(19) World Intellectual Property **Organization**

International Bureau





(43) International Publication Date 3 March 2005 (03.03.2005)

(10) International Publication Number WO 2005/020128 A3

(51) International Patent Classification7: G09G 5/00, 5/08

(21) International Application Number:

PCT/US2004/026070

(22) International Filing Date: 12 August 2004 (12.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

10/604,718 13 August 2003 (13.08.2003) US

(71) Applicant and

(72) Inventor: HUGHES, Michael [US/US]; 17076 Boca Club Boulevard, Apartment #4, Boca Raton, FL 33487 (US).

(74) Agent: RIES, Michael, J.; 1747A Vermont Drive, Elk Grove Village, IL 60007 (US).

(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, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

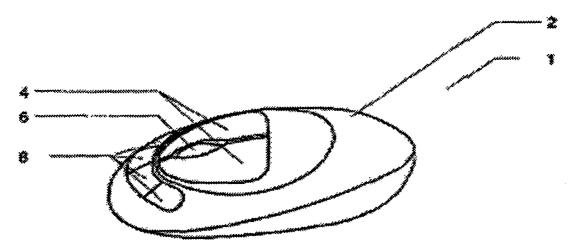
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,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

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: 19 May 2005

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.

(54) Title: COMPUTER MOUSE WITH DATA RETRIEVAL AND INPUT FUNCTIONALITIES



(57) Abstract: The current invention is a desktop operated computer control mouse (1) including a housing (2), electronic circuitry within the housing, a user manipulate rotatable ball, optical technology, or other means for pointing control, and a plurality of front mounted buttons (8) that are in addition to the standard depressible buttons known in the prior art of a computer control mouse, which are exposed on the housing and are electronically connected with circuitry. At least some or all of the additional finger depressible buttons are for user selection of signals to be sent to the computer for the purpose of initiating functioning macros, inputting specified user data, or launching user pre-selected commands, and are associated with electronic switches that allow for at least three input stages; depressing and holding, pressing once, and pressing twice.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/26070

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : GO9G 5/00, 5/08		
US CL : 345/156, 157, 163, 168, 169; 341/22, 23; 400/486, 489		
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.: 345/156, 157, 163, 168, 169; 341/22, 23; 400/486, 489		
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, sea	arch terms used)	
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category * Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
X US 2003/0137491 A (KUO) 24 JULY 2003 (24.07.2003), FIGS. 1-2. Y	1-3, 6, 23, 24, 38-40, 44, 75, 78, 82, 83, 113, 118, 122, 126	
	4, 5, 7-22, 25-37, 41- 43, 45-74, 76, 77, 79- 81, 84-112, 114-117, 119-121, 123-125	
Y US 5,181,029 A (KIM) 19 January 1993 (19.01.1993), col. 3, line 64 to col. 4, line 58.	7-11, 13-22, 25, 26, 27, 28, 29-31, 36, 37, 41, 45-49, 51, 53-63, 64-68, 73, 74, 76, 77, 84-90, 92-107, 111, 112, 114-117, 119- 121, 123-125	
Y US 5,585,823 A (DUCHON et al) 17 December 1996 (17.12.1996), col. 2, lines 11-21.	4, 5, 32, 42, 43, 69, 79, 80, 81	
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 "A" later document published after the inter date and not in conflict with the applica principle or theory underlying the invertigation.	tion but cited to understand the	
"E" earlier application or patent published on or after the international filing date "X" document of particular relevance; the considered novel or cannot be consider when the document is taken alone		
"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) "Y" document of particular relevance; the considered to involve an inventive step with one or more other such documents."	when the document is combined	
"O" document referring to an oral disclosure, use, exhibition or other means obvious to a person skilled in the art		
"P" document published prior to the international filing date but later than the priority date claimed document member of the same patent f		
Date of the actual completion of the international search 2 MAR 2005	ch report	
14 February 2005 (14.02.2005) Name and mailing address of the ISA/US Authorized officer		
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Regina Liang Telephone No. 703-305-3900	5 plg	
Facsimile No. (703) 305-3230		

Form PCT/ISA/210 (second sheet) (July 1998)

DOT	TTOO.	4/2607	70
PL . I	/ 1.1.70.14	+/ Z.OU /	w

INTERNATIONAL SEARCH REPORT

ategory *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	US 6,000,033 A (KELLEY et al) 07 December 1999 (07.12.1999), col. 1, lines 5-55.	12, 33, 34, 50, 52, 70, 71, 91, 108, 109 35, 72, 110
Y	US 2001/0005199 A1 (ANDERSON) 28 June 2001 (28.06.2001), Fig. 3.	
Y	US 2002/0180622 A1 (LUI et al) 05 December 2002 (05.12.2002), see abstract.	27, 28, 64, 65, 103 104
	·	
4		