



(51) International Patent Classification:
G06F 3/033 (2006.01)

(21) International Application Number:
PCT/IB2010/050291

(22) International Filing Date:
22 January 2010 (22.01.2010)

(25) Filing Language: Italian

(26) Publication Language: English

(30) Priority Data:
MO2009A000016 23 January 2009 (23.01.2009) IT

(71) Applicant (for all designated States except US): CE-FRIEL - SOCIETA' CONSORTILE A RESPONSABILITA' LIMITATA [IT/IT]; Via Renato Fucini 2, I-20133 Milano (MI) (IT).

(72) Inventor; and

(71) Applicant : TRABUCCO, Francesco [IT/IT]; Via Tucidide, 56, I-20134 Milano (MI) (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): QUARANTA, Paolo [IT/IT]; Viale Lunigiana, 7, I-20125 Milano (MI) (IT). RIGAMONTI, Matteo [IT/IT]; Via S. Antonio, 7, I-20045 Besana Brianza (MI) (IT). RUSSI, Vincenzo [IT/IT]; Via Carlo Osma, 2, I-20151 Milano (MI) (IT).

(74) Agents: CRUGNOLA, Pietro et al.; Luppi Crugnola & Partners S.r.l., Viale Corassori 54, I-41124 Modena (IT).

(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, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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, 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, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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))

[Continued on next page]

(54) Title: CONTROL DEVICE FOR REMOTE CONTROL OF A SYSTEM

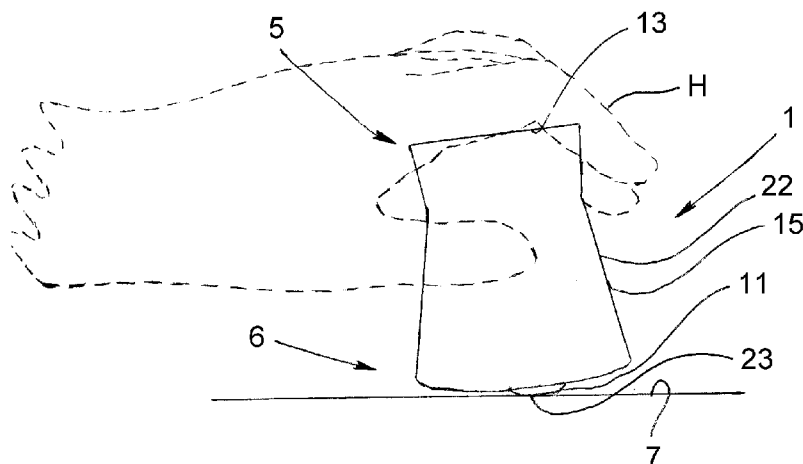


Fig. 19

(57) Abstract: A control device for remote control of a system (2) provides a containing structure shaped for being moved by a user, activating sensors (18) arranged in said containing structure for enabling the control device (1) when it contacts a resting surface (7) on which is moved said containing structure, position sensors (3, 4) arranged in said containing structure for detecting movements of said containing structure, and a processing unit (8), arranged in said containing structure, connected to said activating sensors (18) and to said position sensors (3, 4) to generate control signals (A) to send to said system (2) to manage the system (2) and remote control it. This control device has proved to be extremely manoeuvrable, simple and compact.



— *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:
26 May 2011

INTERNATIONAL SEARCH REPORT

International application No PCT/IB2010/050291

A. CLASSIFICATION OF SUBJECT MATTER
 INV. G06F3/033
 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)
 G06F

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 practical, 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 5 940 066 A (WEINBLATT LEE S [US]) 17 August 1999 (1999-08-17) column 6, line 9 - line 28; figures -----	1-16, 18-21
Y	FR 2 901 376 A (SORLIN STEPHANE [FR]) 23 November 2007 (2007-11-23) page 3, line 7 - last line page 4, line 19 - page 7, line 3; figures -----	1-16, 18-21
Y	WO 2008/002239 A1 (ANOTO AB [SE]; DUNKARS ANDERS [SE]) 3 January 2008 (2008-01-03) page 9, line 14 - line 19; figure 4 page 18, line 16 - page 19, line 4; figures 11,12 -----	1-16, 18-21
A	US 4 787 051 A (OLSON LYNN T [US]) 22 November 1988 (1988-11-22) column 9, line 5 - line 42; figures -----	1-16, 18-21
----- -/--		

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 document 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

1 April 2011

Date of mailing of the international search report

07/04/2011

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

Durand, Jacques

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2010/050291

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2006/066409 A (UNIV WATERLOO [CA]; XU REX FANG [CA]; MACGREGOR CAROLYN GAIL [CA]) 29 June 2006 (2006-06-29) paragraphs [0013] - [0017], [0022], [0038] - [0043], [0055], [0101]; figures -----	1-16, 18-21
A	HINCKLEY K ET AL: "THE VIDEOMOUSE: A CAMERA-BASED MULTI-DEGREE-OF-FREEDOM INPUT DEVICE", UIST. PROCEEDINGS OF THE ANNUAL ACM SYMPOSIUM ON USER INTERFACES SOFTWARE AND TECHNOLOGY, XX, XX, vol. 1, no. 1, 1 January 1999 (1999-01-01), pages 103-112, XP001148435, page 103, left-hand column, last paragraph - right-hand column, last paragraph page 107, right-hand column, paragraph 4 page 108, left-hand column, last paragraph; figures 1,2; table 1 -----	1-16, 18-21
A	RAVIN BALAKRISHNAN ET AL: "The Rockin' Mouse: Integral 3D Manipulation on a Plane", PROCEEDINGS OF THE SIGCHI CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS; [CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS], NEW YORK, NY, USA, 22 March 1997 (1997-03-22), pages 1-12, XP002257214, ISBN: 978-0-89791-802-2 abstract page 5, paragraphs 3,4 page 10, paragraph 7-9; figures 1,2,8 -----	1-16, 18-21
A	US 2001/047215 A1 (KOMATSU YOSHIKI [JP]) 29 November 2001 (2001-11-29) paragraphs [0045], [0047], [0059] -----	1-16, 18-21
A	US 2004/150632 A1 (CLAPPER EDWARD O [US]) 5 August 2004 (2004-08-05) paragraph [0033] - paragraph [0039]; figures -----	1-16, 18-21

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2010/050291

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.:

1-16(completely); 18-21(partially)

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: 1-16(completely); 18-21(partially)

control device for remote control of a system comprising a processing unit which is arranged in a containing structure, and connected to activating means and position sensors to generate control signals sent to system to manage and remote-control said system, characterised in that the containing structure comprises a casing with at least one end shaped so as to be restable and/or pivotable on a resting surface to impress movements on said control device.

2. claims: 17(completely); 18-21(partially)

control device for remote control of a system comprising a processing unit which is arranged in a containing structure, and connected to activating means and position sensors to generate control signals sent to system to manage and remote-control said system, characterised in that it comprises one or more sectors obtained on said containing structure that are mutually rotatable with respect to the containing structure for sending further control signals to said system.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/IB2010/050291

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5940066	A	17-08-1999	DE 69324463 D1 20-05-1999 DE 69324463 T2 02-09-1999 EP 0606704 A1 20-07-1994 JP 7306749 A 21-11-1995

FR 2901376	A	23-11-2007	NONE

WO 2008002239	A1	03-01-2008	DE 212007000046 U1 05-03-2009 JP 2009543181 T 03-12-2009

US 4787051	A	22-11-1988	NONE

WO 2006066409	A	29-06-2006	US 2009040175 A1 12-02-2009

US 2001047215	A1	29-11-2001	NONE

US 2004150632	A1	05-08-2004	NONE
