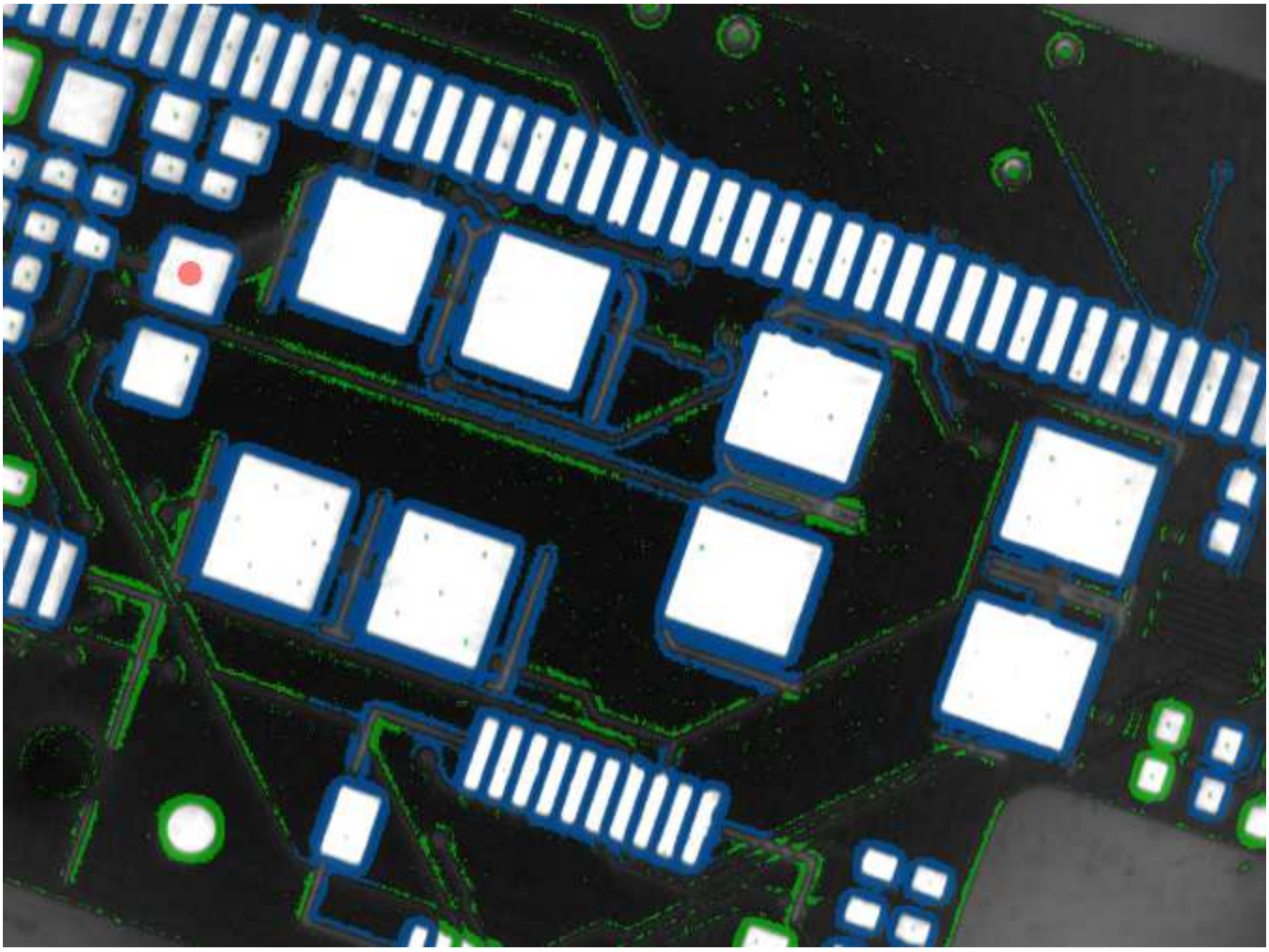
REGION FEATURES

Example



Description

Select regions according to indicated features.

regionInfo_one_region - returns 10 indicated parameters of one of selected regions, marked with red pointer

regionInfo_multiple_regions - returns the value of one chosen parameter of all selected regions

Input parameters

FeaturesSelection - features to be checked when selecting regions

Default: 'area'

Operation - linkage type of the individual features

Default: 'and'

List of values: 'and', 'or'

Min_Values / Max_Values - limits of the features

Default: Min_Value = 150, Max_Value = 99999

Range of values: (0,99999)

sort_mode - kind of sorting

Default: 'first_point'

List of values: 'character', 'first_point', 'last_point', 'lower_left', 'lower_right', 'upper_left', 'upper_right'

row_or_col - sorting first with respect to row, then to column, or otherwise

Default: 'row'

List of values: 'column', 'row'

Parameters for *regionInfo_one_region* only:

region_to_measure - index of region which parameters are displayed

Default: 0

Parametr [0-9] - choose shape features to be measured and displayed as output

Parameters for *regionInfo_multiple_region* only:

Feature_toPrint - region feature which value is put into output array

Default: 'area'

ArrayCount - number of elements in the output array

Default: 10

Range of values: (0, 32)

POSSIBLE FEATURES:

- area
- row - Row index of the center
- column - Column index of the center

- width - Width of the region (parallel to the coordinate axes)
- height - Height of the region (parallel to the coordinate axes)
- ratio - Ratio of the height and the width of the region (parallel to the coordinate axes)
- circularity
- compactness
- contlength - Total length of contour
- convexity
- rectangularity
- ra - Main radius of the equivalent ellipse
- rb - Secondary radius of the equivalent ellipse
- phi - Orientation of the equivalent ellipse
- anisometry
- bulkiness
- struct_factor
- outer_radius - Radius of smallest surrounding circle
- inner_radius - Radius of largest inner circle
- inner_width - Width of the largest axis-parallel rectangle that fits into the region
- inner_height - Height of the largest axis-parallel rectangle that fits into the region
- dist_mean - Mean distance from the region border to the center
- dist_deviation - Deviation of the distance from the region border to the center
- roundness
- num_sides - Number of polygon sides
- connect_num
- max_diameter - Maximum diameter of the region
- orientation - Orientation of the region
- euler_number
- rect2_phi - Orientation of the smallest surrounding rectangle
- rect2_len2 - Half the length of the smallest surrounding rectangle
- rect2_len2 - Half the width of the smallest surrounding rectangle
- moments_m11 - Product of inertia of the axes through the center parallel to the coordinate axes.
- moments_m20 - Moment of 2nd order (row-dependent).
- moments_m02 - Moment of 2nd order (column-dependent).
- moments_ia - Length of the major axis of the input region.
- moments_ib - Length of the minor axis of the input region.

Output

Collection of regions selected from image.

regions_number - number of selected regions

regionInfo_one_region - 10 chosen parameters of a single region marked with red pointer (named *Parameter0_Val*, *Parametr1_Val* etc.); current coordinates of the pointer (*pointer_X, pointer_Y*)

regionInfo_multiple_regions - an array *Parameters* of values of an indicated parameter (*Feature_toPrint*)