

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 June 2010 (10.06.2010)

PCT

(10) International Publication Number
WO 2010/065328 A3

- (51) International Patent Classification:
G06F 3/041 (2006.01)
- (21) International Application Number:
PCT/US2009/065140
- (22) International Filing Date:
19 November 2009 (19.11.2009)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
12/325,721 1 December 2008 (01.12.2008) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: TOUCH SENSOR PANEL USING REGIONAL AND LOCAL ELECTRODES TO INCREASE NUMBER OF SENSE LOCATIONS

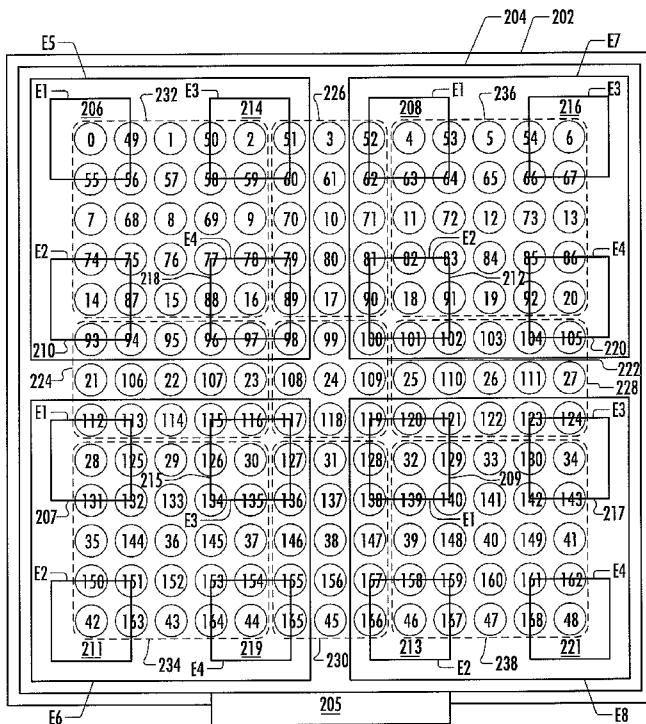


FIG. 2

(57) Abstract: An input sensor for an electronic device (100) which includes a touch sensor panel (104), multiple electrodes and a sensor circuit. The electrodes include multiple regional electrodes and multiple local electrodes. Each regional electrode covers a corresponding region of the touch sensor panel and each local electrode includes multiple pads including one pad located within each of the regional electrodes. The electrodes are distributed so that a touch anywhere across the touch sensor panel is detected by at least one regional electrode and at least one local electrode. A sensor circuit determines a value for each of the electrodes indicating relative change, and compares relative values of the electrodes to identify a location of a touch of the touch sensor panel. The regional electrodes are used to determine a region of a touch and the local electrodes are used to determine a more specific touch location within the determined region.

WO 2010/065328 A3



Published:

(88) Date of publication of the international search report:

2 September 2010

- *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))*

A. CLASSIFICATION OF SUBJECT MATTER**G06F 3/041(2006.01)i**

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 3/041; G08C 21/00; G09G 3/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: touch,pad

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5815141 A1 (PHARES; ROBERT) 29 September 1998 See summary of the invention, claim 1 and fig.1	1,11
Y	See abstract, claim 1, fig.1,5-6 and the related explanations	2-10,12-20
Y	US 2007-0279395 A1 (PHILIPP et al.) 06 December 2007 See abstract, paragraphs [0069]-[0072], claims 1, 5 and figs.2-3	2-10,12-20

 Further documents are listed in the continuation of Box C. See patent family annex.

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"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

06 JULY 2010 (06.07.2010)

Date of mailing of the international search report

07 JULY 2010 (07.07.2010)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

LEE, Cheol Soo

Telephone No. 82-42-481-8525



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2009/065140

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5815141 A1	29.09.1998	None	
US 2007-0279395 A1	06.12.2007	US 2007-279395 A1	06.12.2007