



(43) International Publication Date
12 September 2014 (12.09.2014)

(51) International Patent Classification:
G03B 17/00 (2006.01)

(21) International Application Number:
PCT/US2014/020257

(22) International Filing Date:
4 March 2014 (04.03.2014)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/772,004 4 March 2013 (04.03.2013) US

(71) Applicant: EARTHCAM, INC. [US/US]; 84 Kennedy Street, Hackensack, New Jersey 07838 (US).

(72) Inventors: CURY, Brian; 84 Kennedy Street, Hackensack, New Jersey 07838 (US). NICOLL, James S.; 8340 Austin Street, Apartment 6, Kew Gardens, New York 11415 (US).

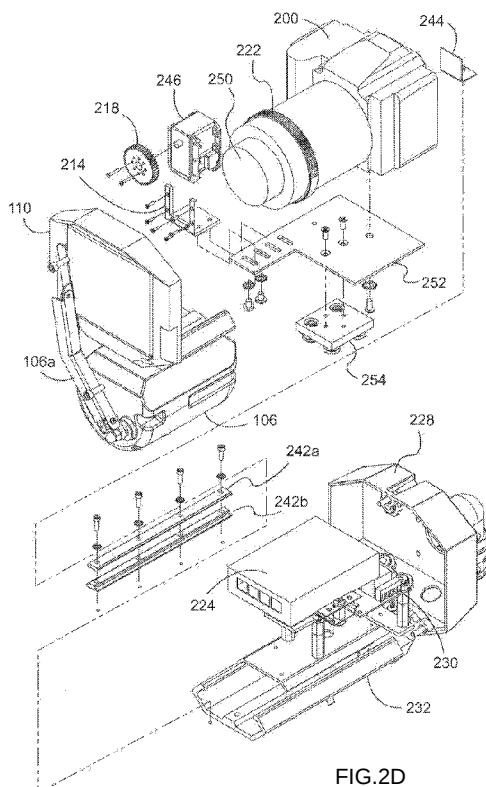
(74) Agents: NIXON, William F. et al; MJLLEN, WHITE, ZELANO, & BRANIGAN, P.C., Arlington Courthouse Plaza, 2200 Clarendon Boulevard, Suite 1400, Arlington, Virginia 22201 (US).

(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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, 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, 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.

(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, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,

[Continued on nextpage]

(54) Title: ALL WEATHER CAMERA SYSTEM AND METHODS FOR CONTROL THEREOF



(57) Abstract: An all-weather, remote camera system (100) including a camera housing (102) and other components, such as a network connection (108) that allows the camera system to be placed in locations for capturing images over periods of time. The camera system including a megapixel camera (200) linked to a device server (224) and an image storage device (226) to capture images under a variety of conditions. The camera system also includes a zoom capability to generate panoramic images. The zoom operations are performed within the camera system at its location.



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, KM, ML, MR, NE, SN, TD, TG).

— *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))*

Published:

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

13 November 2014

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

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2014/020257

A. CLASSIFICATION OF SUBJECT MATTER

INV. G03B17/00

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)

G03B

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)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/085844 A1 (TASHIRO HIROYUKI [JP] ET AL) 4 July 2002 (2002-07-04) all whether camera comprising a camera, a camera housing, a storage device and a device server; the whole document -----	1-10,21
X	US 2010/110192 A1 (JOHNSTON GREGORY E [US] ET AL) 6 May 2010 (2010-05-06) all whether camera comprising a camera, a camera housing, a storage device and a device server; the whole document ----- -/-	1-10



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) on 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

9 July 2014

Date of mailing of the international search report

08/09/2014

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Tomezzoli, Giancarlo

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2014/020257

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 2004/258404 A1 (BROWN STEPHEN F [US]) 23 December 2004 (2004-12-23) all wether camera compri si ng a camera, a camera housi ng, a storage devi ce and a devi ce server; the whol e document -----	1-10
X	AU 2009 100 942 A4 (LOBEGER ANITA) 29 October 2009 (2009-10-29) all wether camera compri si ng a camera, a camera housi ng, a storage devi ce and a devi ce server; the whol e document -----	1-10
X	JP 2002 158788 A (IPEX KK; DNA KK) 31 May 2002 (2002-05-31) all wether camera compri si ng a camera, a camera housi ng, a storage devi ce and a devi ce server; abstract; figures 1-9 -----	1-10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2014/020257

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. :
1-10, 21

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-10, 21

all-weather, remote camera systems

2. claims: 11-15

method for capturing an image using a all-weather camera system

3. claims: 16-18

method for executing a panorama process using an all weather camera system

4. claim: 19

method for executing self-repair process for an all-weather camera system

5. claim: 20

method for executing self-repair process during a loss of connection to a network from an all-weather camera system

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2014/020257

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002085844	AI	04-07-2002	CN 1374790 A 16-10-2002
			JP 4507428 B2 21-07-2010
			JP 2002232767 A 16-08-2002
			US 2002085844 AI 04-07-2002
US 2010110192	AI	06-05 -2010	US 7755668 BI 13-07 -2010
			US 2010110192 AI 06-05 -2010
US 2004258404	AI	23-12 -2004	US 2004258404 AI 23-12 -2004
			US 2008012941 AI 17-01 -2008
AU 2009100942	A4	29-10 -2009	NONE
JP 2002158788	A	31-05 -2002	NONE