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(54) Title: CAMERAS WITH SCANNING OPTICAL PATH FOLDING ELEMENTS FOR AUTOMOTIVE OR SURVEILLANCE APPLICATIONS

(57) Abstract: Systems including dual-aperture zoom digital cameras with scanning optical path folding elements (OPFEs) for automotive or surveillance applications and methods for operating and using same. In some embodiments, a dual-aperture zoom digital camera comprises a Wide camera with a Wide field of view FOV_W, a Wide sensor and a Wide lens, wherein the Wide camera is operative to output Wide image information, a Tele camera with a Tele field of view FOV_T smaller than FOV_W and with a Tele sensor, a Tele lens with a Tele lens optical axis and a scanning OPFE, and a processing unit operative to detect an object of interest (OOI) from Wide and/or Tele image information and to direct the Tele camera to move FOV_T to acquire Tele image information on the OOI.

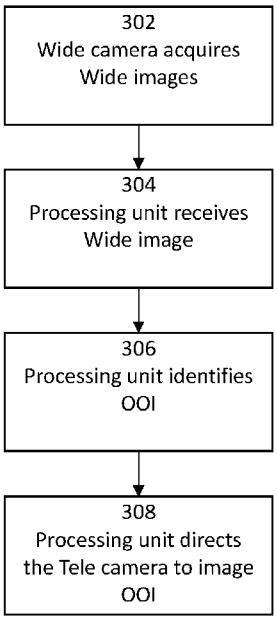

FIG. 3

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CPC - G02B 7/102, 7/08; H04N 5/2254

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)
See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	WO-2017/115179 A1 (COREPHOTONICS LTD) 06 July 2017; page 2, lines 12-15, page 3, lines 21-28; page 7, lines 4-20, 28-33, page 12, lines 6-14	1, 13-15, 17-20 --- 2-12, 16
Y	TESLA "Future of Driving Advanced Sensor Coverage" Article [online]. 20 October 2016 [retrieved 19 November 2019]. Retrieved from the Internet: <URL: https://www.tesla.com/autopilot>; page 4, video from times 0:45-0:55	2-12
Y	KR 10-1428042 B1 (LG INNOTEK CO LTD.) 01 August 2014; see English machine translation	7
Y	US 2007/0159344 A1 (KISACANIN, B) 12 July 2007; paragraphs [0018], [0020]	10
Y	US 2009/0234542 A1 (ORLEWSKI, P) 17 September 2009; paragraphs [0043], [0047]	11
Y	US 2016/0342095 A1 (CARL SEISS SMT GMBH) 24 November 2016; paragraphs [0009], [0105]	16

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