

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 2016OPSE8903	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/KR2017/003831	International filing date (<i>day/month/year</i>) 07 April 2017 (07.04.2017)	(Earliest) Priority Date (<i>day/month/year</i>) 27 April 2016 (27.04.2016)
Applicant SAMSUNG ELECTRONICS CO., LTD.		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

the international application in the language in which it was filed

a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box No. II)

3. **Unity of invention is lacking** (See Box No. III)

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the **drawings** to be published with the abstract is Figure No. 6b

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b. none of the figures is to be published with the abstract.

A. CLASSIFICATION OF SUBJECT MATTER**G06F 21/32(2013.01)i, G06K 9/00(2006.01)i, G06F 3/041(2006.01)i, G06F 3/0488(2013.01)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 21/32; H04W 88/02; G06K 9/00; G06F 21/60; G06F 1/32; H04B 1/40; G06F 3/041; G06F 3/0488

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: touchscreen display, pressure sensor, fingerprint sensor, unlock, security policy

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2010-0240415 A1 (JONG HWAN KIM et al.) 23 September 2010 See paragraphs [0049], [0073]-[0076], [0088]-[0091], [0099], [0127]-[0129]; claim 1; and figures 1-2, 4, 11.	1-15
Y	US 2008-0253624 A1 (SHIH-FANG WONG et al.) 16 October 2008 See paragraphs [0026]-[0034]; and figure 4.	1-15
A	KR 10-2015-0092479 A (LG ELECTRONICS INC.) 13 August 2015 See paragraphs [0037]-[0044]; and figure 3.	1-15
A	WO 2016-018085 A1 (SAMSUNG ELECTRONICS CO., LTD.) 04 February 2016 See paragraphs [0217]-[0223]; and figure 14.	1-15
A	KR 10-2011-0108646 A (SK TELECOM CO., LTD.) 06 October 2011 See paragraphs [0056]-[0063]; and figure 4.	1-15

 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 application or patent 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

07 July 2017 (07.07.2017)

Date of mailing of the international search report

10 July 2017 (10.07.2017)

Name and mailing address of the ISA/KR

International Application Division

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2017/003831

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010-0240415 A1	23/09/2010	CN 101853379 A	06/10/2010
		CN 101853379 B	28/05/2014
		EP 2230623 A1	22/09/2010
		KR 10-1549558 B1	03/09/2015
		KR 10-1657549 B1	20/09/2016
		KR 10-2010-0104648 A	29/09/2010
		US 8443199 B2	14/05/2013
US 2008-0253624 A1	16/10/2008	CN 101286190 A	15/10/2008
		US 8019131 B2	13/09/2011
KR 10-2015-0092479 A	13/08/2015	CN 106415569 A	15/02/2017
		EP 3103049 A1	14/12/2016
		US 8949618 B1	03/02/2015
		WO 2015-119324 A1	13/08/2015
WO 2016-018085 A1	04/02/2016	AU 2015-297122 A1	04/02/2016
		CN 106575201 A	19/04/2017
		EP 3175335 A1	07/06/2017
		KR 10-2016-0014481 A	11/02/2016
		US 2016-0034117 A1	04/02/2016
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