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92121-1714 (US).

(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, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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.

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(54) Title: ASSIST FOR ORIENTING A CAMERA AT DIFFERENT ZOOM LEVELS

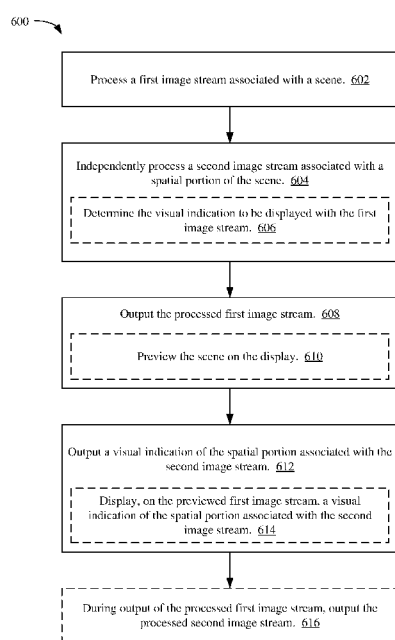


FIG. 6

(57) Abstract: Aspects of the present disclosure relate to systems and methods for assisting in positioning a camera at different zoom levels. An example device may include a memory configured to store image data. The example device may further include a processor in communication with the memory, the processor being configured to process a first image stream associated with a scene, independently process a second image stream associated with a spatial portion of the scene wherein the second image stream is different from the first image stream, output the processed first image stream, and output during output of the processed first image stream a visual indication that indicates the spatial portion associated with the second image stream.

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*
- *with information concerning incorporation by reference of missing parts and/or elements (Rule 20.6)*

(88) Date of publication of the international search report:

25 April 2019 (25.04.2019)

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2018/050205

A. CLASSIFICATION OF SUBJECT MATTER

INV. H04N5/232 H04N5/225 H04N5/77
ADD.

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)

H04N

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

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

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 106 713 772 A (VIVO COMM TECHNOLOGY CO LTD) 24 May 2017 (2017-05-24)	1,2,4-6, 9,10, 12-14, 17,18, 20-22, 25,26, 28-30
Y	paragraph [0048] - paragraph [0102] paragraph [0115] - paragraph [0130] figures 2-5,10 ----- -/--	8,16,24



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

27 March 2019

Date of mailing of the international search report

02/04/2019

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2018/050205

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2018/050205

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2016/007008 A1 (MOLGAARD CLAUS [US] ET AL) 7 January 2016 (2016-01-07) paragraph [0062] paragraph [0118] - paragraph [0129] paragraph [0136] - paragraph [0138] figures 1-5 -----	1-3, 9-11, 17-19, 25-27
X	EP 3 122 021 A2 (LG ELECTRONICS INC [KR]) 25 January 2017 (2017-01-25) -----	1-4,6,7, 9-12,14, 15, 17-20, 22,23, 25-28,30
Y	paragraph [0250] - paragraph [0254] figures 16A-16C -----	8,16,24
Y	US 2016/381289 A1 (KIM JAE-GON [KR] ET AL) 29 December 2016 (2016-12-29) -----	8,16,24
A	paragraph [0008] - paragraph [0021] paragraph [0097] - paragraph [0200] figures 1-12 -----	3,11,19, 27
X	US 2015/350554 A1 (KOTI SREENIDHI A [IN] ET AL) 3 December 2015 (2015-12-03) paragraph [0023] - paragraph [0041] figures 1-8 -----	1,2,9, 10,17, 18,25,26
A	W0 2016/172619 A1 (APPLE INC [US]) 27 October 2016 (2016-10-27) paragraph [0148] - paragraph [0208] figures 1-8A -----	1-30

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2018/050205

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			US 2019028650 A1	24-01-2019
			WO 2016172619 A1	27-10-2016

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-6, 9-14, 17-22, 25-30

Switching between displaying the processed first image stream and displaying the second processed image stream based on one or more criteria.

2. claims: 7, 8, 15, 16, 23, 24

Determining whether to record the spatial position of the scene corresponding to the visual indication from the first image stream or the second image stream.
