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Shabtay et al.

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(54) **HIGH RESOLUTION THIN
MULTI-APERTURE IMAGING SYSTEMS**

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(73) Assignee: **Corephotonics Ltd.**, Tel Aviv (IL)

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H04N 5/232 (2006.01)
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(Continued)

(58) **Field of Classification Search**
USPC 348/211.9, 211.11, 240.99–240.3, 237, 348/267, 273–280, 350, 376; 396/72, 76, 396/77
See application file for complete search history.

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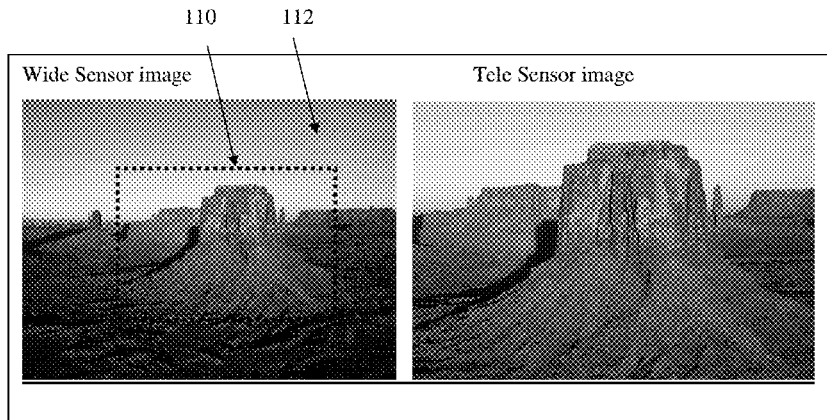
International Search Report and Written Opinion issued in related PCT patent application PCT/IB2013/060356, dated Apr. 17, 2014, 15 pages.

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(57) **ABSTRACT**

A multi-aperture imaging system comprising a first camera with a first sensor that captures a first image and a second camera with a second sensor that captures a second image, the two cameras having either identical or different FOVs. The first sensor may have a standard color filter array (CFA) covering one sensor section and a non-standard color CFA covering another. The second sensor may have either Clear or standard CFA covered sections. Either image may be chosen to be a primary or an auxiliary image, based on a zoom factor. An output image with a point of view determined by the primary image is obtained by registering the auxiliary image to the primary image.

4 Claims, 7 Drawing Sheets



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H04N 9/04 (2006.01)
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2209/045 (2013.01)

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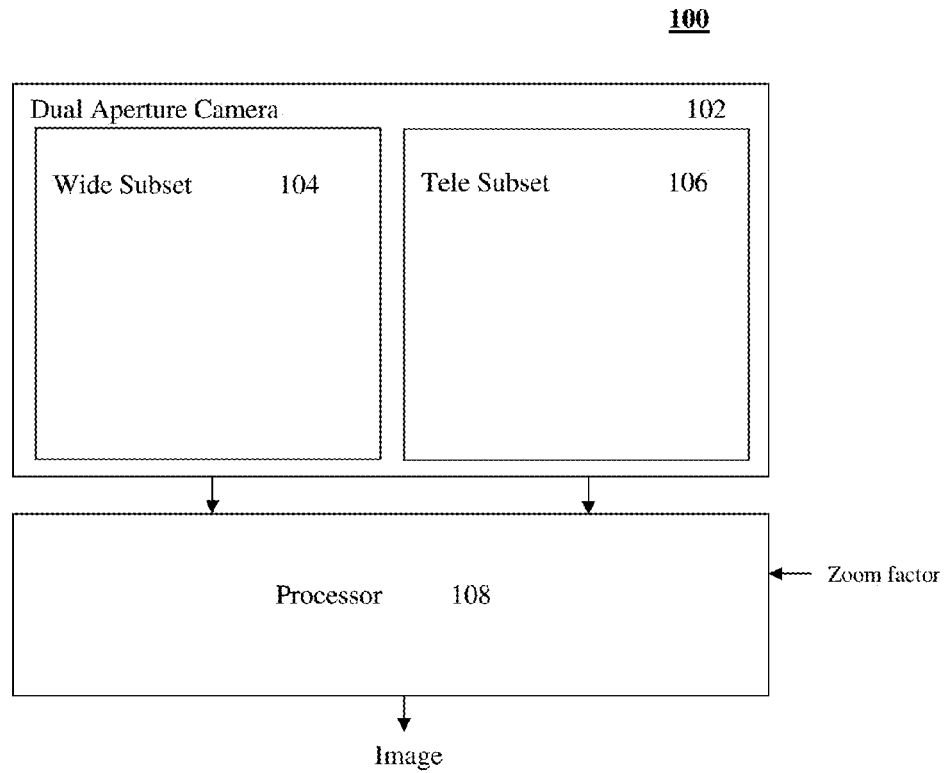


FIG. 1A

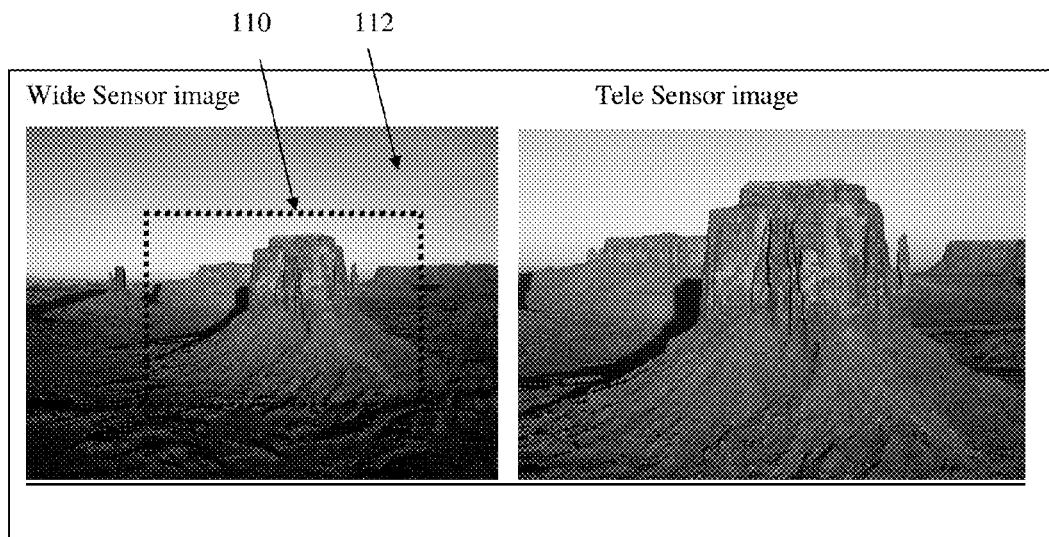


FIG. 1B

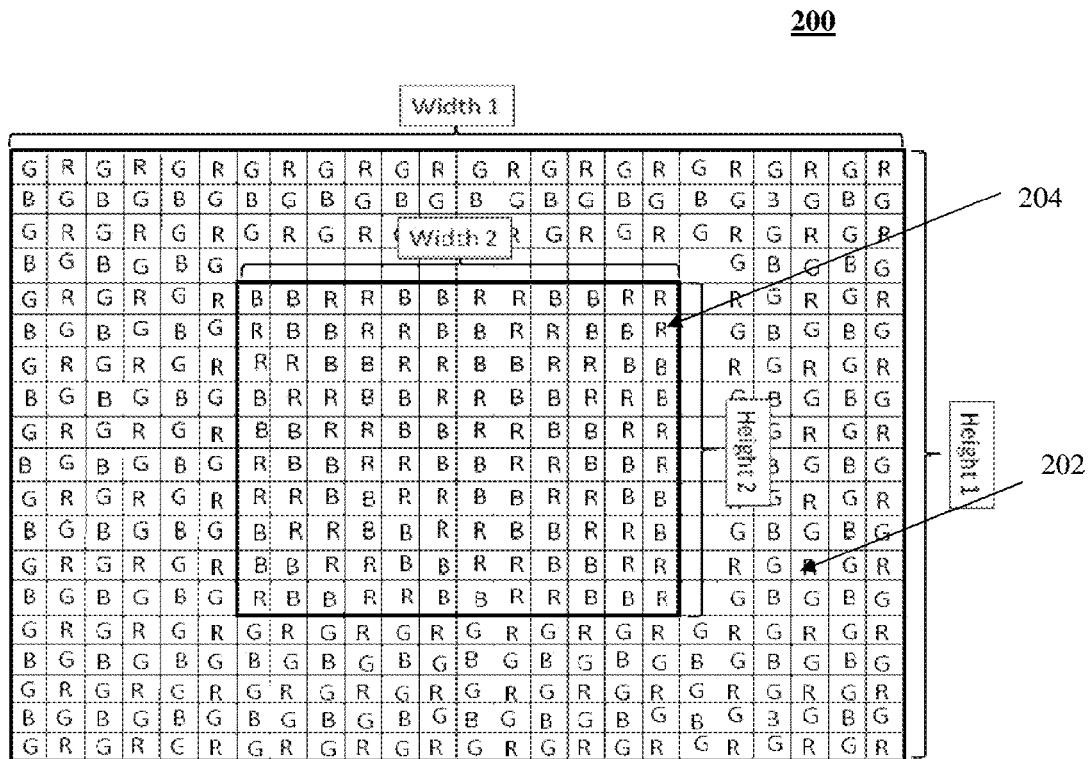


FIG. 2

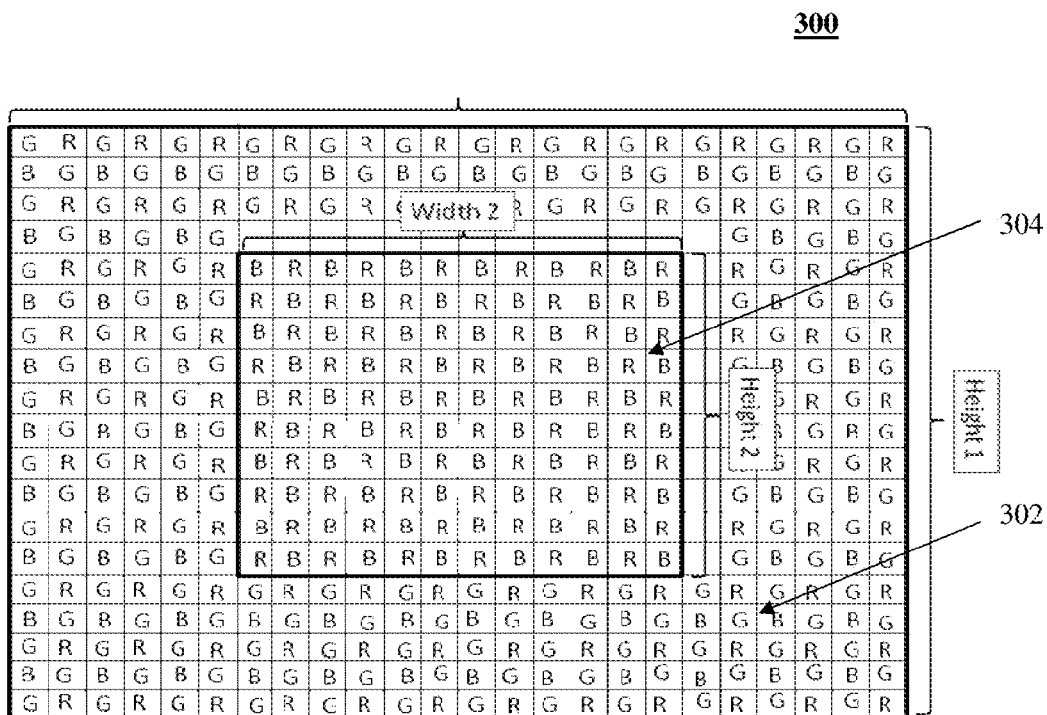


FIG. 3

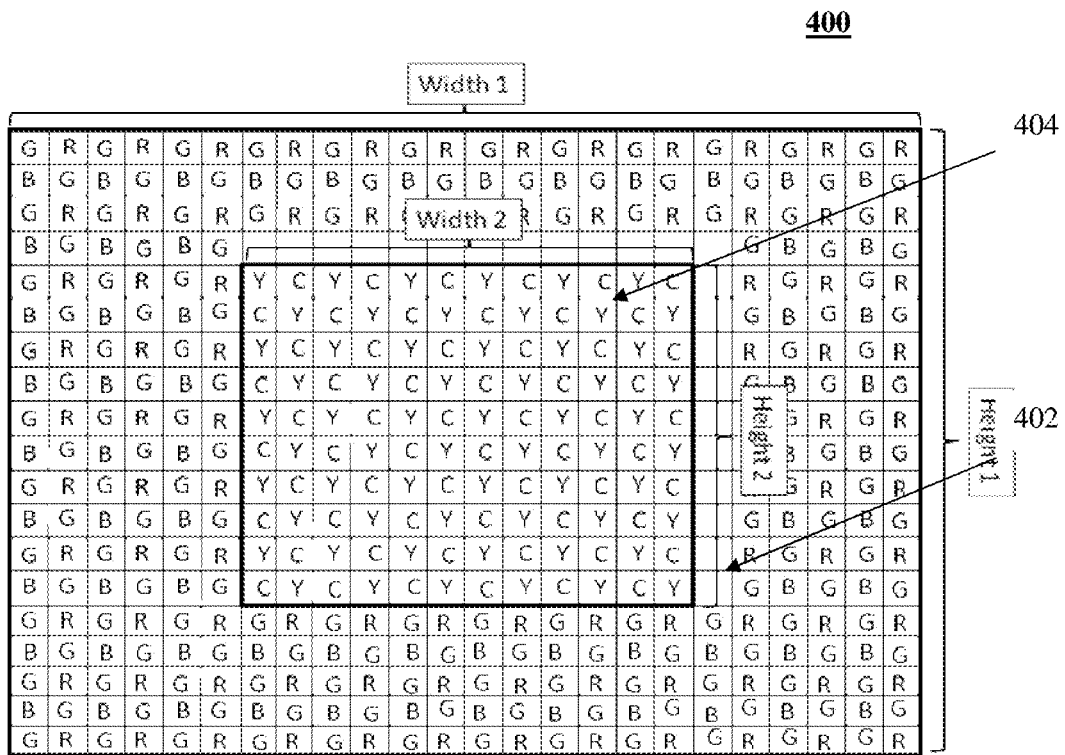


FIG. 4

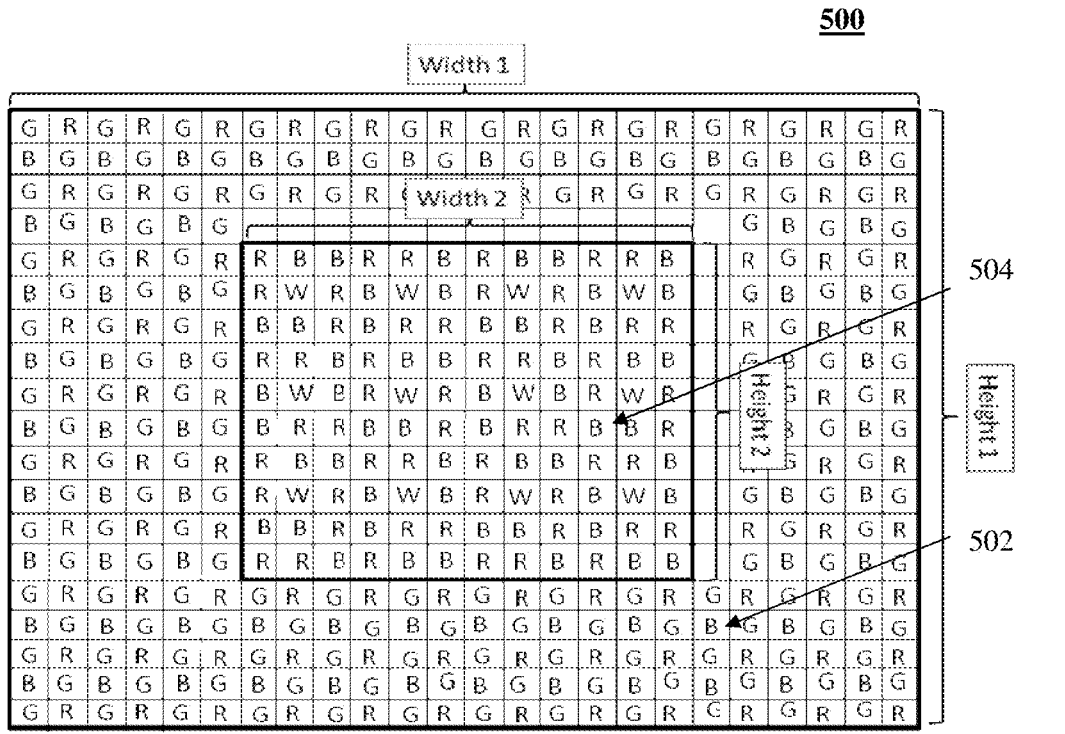


FIG. 5

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