

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

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| Applicant's or agent's file reference 180052CIPPCT | FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below. | |
| International application No. PCT/US2018/018352 | International filing date (<i>day/month/year</i>) 15 February 2018 (15-02-2018) | (Earliest) Priority Date (<i>day/month/year</i>) 10 March 2017 (10-03-2017) |
| Applicant RHYNE, STEPHEN | | |

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 5 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 43.6**bis**(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/US2018/018352

A. CLASSIFICATION OF SUBJECT MATTER
INV. H04M1/60 H04M1/725
ADD.
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)
H04M G01C G06F B60K H04W B60R G07C G06K

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| X | WO 2015/198306 A1 (SAVERONE 2014 LTD [IL]) 30 December 2015 (2015-12-30) | 1-17, 19-28,30 |
| Y | page 2, line 33 - page 4, line 9 page 5, line 4 - line 7 page 12, line 11 - page 18, line 30 page 22, line 24 - page 23, line 7 page 24, line 10 - line 15 page 24, line 31 - page 25, line 4 page 28, line 13 - page 29, line 27 page 32, line 3 - page 35, line 13 figures 1-3,5-7,10-12 ----- -/-- | 18,29 |

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

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| Date of the actual completion of the international search 19 April 2018 | Date of mailing of the international search report 30/04/2018 |
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| Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016 | Authorized officer Banerjea, Robin |
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| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
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| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| Y | US 2011/021234 A1 (TIBBITTS SCOTT FERRILL [US] ET AL) 27 January 2011 (2011-01-27) paragraph [0002] paragraph [0004] paragraph [0103] - paragraph [0104] paragraph [0013] paragraph [0115] paragraph [0117] - paragraph [0121] paragraph [0125] figures 1-3,10 | 18,29 |
| X | US 2011/093161 A1 (ZHOU XUESONG [US] ET AL) 21 April 2011 (2011-04-21) | 9,10, 12-14, 16-21, 23-25, 27-30 |
| Y | paragraph [0024] - paragraph [0038] paragraph [0051] - paragraph [0054] paragraph [0057] - paragraph [0063] figure 1 | 1-8,11, 15,22,26 |
| Y | US 8 731 530 B1 (BREED DAVID S [US] ET AL) 20 May 2014 (2014-05-20) column 1, line 15 - line 67 column 2, line 9 - line 17 column 5, line 30 - line 47 figures 2,3 | 1-8 |
| Y | US 2012/100828 A1 (LEBLANC DANIEL [IL] ET AL) 26 April 2012 (2012-04-26) | 11,22 |
| A | paragraph [0007] paragraph [0015] - paragraph [0017] figures 3-8,13,14 | 13,24 |
| Y | US 2011/294520 A1 (ZHOU XUESONG [US] ET AL) 1 December 2011 (2011-12-01) | 15,26 |
| A | paragraph [0004] paragraph [0009] paragraph [0028] paragraphs [0034] - [0037] paragraph [0054] figures 1,3,5,6 | 16,27 |
| A | US 2014/302834 A1 (JONES STEVEN [US]) 9 October 2014 (2014-10-09) the whole document | 1-30 |
| A | US 2011/063099 A1 (MILLER THOMAS LEE [US] ET AL) 17 March 2011 (2011-03-17) the whole document | 1-30 |
| A | US 2005/070245 A1 (NATH SANJEEV [US] ET AL) 31 March 2005 (2005-03-31) the whole document | 1-30 |
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International application No
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| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
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| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| A | US 2013/316737 A1 (GUBA ROBERT W [US] ET AL) 28 November 2013 (2013-11-28) the whole document ----- | 1-30 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2018/018352

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
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