



- (51) **International Patent Classification:**
G06K 9/36 (2006.01)
- (21) **International Application Number:**
PCT/US2011/064921
- (22) **International Filing Date:**
14 December 2011 (14.12.2011)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
12/967,807 14 December 2010 (14.12.2010) US
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- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(54) **Title:** SYSTEMS AND METHODS FOR SYNTHESIZING HIGH RESOLUTION IMAGES USING SUPER-RESOLUTION PROCESSES

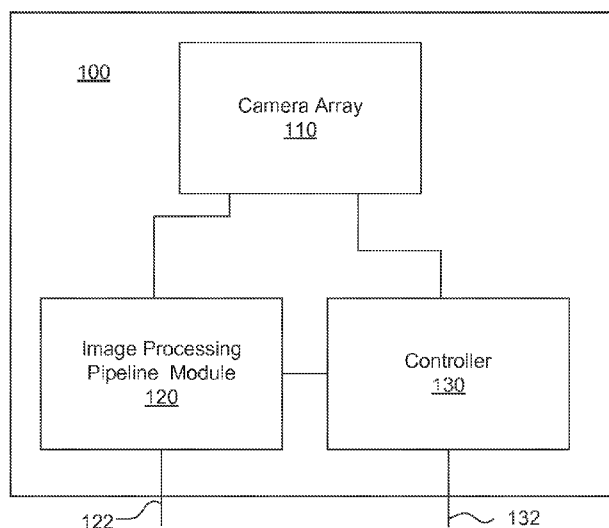


FIG. 1

(57) **Abstract:** Systems and methods in accordance with embodiments of the invention are disclosed that use super-resolution (SR) processes to use information from a plurality of low resolution (LR) images captured by an array camera to produce a synthesized higher resolution image. One embodiment includes obtaining input images using the plurality of imagers, using a microprocessor to determine an initial estimate of at least a portion of a high resolution image using a plurality of pixels from the input images, and using a microprocessor to determine a high resolution image that when mapped through the forward imaging transformation matches the input images to within at least one predetermined criterion using the initial estimate of at least a portion of the high resolution image.



Published:

— *with international search report (Art. 21(3))*