

WHAT IS CLAIMED IS:

1. An object detection method to be performed by an image analysis device configured with a computer including a processor and a memory, the object detection method comprising:

5 a first step of receiving, by the processor, input of an image and storing the image to the memory;

 a second step of extracting, by the processor, a partial area which is a part of the input image and storing the partial area to the memory;

 a third step of evaluating, by the processor, symmetry of the partial
10 area using features extracted from the partial area and reflected features obtained by applying reflection to the features, wherein the third step includes:

 a step of distributing the orientations of intensity gradient
 vectors extracted as the features to a range from 0 to 180 degrees to
15 process in a case where the input image is a binary image; and

 a step of distributing the orientations of intensity gradient
 vectors extracted as the features to a range from 0 to 360 degrees to
 process in a case where the input image is not a binary image;
 and

20 a fourth step of determining, by the processor, that the partial area is an object area including an object to be detected in a case where the symmetry of the partial area is evaluated as higher than a predetermined threshold.

2. The object detection method according to claim 1, wherein the third
25 step includes a step of evaluating symmetry of the partial area using features extracted from the partial area, reflected features obtained by applying reflection to the features, and an average magnitude of the features.

3. The object detection method according to claim 1, wherein the third

step includes a step of dividing the partial area into rectangular blocks having a predetermined size and extracting features from each block.

5 4. The object detection method according to claim 1, wherein the third step includes steps of creating an area by changing at least one of position and size of the partial area, evaluating symmetry of features of the partial area and symmetry of features of the created area, and determining that an area evaluated to have symmetry higher than a predetermined threshold is an object area including an object to be detected.

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5. The object detection method according to claim 1, wherein the second step includes a step of transforming the input image to have a specified aspect ratio and extracting a partial area from the image transformed in aspect ratio.

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6. An image search system configured to:

for each of input images for registration, store features of an object area determined by the method according to any one of claims 1 to 5 to a database; and

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compare features extracted from an input query image with features of the registered images to retrieve a registered image similar to the query image.