

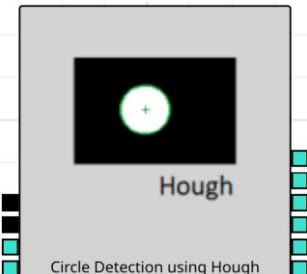
Precitec Macro Documentation

02 Circle Detection using Hough

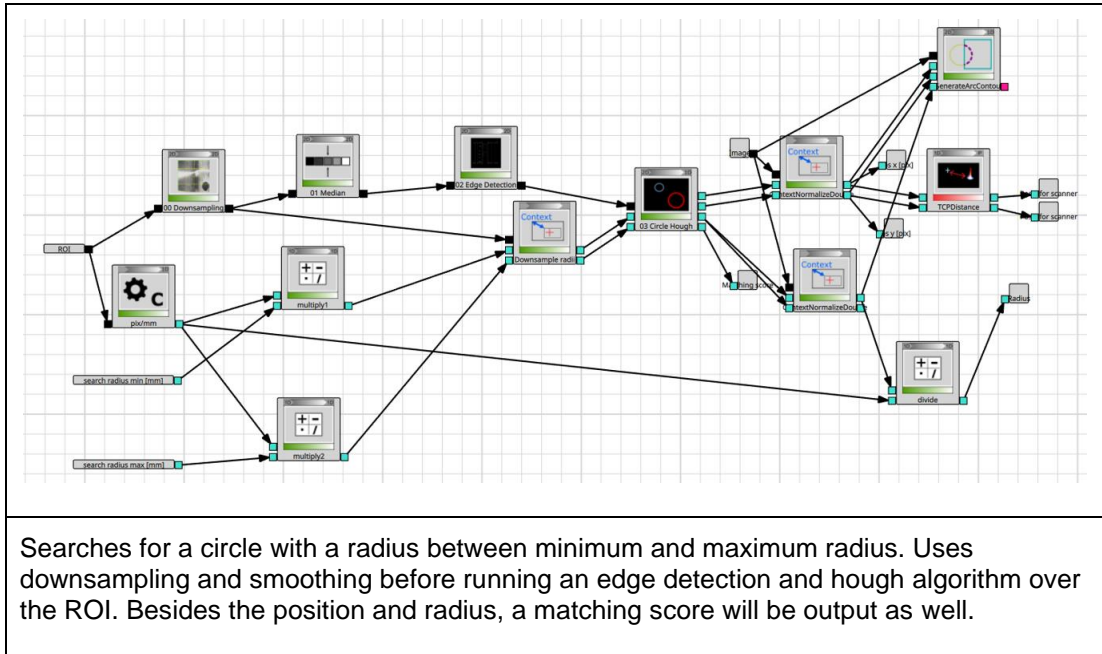
■ Changelog

Date	Version	Autor	Tested on	Description
2022-06-08	A	Wre	5.16.16	New documentation

■ Description

	<p>Searches for a circle with a radius between minimum and maximum radius.</p> <p>I1: Image</p> <p>I2: ROI</p> <p>I3: minimal search radius [mm]</p> <p>I4: maximal search radius [mm]</p> <p>O1: Position X in pixel</p> <p>O2: Position Y in pixel</p> <p>O3: Position X for Scanner</p> <p>O4: Position Y for Scanner</p> <p>O5: Radius [mm]</p> <p>O6: Matching Score</p>
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■ Macro structure



■ Parameter

NAME	VALUE	Description	UserLevel
00 Downsampling → Verbosity Level	None	Visibility of downsampling	Admin
00 Downsampling → Jumping distance	1	Jumping distance while downsampling	Admin
00 Downsampling → Tile size	1	Tile size to downsample	Admin
01 Median → Verbosity Level	Low	Visibility of smoothed image	Admin
01 Median → Filter Length	3	Filter radius to be averaged on	Admin
02 Edge Detection → Verbosity Level	None	Visibility of edge detection operation	Admin
02 Edge Detection → Method	Sobel	Algorithm used for edge detection	Admin



02 Edge Detection → Scaling	0	Scale factor of edge detection operation	Admin
03 Circle Hough → Verbosity Level	Low	Visibility of circle detection	Admin
03 Circle Hough → Radius Step	5	Radius increase steps in pixel	Admin
03 Circle Hough → Number of max	5	Maximum amount of steps to increase radius	Admin
03 Circle Hough → IntensityThreshold	80	Grey level threshold to detect edges of a circle	Admin
03 Circle Hough → ScoreThreshold	-1	Threshold for matching score. Scores lower than the threshold are not accepted detections. -1 equals to no score threshold enabled	Admin
03 Circle Hough → SearchOutsideROI	0	Allow the algorithm to search for circles outside the ROI	Admin