



(51) International Patent Classification:  
G06F 3/041 (2006.01)

(21) International Application Number:  
PCT/US2012/037348

(22) International Filing Date:  
10 May 2012 (10.05.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
61/484,544 10 May 2011 (10.05.2011) US  
61/484,564 10 May 2011 (10.05.2011) 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, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- 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))

[Continued on next page]

(54) Title: A TOUCH INTERFACE DEVICE HAVING AN ELECTROSTATIC MULTITOUCH SURFACE AND METHOD FOR CONTROLLING THE DEVICE

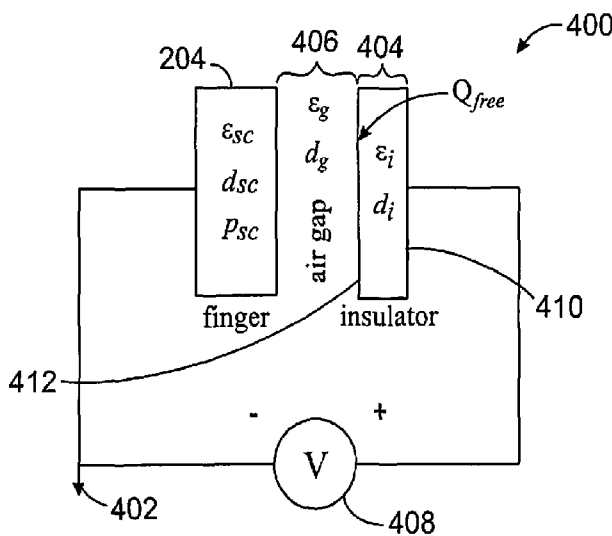


FIG. 4

(57) Abstract: A touch interface device includes a touch surface, a first electrode, and a second electrode. The first electrode is coupled with the touch surface. The first electrode also configured to receive a first haptic actuation electric potential. The second electrode is coupled with the touch surface. The second electrode also is configured to receive a different, second haptic actuation electric potential having an opposite polarity than the first haptic actuation potential. The first and second electrodes generate an electrostatic force that is imparted on one or more appendages of an operator that touches the touch surface above both the first electrode and the second electrode in order to generate a haptic effect.

WO 2012/154972 A3

**(88) Date of publication of the international search report:**  
31 January 2013

**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; G06F 3/02; G06F 3/033; G06F 3/01

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) &amp; Keywords:touch interface,haptic actuation

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2010-105006 A1 (IMMERSSION CORPORATION et al.) 16 September 2010 See abstract; page 9, line 17 - page 12, line 10; claim 1 and figure 3.	1-39
A	US 2010-0079379 A1 (DEMUYNCK RANDOLPH C. et al.) 01 April 2010 See abstract; paragraphs[0057]-[0065]; claim 1 and figures 3-7.	1-39
A	KR 10-2010-0065640 A (SAMSUNG ELECTRONICS CO., LTD.) 17 June 2010 See abstract; paragraphs[0023]-[0041]; claim 1 and figures 3-5.	1-39
A	WO 2010-033522 A2 (MICROSOFT CORPORATION) 25 March 2010 See abstract and claim 1.	1-39

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

\* Special categories of cited documents:

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"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

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"&amp;" document member of the same patent family

Date of the actual completion of the international search

27 NOVEMBER 2012 (27.11.2012)

Date of mailing of the international search report

**28 NOVEMBER 2012 (28.11.2012)**

Name and mailing address of the ISA/KR

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Facsimile No. 82-42-472-7140

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Telephone No. 82-42-481-8120



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2012/037348**

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