

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
9 September 2005 (09.09.2005)

PCT

(10) International Publication Number  
**WO 2005/082075 A3**

(51) International Patent Classification:  
**G03B 21/14** (2006.01) **G01B 11/25** (2006.01)

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(21) International Application Number:  
PCT/US2005/006225

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(22) International Filing Date:  
25 February 2005 (25.02.2005)

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/547,724 25 February 2004 (25.02.2004) US

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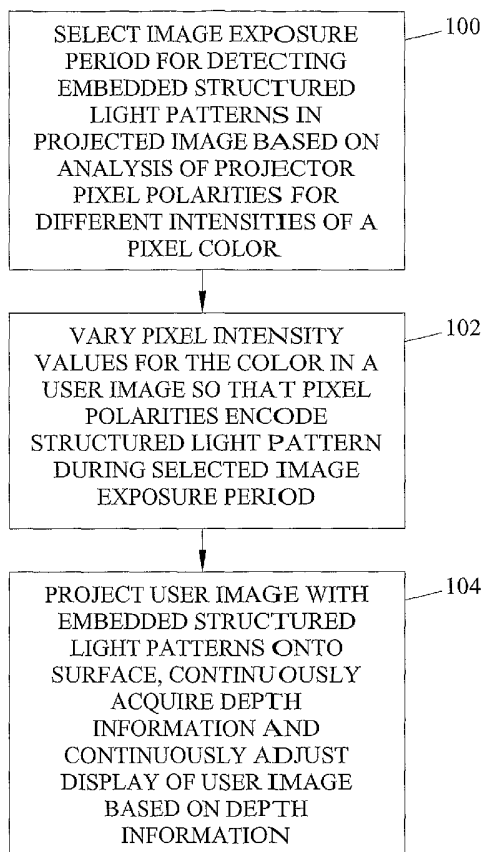
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

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[Continued on next page]

(54) Title: SYSTEMS AND METHODS FOR IMPERCEPTIBLY EMBEDDING STRUCTURED LIGHT PATTERNS IN PROJECTED COLOR IMAGES



(57) Abstract: Methods, systems, and computer program products for imperceptibly embedding structured light patterns in projected color images for display on planar and non-planar surfaces are disclosed. According to one method, an image exposure period for detecting an embedded structured light patterns in a projected image is selected based on analysis of pixel polarities for different pixel intensities of a pixel color. Pixel intensities for the color are varied in the user image so that pixel polarities encode the structured light patterns during image exposure period. The user image is projected with the structured light patterns onto the surface. Depth information is continuously acquired and used to adjust display of the user image.

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FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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

28 September 2006

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/06225

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: G03B 21/14( 2006.01);G01B 11/25( 2006.01)

USPC: 353/69,29,121;356/604

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)

U.S. : Please See Continuation Sheet

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)  
USPAT,US-PGPUB,EPO,JPO,DERWENT

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2004/0033060 A1 (BEATON) 19 February 2004 (19.02.2004), figures 1, 23, 6, and 7	1-52
Y,P	US 2004/0257540 A1 (ROY et al) 23 December 2004 (23.12.2004), figures 1 and 2.	1-52
A	FR 2794246 A1 (INST FRANCO ALLEMAND RECH SAINT LOUIS[DEFR].) 1 December 2000 (01.12.2000)	1-52
A	US 2003/0223083 A1 (GENG) 04 December 2003 (04.12.2003)	1-52
A	US 2002/0057832 A1 (PROESMANS et al) 16 May 2002 (16.05.2002)	1/52

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

Date of the actual completion of the international search

01 June 2006 (01.06.2006)

Date of mailing of the international search report

02 AUG 2006

Name and mailing address of the ISA/US

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Alexandria, Virginia 22313-1450

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US05/06225

Continuation of B. FIELDS SEARCHED Item 1:

353/69,28,121,122,70,94,7,11,71;356/601,610,602-604;348/14.03,14.07,14.16,121,169,745-747;G03B021/14;G01B011/25