Title: KEYBOARDS FOR PORTABLE ELECTRONIC DEVICES

(57) Abstract: A plurality of icons are displayed on a touch-sensitive display. A respective icon in at least a subset of the plurality of icons corresponds to two or more symbols. A contact by a user with the touch-sensitive display that corresponds to the respective icon is detected. A respective symbol in the two or more symbols to which the contact further corresponds is determined. The displayed respective icon is modified to indicate that the contact corresponds to the respective symbol.
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

Date of publication of the international search report:

29 May 2008
**INTERNATIONAL SEARCH REPORT**

**International application No:** PCT/US2007/060119

**A. CLASSIFICATION OF SUBJECT MATTER**

INV. G06F3/048

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

G06F

**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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<tr>
<td>X</td>
<td>GB 2 337 349 A (SAMSUNG ELECTRONICS CO. LTD.) 17 November 1999 (1999-11-17) page 8, line 11 - page 9, line 28 page 11, line 16 - page 14, line 19; figures 4A, 5A, 7A-10</td>
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<td>A</td>
<td>US 2004/160419 A1 (PADGIT) 19 August 2004 (2004-08-19) paragraph [0011] - paragraph [0017]; figures 1,3</td>
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<td>A</td>
<td>WO 2004/051392 A (PHILIPS N.V.) 17 June 2004 (2004-06-17) page 6, line 24 - page 8, line 19; figures 2,3</td>
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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 refering 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

*Z* document member of the same patent family

**Date of the actual completion of the international search**

14 December 2007

**Data of mailing of the international search report**

11/04/2008

**Name and mailing address of the ISA**

European Patent Office, P B 8818 Patentlaan 2 NL 2280 - HV Rijswijk
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Fax (+31-70) 340-3016

**Authorized officer**

Taylor, Paul

Form PCT/ISA/210 (second sheet) (April 2005)
C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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<tr>
<td>A</td>
<td>US 5 736 974 A (SELKER) (1,2,4,5,7) April 1998 (1998-04-07) column 7, line 35 - column 8, line 10; figures 6,7</td>
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## INTERNATIONAL SEARCH REPORT

### 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. [X] Claims Nos.: 18  
   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:  
   see FURTHER INFORMATION sheet PCT/ISA/210

3. [ ] Claims Nos.:  
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 5.4(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. [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.:
   1-17, 19, 20

### Remark on Protest

- [ ] The additional search fees were accompanied by the applicants protest and, where applicable, the payment of a protest fee.

- [ ] The additional search fees were accompanied by the applicants 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.
Continuation of Box 11.2

Claims Nos.: 18

Claim not supported by the description.

The applicant's attention is drawn to the fact that claims relating to inventions- in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter 11 procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.
This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-17, 19, 20
   A method (claims 1-16), a computer program used in conjunction with a device (claim 17) or a portable electronic device incorporating such a program (claims 19 and 20) to implement this method, for modifying an icon, corresponding to two or more symbols, among a plurality of icons displayed on a touch-sensitive display to indicate which symbol contained within the icon corresponds to a contact made by a user.

2. claim: 21
   A portable electronic device comprising a program in which subsets of plural icons are arranged in rows spaced apart such that, on detecting a contact by the user, a symbol corresponding to a respective icon is displayed between two neighbouring rows of icons.

3. claim: 22
   A portable device comprising a computer program in which plural icons corresponding to at least one symbol are displayed together with one or more words in accordance with a user history and a word is selected based on detecting a contact made by the user which includes a gesture.

4. claim: 23
   A portable device comprising a computer program in which plural icons corresponding to at least two symbols are displayed and detecting a contact made by the user corresponding to one of the icons which includes a gesture, further determining which symbol should be selected depending on whether the gesture involves a continuous or non-continuous contact.

5. claim: 24
   A portable device comprising a computer program in which plural icons corresponding to at least two symbols are displayed, each symbol within an icon corresponding to different subsets of symbols having differing probabilities of occurrence, detecting a contact made by the user which includes a gesture and thereby determining which symbol is selected.
<table>
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