

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference P115220	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/SG2018/050598	International filing date (<i>day/month/year</i>) 07 December 2018 (07.12.2018)	(Earliest) Priority Date (<i>day/month/year</i>)
Applicant RAZER (ASIA-PACIFIC) PTE. 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. 1

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.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SG2018/050598**A. CLASSIFICATION OF SUBJECT MATTER****G06F 3/01(2006.01)i, G06F 3/02(2006.01)i, G06F 3/039(2006.01)i, A47B 21/03(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 3/01; G06F 3/0346; G06F 3/041; G06F 3/043; G09G 5/00; G06F 3/02; G06F 3/039; A47B 21/03

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: vibration, feedback, haptic, cushion, interface, lubricating, actuator

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2014-0191973 A1 (STRATEGIC POLYMER SCIENCES, INC.) 10 July 2014 See paragraphs [0039]-[0042]; claim 1; and figures 3, 6-7.	1-8,12-13
Y		9-11,14-30
Y	US 2013-0002584 A1 (LARKHOON LEEM et al.) 03 January 2013 See paragraphs [0034]-[0035]; and figures 7a-7b.	9-11,14-30
A	US 2006-0232564 A1 (HIDEKI NISHIMURA et al.) 19 October 2006 See paragraphs [0026]-[0037]; and figures 1-3.	1-30
A	US 2012-0162143 A1 (YOSHIHIRO KAI et al.) 28 June 2012 See paragraphs [0058]-[0063]; and figures 1-3.	1-30
A	US 2016-0070348 A1 (INTEL CORPORATION) 10 March 2016 See paragraphs [0009]-[0038]; and figures 1-5.	1-30

 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

06 September 2019 (06.09.2019)

Date of mailing of the international search report

06 September 2019 (06.09.2019)

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/SG2018/050598

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2014-0191973 A1	10/07/2014	US 10088936 B2 WO 2014-114979 A2 WO 2014-114979 A3	02/10/2018 31/07/2014 31/12/2014
US 2013-0002584 A1	03/01/2013	US 8866774 B2	21/10/2014
US 2006-0232564 A1	19/10/2006	CN 1831744 A JP 2006-215849 A JP 4516852 B2 KR 10-2006-0089645 A TW 200703073 A TW I327707 B US 8203534 B2	13/09/2006 17/08/2006 04/08/2010 09/08/2006 16/01/2007 21/07/2010 19/06/2012
US 2012-0162143 A1	28/06/2012	CN 102483665 A CN 102483665 B JP 2011-053744 A JP 2011-053745 A JP 5306944 B2 JP 5306945 B2 TW 201112087 A TW I470486 B US 8816981 B2 WO 2011-024713 A1	30/05/2012 10/12/2014 17/03/2011 17/03/2011 02/10/2013 02/10/2013 01/04/2011 21/01/2015 26/08/2014 03/03/2011
US 2016-0070348 A1	10/03/2016	EP 3189401 A1 JP 2017-527039 A JP 6453448 B2 KR 10-2017-0026567 A TW 201626161 A TW I607346 B US 9645646 B2 WO 2016-036443 A1	12/07/2017 14/09/2017 16/01/2019 08/03/2017 16/07/2016 01/12/2017 09/05/2017 10/03/2016