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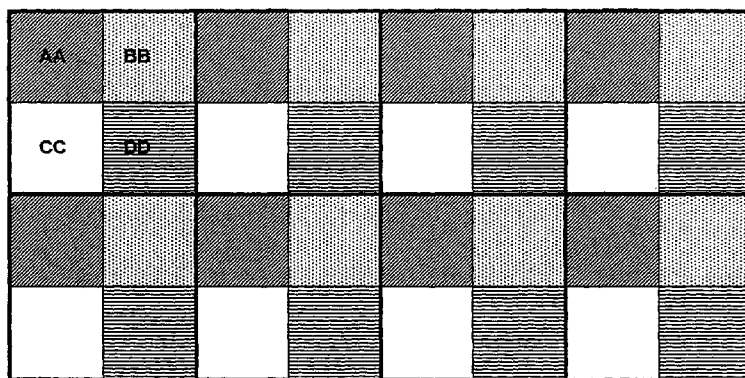
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(54) Title: ROD AND CONE RESPONSE SENSOR



Legend

= red

= green

= blue

= non-color

(57) Abstract: An imager having color sensitivity in any lighting condition is provided by replacing at least one of the green color filtered pixels in a Bayer pattern array with a non-color filtered pixel and providing a different integration period for each color channel. When replacing a color filtered pixel with a non-color filtered pixel, the benefits of both color sensitivity and light sensitivity may be harnessed by providing the color filtered pixels with a longer integration period than the non-color filtered pixels. Color information may be interpolated by performing subtraction logic using non-color and color filter information from adjacent pixels in back-end processing. Integration times for each color channel can be adapted to minimize filter transmission and sensor absorption differences within each frame of data. Temporal displacement of colors of moving objects by having different integration periods may be corrected in back-end processing. Back-end processing may also correct motion blur.

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