Threshold Tab

In the threshold tab you can adjust different threshold methods and types but this is normally not necessary because the best threshold settings are the default values. But I implement everything so you are free to play with them.

Number 1,2 and 3 – this values are to adjust the threshold image, number 1 should be always on the highest value (255) with the default threshold-type and -method. Normally you adjust the block size (Size of a pixel neighbourhood that is used to calculate a threshold value for the pixel) and the c-constant (Constant subtracted from the mean or weighted mean) to get a perfect threshold image. When you see the threshold image you can try to change the values to see what happens.

If you want more information how the calculation happens, you can visit the OpenCV Website and read the documentation about thresholding with more or less deep information.

http://opencv.org/

Stream Tab

In the stream tab you define the area of calculating the stream and gap value. The stream should be between these two lines. You can adjust the left line with left boarder (2) and the right line with the right border (3), also the line thickness you can adjust.

If you see the threshold image, you can play with this two lines and see what happens with the calculation.

Currently the automatic stream calculation is not available but will be updated in the future.

Tracking Tab

In the tracking tab you adjust different values that have a high influence for the calculation of the gap and stream value.

(1) start point value:

Sometimes you see on the top of the threshold image white pixel lines, the calculation doesn’t work when. To defined the start point of the calculation I implement an extra value the start point value. A value from ten means, from top of the image, the tenth horizontal pixel line will use as the first pixel line for calculation.

(2) frames median value:

If you have dark camera images because of light conditions, it will produce more noise in the threshold image and the calculated gap/stream value will be jumping up and down. To solve this problem and make the stream and gap value stable, I just calculating the median from a specific number of gap and stream values and this number of gap and stream values can you adjust with this value. From every frame this two values are calculating. We can also say number of gap and stream values are the same as number of camera frames.

The camera on the influx has a frame rate about 25-30 frames /second. If you set the frames median value to 30, 30 gap/stream values will be use two calculating the median gap/stream value. Means also around every second the user gap/stream value and the calculated gap/stream value will be compared.

(3) gap value range:

Defines the range the calculated gap value can be without changing the amplitude automatically.

The range is the user gap input value +/- the gap value range, if the calculated gap value (live value) is out of those range the software will try to bring the calculated value back, falling in this range.

(4) Amplitude+-:

To bring the calculated gap value back to the user gap value, the software will change the amplitude value of the machine. You define how big this value will be, normally +/- 0.1 is enough.