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(54) **Title:** HIGH-RESOLUTION INTERPOLATION FOR COLOR-IMAGER-BASED OPTICAL CODE READERS

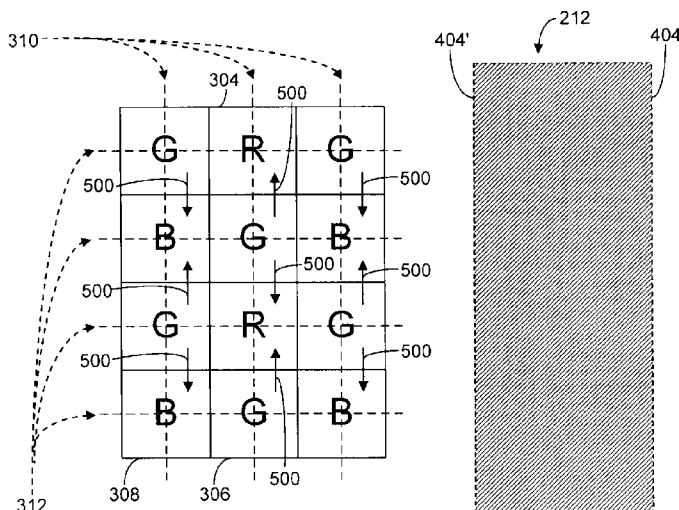


FIG. 7

(57) **Abstract:** An optical code reader (200) includes a color image sensor array (202) having pixels (306) of a first set and pixels (304, 308, or 304 and 308) of a second set arranged along multiple parallel axes of a first axes group (310) and multiple parallel axes of a second axes group (312) transverse to the first axes group. The pixels of the first set produce data representing sensed light intensity values. In one configuration, the optical code reader includes a data processing system (210) operable to perform single-axis interpolation to produce interpolated intensity values that correspond to selected locations of pixels of the second set. An interpolated intensity value is produced for a selected location by using only intensity values sensed by pixels of the first set that share an axis of the first axes group with the selected location.

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A. CLASSIFICATION OF SUBJECT MATTER*G06K 9/20(2006.01)i, G06K 7/10(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06K 9/20; G06K 7/00; G06K 7/10; G06K 9/36; H04N 3/14; H04N 5/335; H04N 9/04

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: color, image, barcode, OCR, interpolation, Bayer, parallel, axis

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006-0274171 A1 (YANJIUN WANG) 07 December 2006 See Abstract; paragraph 149-150; figures 16-17.	1-22
A	WO 97-48231 A1 (ITERATED SYSTEMS, INC.) 18 December 1997 See Abstract; claims 1-8; figures 1-4.	1-22
A	US 7364081 B2 (HAVENS WILLIAM H. et al.) 29 April 2008 See Abstract; claims 1-14; figure 3.	1-22
A	JP 09-073506 A (MATSUSHITA ELECTRIC IND CO LTD) 18 March 1997 See Abstract; claims 1-12; figures 1-15.	1-22

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

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"&" document member of the same patent family

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