



(43) International Publication Date  
26 July 2012 (26.07.2012)

- (51) International Patent Classification:  
*G03B 21/00* (2006.01)
- (21) International Application Number:  
PCT/US2009/002909
- (22) International Filing Date:  
10 May 2009 (10.05.2009)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
12/269,039 12 November 2008 (12.11.2008) US
- (71) Applicant (for all designated States except US): **BRAI-MAN, Mark, S.** [US/US]; 4775 East Lake Road, Cazenovia, NY 13035 (US).
- (72) Inventor: **BLAKE, Dustch Joseph**; 4775 East Lake Road, Cazenovia, NY 13035 (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, BR, BW, BY, BZ, CA, CH, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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, SE, SI, SK, 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:**

- 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))

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

1 November 2012

(54) Title: COOPERATIVE POINTILLISTIC PROJECTION OF A GRAPHICAL IMAGE ON A PRE-SELECTED REMOTE SURFACE BY USING A MULTIPLICITY OF LASERS



Figure 1

(57) Abstract: A method is described for multiple persons operating lasers to cooperatively project a pointillistic graphical image onto a remote surface. The visibility of the projected image depends on aiming the lasers with accurate relative-displacements. Invariant features of the specific remote landscape where the image is to be projected are used as guideposts for maintaining these displacements. A set of transparent images is distributed to the laser operators, designating for each a spot to illuminate, superimposed on a scaled representation of the background landscape. In the preferred embodiment, each transparent image is used as a reticle, mounted into a monocular at its internal focal plane with the designated illumination spot centered on-axis. A laser is also rigidly attached to the monocular, with their optical axes parallel. Each operator aims his/her laser by visually sighting through the monocular so as to align transparent and direct views of the target landscape.



## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2009/002909****A. CLASSIFICATION OF SUBJECT MATTER****G03B 21/00(2006.01)i**

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 21/00; G03G 015/00; G03B 027/72; G06K 15/02; G03C 7/18; G03B 17/24; G03C 7/30; G03B 21/32

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

Korean utility models and applications for utility models  
Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) &amp; Keywords: "graphical image, laser beam, projector, visual feature, image copy"

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0162196 B2 (KONICA CORPORATION) 27 October 1993 See figure 6 and column 7, line 26-column 8, line 45 and claim 1.	1-7
A	WO 91-06038 A1 (EASTMAN KODAK COMPANY) 02 May 1991 See figure 7 and page 4, lines 8-9 and page 19, lines 24-25.	1-7
A	US 05959717 A (JERRY CHAUM) 28 September 1999 See figure 3B and column 8, lines 43 - 44 and claim 1.	1-7
A	US 7170632 B1 (NAOTO KINJO) 30 January 2007 See column 28, lines 13 - 14 and claim 1.	1-7

 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 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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

14 SEPTEMBER 2012 (14.09.2012)

Date of mailing of the international search report

**17 SEPTEMBER 2012 (17.09.2012)**

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
189 Cheongsu-ro, Seo-gu, Daejeon Metropolitan  
City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

SONG, Byoung Jun

Telephone No. 82-42-481-8475



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2009/002909**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0162196 B2	27. 10. 1993	DE 3577362 D1	31.05.1990
		EP 0162196 A1	27. 11. 1985
		EP 0162196 B1	25.04.1990
		JP 04-056987 B	10.09.1992
		JP 1763892 C	28.05.1993
		JP 60-173537 A	06.09.1985
		JP 60-173538 A	06.09.1985
		JP 60-173561 A	06.09.1985
		JP 60-173562 A	06.09.1985
		JP 60-173563 A	06.09.1985
		JP 60-173564 A	06.09.1985
		JP 60-173566 A	06.09.1985
		US 04733306 A	22.03.1988
		WO 91-06038 A1	02.05.1991
DE 69033875 D1	24.01.2002		
DE 69033875 T2	25.04.2002		
EP 0450033 A1	09.10.1991		
EP 0450033 A1	16.05.2001		
EP 0450033 B1	12.12.2001		
JP 03-295420 B2	05.04.2002		
JP 3295420 B2	24.06.2002		
US 05051341 A	24.09.1991		
US 05959717 A	28.09.1999		
US 7170632 B1	30.01.2007	JP 03-386373 B2	10.01.2003
		JP 03-545616 B2	21.07.2004
		JP 03-593266 B2	24.11.2004
		JP 03-808662 B2	16.08.2006
		JP 04-268612 B2	27.02.2009
		JP 11-352601 A	24.12.1999
		JP 2000-066312 A	03.03.2000
		JP 2000-105431 A	11.04.2000
		JP 2000-115686 A	21.04.2000
		JP 2006-197579 A	27.07.2006
		JP 3386373 B2	17.03.2003
		JP 4268612 B2	27.05.2009