

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
22 March 2012 (22.03.2012)

PCT

(10) International Publication Number
WO 2012/036637 A2

(51) International Patent Classification:
G03B 35/14 (2006.01) **G02B 27/22** (2006.01)
G03B 35/08 (2006.01)

(21) International Application Number:
PCT/SG2011/000315

(22) International Filing Date:
15 September 2011 (15.09.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PCT/SG2010/000341
16 September 2010 (16.09.2010) SG
201006753-6 16 September 2010 (16.09.2010) SG
PCT/SG2010/000378
4 October 2010 (04.10.2010) SG

(72) Inventor; and

(71) Applicant : **DHARMATILLEKE, Medha** [LK/SG]; 71
Chu Lin Road, Singapore 669960 (SG).

(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, 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, LT, 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).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— without international search report and to be republished upon receipt of that report (Rule 48.2(g))

(54) Title: OPTICAL LENS MODULE ASSEMBLY WITH AUTO FOCUS AND 3-D IMAGING FUNCTION

(57) Abstract: An optical lens module assembly is disclosed which can perform "Auto Focus" and produce "3 -Dimensional (3-D) images", "2 -Dimensional (2-D) video movies and still photographs" having all the objects in the area of its view (field of view) to be fully focused. Due to the fact that all the objects in the field of view including the background is fully focused with high image quality, these video movies and still photographs can easily be converted to high quality 3-Dimensional (3-D) video movies and 3-D still photographs. The conversion may be done by using software or hardware or a combination of both software and hardware. Further, due to artistic reasons, if it is required for the area towards the outer edges of the imaging area or photo or video to be made blur while the middle area is focused, then the outer areas can be made to be out of focus (blur image) while the middle part of the photo (image) or video can be made to be focused. Similarly, due to artistic reasons, if it is required for part towards the outer edges of the imaging area or photo or video to be made focused while the middle area is blur, then the outer areas can be made to be focused while the middle part of the photo (image) or video can be made to be out of focused (blur image). Further, these optical lens module assemblies can be also used in conventional 3D cameras, which use two separate camera modules. Also, these optical lens module assemblies can be used to replace the standard auto focus optical assemblies in all camera applications.



WO 2012/036637 A2