Title: KEYPAD FOR PORTABLE WIRELESS DEVICES

Abstract: A keypad 620 includes keys 625 that can be selectively coupled electrically with a printed circuit board 530 to create electrical signals representative of a character to be input to the portable wireless device. Each key further includes contact points 515 wherein each contact point 515 can be separately electrically coupled with the printed circuit board 530 to input a character associated with that contact point 515. The keypad can be switched between a singular mode in which all the contact points 515 for a given key refer to the same input character and a multiple mode in which each contact point 515 for a given key refer to a different input character. In addition, at least some of the contact points 515 for each key can be programmable by the user to assign desired characters to specific contact points 515.

**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
— 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:**
14 December 2006

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.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06F3/023

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 database consulted during the international search (name of database and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<tr>
<th>Category</th>
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<th>Relevant to claim No.</th>
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<td>X</td>
<td>US 5 861 823 A (STRAUCH ET AL) 19 January 1999 (1999-01-19) column 3, line 18 - column 4, line 63; figures 1,4,5</td>
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<td>US 2002/110237 A1 (KRISHNARAVI C) 15 August 2002 (2002-08-15) abstract; figures 1,4,6a,10a paragraph [0947]</td>
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X Further documents are listed in the continuation of Box C. X 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

*B* earlier document but published on or after the international filing date

*L* document which may throw doubts on priority claims or which is cited to establish the publication date of another document or to put the invention in a different context

*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

**V** 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

**R** document member of the same patent family

Date of the actual completion of the international search

26 July 2006

Date of mailing of the international search report

02/10/2006

Name and mailing address of the ISA

European Patent Office, P.B. 5316 Patentlaan 2 NL - 2280 HV Rijswijk, Tel. (+31-70) 340-2040, Tx. 31 851 epo nl, Fax. (+31-70) 540-3018

Authorized officer

Wikander, Anders

Form PCT/ISA/107 (second sheet) (April 2005)
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INTERNATIONAL SEARCH REPORT

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. x 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.:

   1-3

Remark on Protest □ The additional search fees were accompanied by the applicant's protest.

□ No protest accompanied the payment of additional search fees.

Form PCT/ISA/2.10 (continuation of first sheet (2)) (January 2004)
This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-3
   A keypad for a portable wireless device

2. claims: 4-5
   An overlay keypad that fits over a standard keypad of a portable wireless device

3. claims: 6-10
   An alternate keypad that can replace a removable standard keypad on a portable device
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