more than one object for masks with a large circularities and will reprocess them if found.

5.

Here are some examples:



In this example, there is a single pixel joining the two masks. The edge cleaning makes the first split and the objects are then reprocessed and one object is further divided.

