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Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

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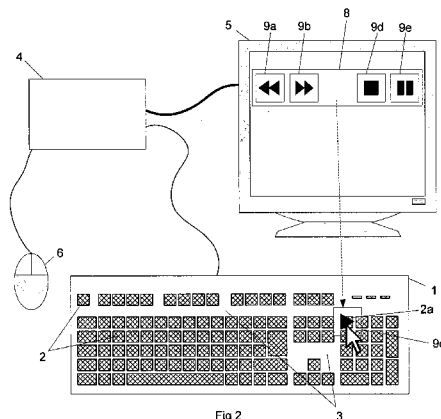
— with international search report (Art. 21(3))

— 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:

8 July 2010

(54) Title: INPUT DEVICE



(57) Abstract: A method for displaying a graphical user interface element to a user on a first display portion provided by a first display device and a second display portion provided by a second device. The method comprises displaying said graphical user interface element on said first display portion provided by said first display device, receiving user input indicating movement of said graphical user interface element from said first display portion to said second display portion, said user input comprising selection of said graphical user interface element on said first display portion and movement of said graphical user interface element to said second display portion, and displaying said graphical user interface element on said second display portion in response to said user input; wherein said second device is an input device comprising a plurality of independently physically actuable members comprising a respective display surface, and said second display portion is formed by said plurality of display surfaces.



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INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2009/000255

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06F3/023

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 Y A	US 7 301 532 B1 (DOBRY JEROD M [US]) 27 November 2007 (2007-11-27) figures 2-4,7-10 column 5, line 40 - column 6, line 8 column 9, line 33 - column 9, line 59 column 11, line 56 - column 13, line 61	20,21, 23,24 22 1-19
A	US 2004/218963 A1 (VAN DIEPEN PETER JAN [CA] ET AL) 4 November 2004 (2004-11-04) the whole document	1-19
A,P	WO 2008/036338 A1 (UNITED KEYS INC [US]; BROWN RONALD [US]; HARDEN DANIEL [US]) 27 March 2008 (2008-03-27) abstract; figures 1,33 page 40, line 16 - page 43, line 3	1-19
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 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

12 May 2010

Date of mailing of the international search report

21/05/2010

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2009/000255

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 6 016 142 A (CHANG SHUN-HWA [US] ET AL) 18 January 2000 (2000-01-18)	20,21
Y	abstract; figures 2-4	22
A	column 2, line 35 - column 4, line 13 -----	23,24
Y	EP 0 982 676 A1 (HEWLETT PACKARD CO [US]) 1 March 2000 (2000-03-01)	22
A	the whole document -----	20,21, 23,24

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2009/000255

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.:

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

International Application No. PCT/GB2009 /000255

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-19

Method and apparatus for assigning keyboard functionality by icon movement

2. claims: 20-24

Keyboard comprising two different display portions, one of which being the keys.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/GB2009/000255

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 7301532	B1	27-11-2007	NONE
US 2004218963	A1	04-11-2004	CA 2426867 A1 30-10-2004
WO 2008036338	A1	27-03-2008	EP 2069890 A1 17-06-2009 WO 2008073551 A2 19-06-2008
US 6016142	A	18-01-2000	NONE
EP 0982676	A1	01-03-2000	CN 1246743 A 08-03-2000 JP 2000089899 A 31-03-2000 US 6266048 B1 24-07-2001