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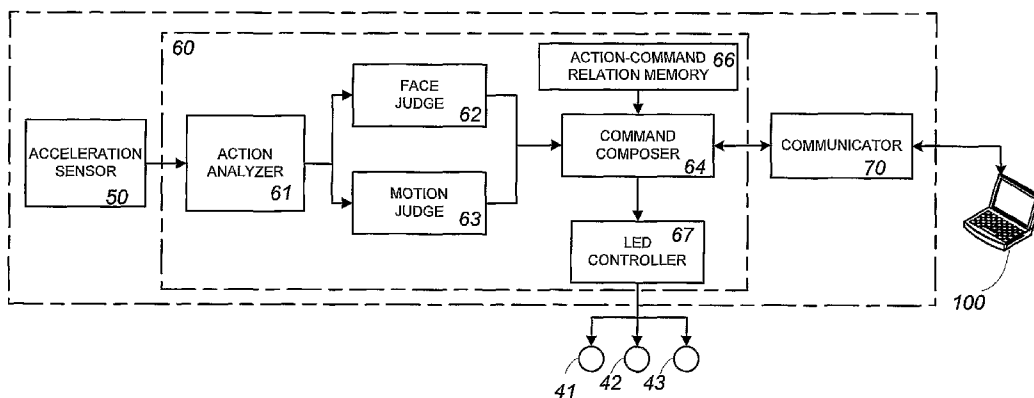
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: INPUT DEVICE FOR A COMPUTER AND ENVIRONMENTAL CONTROL SYSTEM USING THE SAME



(57) Abstract: An input device for a computer has a polyhedral body which is sized to be manipulated by a user and has a plurality of resting faces by which the body can be rested upon a supporting surface. The body incorporates an acceleration sensor providing a sensor output indicating an acceleration being applied to the body. The body includes a circuit which identifies which one of the resting faces is on the supporting surface as well as one of dynamic actions that the user applies to the body by analyzing the sensor output from the acceleration sensor. The resting faces and the dynamic actions are allocated to different ones of command to be input to the computer so that the command can be discriminated from the identified resting face and the dynamic motion. Thus, the dynamic actions are added to increase the number of the commands, improving maneuverability while retaining the body in a rather simple geometry with a limited number of resting faces.

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. G06F3/033 F24F11/00 H05B37/02

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 F24F H05B

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, 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 2003/076343 A1 (FISHKIN KENNETH P ET AL) 24 April 2003 (2003-04-24) paragraph [0040] - paragraph [0044] paragraph [0091] - paragraph [0136] paragraph [0179] paragraph [0205] - paragraph [0211]; figures 1,23	1-3
X	US 2002/167699 A1 (VERPLAETSE CHRISTOPHER ET AL) 14 November 2002 (2002-11-14) paragraph [0040] paragraph [0042] paragraph [0045] - paragraph [0048] paragraph [0053] - paragraph [0055] paragraph [0059]; figures	1-3
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Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

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| <p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*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)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p> | <p>*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</p> <p>*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</p> <p>*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.</p> <p>*Z* document member of the same patent family</p> |
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INTERNATIONAL SEARCH REPORT

International application No

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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.
X	US 2003/179246 A1 (MARMAROPOULOS GEORGE ET AL) 25 September 2003 (2003-09-25) paragraph [0006] - paragraph [0008] paragraph [0021] - paragraph [0027]; figures	1-3
A	US 2003/103091 A1 (WONG YOON KEAN ET AL) 5 June 2003 (2003-06-05) paragraph [0004] - paragraph [0006] paragraph [0029] paragraph [0053]; figures 5,6	1-3
A	WO 03/001340 A (MOTION SENSE CORPORATION; MOSTTOV, KIRILL; VERMES, JOHN) 3 January 2003 (2003-01-03) page 3, line 2 - line 19 page 9, line 11 - page 10, line 22; figures	1-3
A	JP 09 084145 A (OMRON TATEISI ELECTRONICS CO) 28 March 1997 (1997-03-28) cited in the application abstract; figures	1-3
A	US 2004/227741 A1 (KODA YASUNORI [JP] ET AL) 18 November 2004 (2004-11-18) paragraph [0280] - paragraph [0287]	3
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X	US 5 390 206 A (REIN ALAN D [US] ET AL) 14 February 1995 (1995-02-14) column 9, line 67 - column 10, line 38 column 15, line 14 - column 17, line 15 column 20, line 12 - line 42 column 22, line 24 - line 60; figures 2,8,11,13,14,21,22	4,5
X	US 2002/072356 A1 (YAMASHITA ATSUSHI [JP] ET AL) 13 June 2002 (2002-06-13) paragraph [0006] paragraph [0075] paragraph [0146] - paragraph [0150] paragraph [0188] - paragraph [0189]; figures 2-6,12	4,5

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2006/301080

Box 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 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 fee, this Authority did not invite payment of any additional fee.

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.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- 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: 1-3

input device for a computer comprising a polyhedral body having a plurality of flat resting faces and an acceleration sensor incorporated within the body characterised in that a dynamic motion is identified by the analysis of time series data of the sensor prior to a predetermined period of stability of the body.

2. claims: 4, 5

environmental system comprising an input device with a polyhedral body, characterised in that a server analyses the demands emitted by the input devices and determines the control command to be applied to that apparatus.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/JP2006/301080

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