

(19) World Intellectual Property Organization
International Bureau

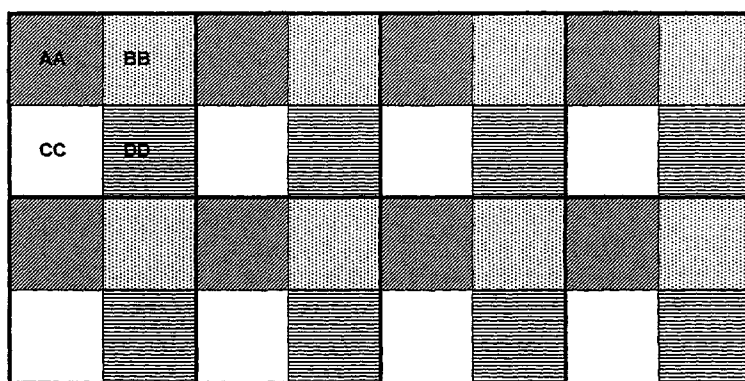


(43) International Publication Date
9 February 2006 (09.02.2006)

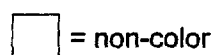
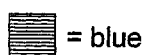
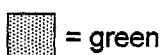
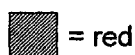
PCT

(10) International Publication Number
WO 2006/014641 A2

- (51) International Patent Classification⁷: **H04N 9/04**
- (21) International Application Number:
PCT/US2005/025579
- (22) International Filing Date: 19 July 2005 (19.07.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
10/895,129 21 July 2004 (21.07.2004) US
- (71) Applicant (for all designated States except US): **MICRON TECHNOLOGY, INC.** [US/US]; 8000 S. Federal Way, Boise, ID 83707-0006 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **GALLAGHER, Paul, K.** [US/US]; 15110 Herring Avenue, San Jose, CA 95124 (US).
- (74) Agent: **D'AMICO, Thomas, J.**; Dickstein Shapiro Morin & Oshinsky LLP, 2101 L Street NW, Washington, DC 20037-1526 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
- (54) Title: **ROD AND CONE RESPONSE SENSOR**



Legend



(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.

WO 2006/014641 A2