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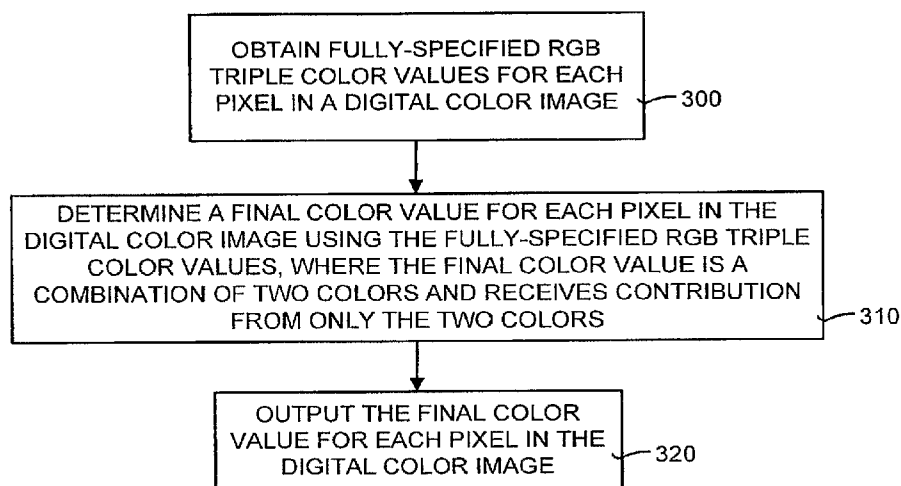
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- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: BAYESIAN DEMOSAICING USING A TWO-COLOR IMAGE



(57) Abstract: A Bayesian two-color image demosaicer and method for processing a digital color image to demosaic the image in such a way as to reduce image artifacts. The method and system are an improvement on and an enhancement to previous demosaicing techniques. A preliminary demosaicing pass is performed on the image to assign each pixel a fully specified RGB triple color value. The final color value of pixel in the processed image is restricted to be a linear combination of two colors. Fully-specified RGB triple color values for each pixel in an image used to find two clusters represented favored two colors. The amount of contribution from these favored two colors on the final color value then is determined. The method and system also can process multiple images to improve the demosaicing results. When using multiple images, sampling can be performed at a finer resolution, known as super resolution.

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