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13/333,786 21 December 2011 (21.12.2011) US
- (71) **Applicant (for all designated States except US):** **SONY COMPUTER ENTERTAINMENT INC.** [JP/JP]; 1-7-1 Konan, Minato-ku, Tokyo, 108-0075 (JP).
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- (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, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, 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, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report (Art. 21(3))
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- (88) **Date of publication of the international search report:**  
22 August 2013

(54) **Title:** DIRECTIONAL INPUT FOR A VIDEO GAME

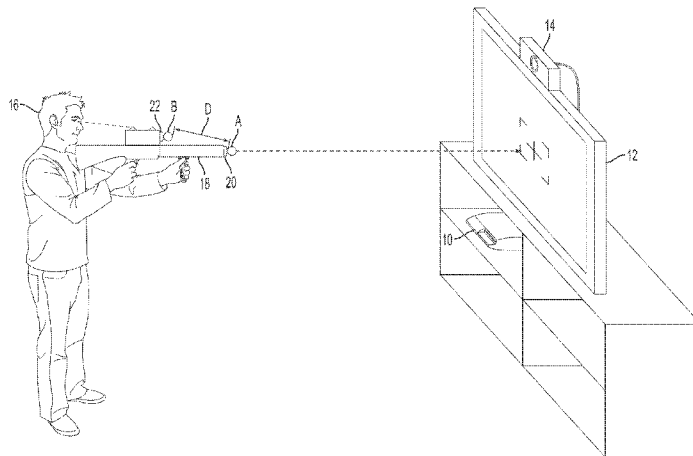


FIG. 1

(57) **Abstract:** A method for providing directional input to a video game is provided. The method initiates with capturing an image of a first object and a second object, the first object and the second object being defined at a fixed distance from each other. A three-dimensional location of the first object is determined based on analysis of the captured image, and a two-dimensional location of the second object is determined based on analysis of the captured image. An input direction for a video game is determined based on the three-dimensional location of the first object and the two-dimensional location of the second object.

WO 2013/096844 A3

# INTERNATIONAL SEARCH REPORT

International application No <b>PCT/US2012/071386</b>
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**A. CLASSIFICATION OF SUBJECT MATTER**  
**INV. A63F13/04**  
**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)  
**A63F**

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, WPI Data**

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/046736 A1 (PRYOR TIMOTHY R [CA] ET AL) 11 March 2004 (2004-03-11)	1-6
Y	abstract; figures 1b,1c paragraph [0105] - paragraph [0114] -----	7
X	WO 2007/078639 A1 (SONY COMP ENTERTAINMENT INC [JP]; MARKS RICHARD L [US]; DESHPANDE HRIS) 12 July 2007 (2007-07-12)	1-6
Y	abstract; figures 2,3 paragraph [0025] - paragraph [0032] paragraphs [0036], [0047], [0048], [0050], [0061] ----- -/--	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 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

22 March 2013

Date of mailing of the international search report

08/07/2013

Name and mailing address of the ISA/

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**INTERNATIONAL SEARCH REPORT**

International application No PCT/US2012/071386
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>US 2009/209343 A1 (FOXLIN ERIC [US] ET AL) 20 August 2009 (2009-08-20) abstract paragraph [0003] - paragraph [0007] paragraph [0039] - paragraph [0056] paragraph [0070]</p> <p align="center">-----</p>	7
Y	<p>YOU S ET AL: "Fusion of vision and gyro tracking for robust augmented reality registration", PROCEEDINGS IEEE 2001 VIRTUAL REALITY. (VR). YOKOHAMA, JAPAN, MARCH 13 - 17, 2001; [PROCEEDINGS IEEE VIRTUAL REALITY.(VR)], LOS ALAMITOS, CA, IEEE COMP. SOC, US, 1 January 2001 (2001-01-01), pages 71-78, XP031172752, DOI: 10.1109/VR.2001.913772 ISBN: 978-0-7695-0948-8 abstract Sec.4.1 "Image measurement" Sec 4.3 "Fusion filter"</p> <p align="center">-----</p>	7
A	<p>MADJID MAIDI ET AL: "A performance study for camera pose estimation using visual marker based tracking", MACHINE VISION AND APPLICATIONS, SPRINGER, BERLIN, DE, vol. 21, no. 3, 1 October 2008 (2008-10-01), pages 365-376, XP019797444, ISSN: 1432-1769 abstract Sec. 2 Sec. 2.2</p> <p align="center">-----</p>	1-7

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2012/071386

## 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.:

1-7

### 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

Information on patent family members

International application No PCT/US2012/071386
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004046736 A1	11-03-2004	US 6720949 B1	13-04-2004
		US 2004046736 A1	11-03-2004
		US 2006202953 A1	14-09-2006
		US 2008122786 A1	29-05-2008
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WO 2007078639 A1	12-07-2007	EP 1960069 A1	27-08-2008
		JP 5084052 B2	28-11-2012
		JP 2009519105 A	14-05-2009
		US 2007298882 A1	27-12-2007
		US 2010056277 A1	04-03-2010
		WO 2007078639 A1	12-07-2007
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US 2009209343 A1	20-08-2009	NONE	
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**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

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

1. claims: 1-7

Method for user interaction based on optical localization of two objects.

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2. claims: 8-14

Device for directional user input based on determining a device ID.

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3. claims: 15-21

Peripheral device for directional user input configured to receive an existing motion controller.

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4. claims: 22-28

Peripheral device for directional user input configured to receive two existing motion controllers.

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