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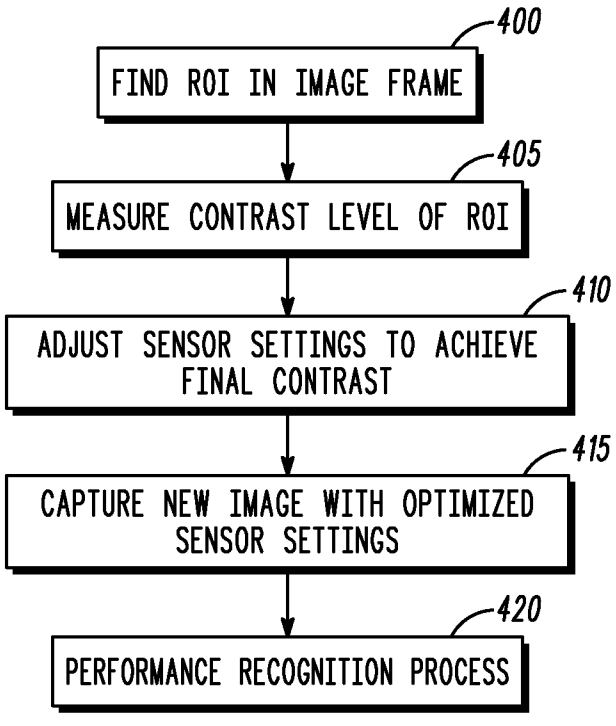
(54) Title: METHOD AND SYSTEM FOR IMPROVING IMAGE REGION OF INTEREST CONTRAST FOR OBJECT RECOGNITION



(57) Abstract: A method includes locating (400) a region of interest in an image and measuring (405) a contrast level of the region of interest. At least one sensor setting is adjusted (410) to increase the contrast level of the region of interest to at least the predetermined threshold level in response to the contrast level being below a predetermined threshold level.

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1. A method, comprising:

locating a region of interest in an image captured by an image sensor;

measuring a contrast level of the region of interest; and

automatically adjusting, in response to the contrast level being below a predetermined threshold level, at least one sensor setting of the image sensor to increase the contrast level of a second region of interest, of a subsequent image captured by the image sensor, to at least the predetermined threshold level.

2. The method of claim 1, wherein the locating is based on pre-knowledge about where a location of the region of interest is likely to be in the image.

3. The method of claim 1, further comprising:

utilizing a default black level calibration value from a measurement of at least one of black rows and black columns of the image sensor used to capture the image, and analyzing the image to detect an object of interest near the region of interest; and

obtaining the region of interest in the image in response to the object of interest being detected.

4. The method of claim 3, wherein the object of interest is a predetermined object having alphanumeric symbols.

5. The method of claim 4, wherein the object of interest is at least one of a license plate and a road sign.

6. The method of claim 1, wherein the measuring of the contrast level comprises measuring a sum of absolute differences between adjacent pixels in the region of interest to determine if the sum meets the predetermined threshold level.

7. The method of claim 1, wherein the at least one sensor setting is at least one of an offset correction voltage, an analog gain setting, and a digital gain setting.

8. The method of claim 1, further comprising:

capturing the subsequent image using the at least one adjusted sensor setting; and

performing an image recognition process on the subsequent image captured using the at least one adjusted sensor setting.

9. A system, comprising:

an image sensor generating a captured image at an output; and

a processing device operably coupled to the output and being configured and arranged to:

receive the captured image,

locate a region of interest in the captured image,

measure a contrast level of the region of interest, and

automatically adjust, in response to the contrast level being below a predetermined threshold level, at least one sensor setting of the image sensor to increase the contrast level of a second region of interest, of a subsequent captured image generated at the output of the image sensor, to at least the predetermined threshold level.

10. An apparatus, comprising:

an input to provide an image captured by an image sensor;

a processing device coupled to the input to:

locate a region of interest in the image,

measure a contrast level of the region of interest, and

automatically adjust, in response to the contrast level being below a predetermined threshold level, at least one sensor setting of the image sensor to increase the contrast level of a second region of interest, of a subsequent image captured by the image sensor, to at least the predetermined threshold level.