

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference BABA003403WO	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2016/024069	International filing date ( <i>day/month/year</i> ) 24 March 2016	(Earliest) Priority Date ( <i>day/month/year</i> ) 25 March 2015
Applicant ALIBABA GROUP HOLDING LIMITED		

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 2 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. 2A

- 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/US2016/024069

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06F 17/27; G06K 9/00; G06K 9/12; G06K 9/18; G06K 9/34; G06K 9/46; G06K 9/48 (2016.01)

CPC - G06K 9/00; G06K 9/00422; G06K 9/18; G06K 9/222; G06K 9/4661; G06K 9/6256 (2016.01)

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)

IPC(8) - G06F 17/27; G06K 9/00; G06K 9/12; G06K 9/18; G06K 9/34; G06K 9/46; G06K 9/48; G06K 9/54 (2016.01)

CPC - G06K 9/00; G06K 9/00422; G06K 9/18; G06K 9/222; G06K 9/4661; G06K 9/6256; G06K 9/6835 (2016.01)

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

U.S. Class/Subclass(es): 382/159; 382/171; 382/176; 382/182; 382/185; 382/187; 382/305 (keyword delimited)

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

Orbit, Google Patents, Google Scholar

Search terms used: text line classifier, terminal system font reservoir, extracting features, samples, training models, optical character recognition, detect image, score image, detect text region, pre-determined threshold, character samples, size, rotation angle, font, assigning weight, MSER, stroke width transform, stroke feature transform

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ---	US 2007/0065003 A1 (KELLERMAN et al.) 22 March 2007 (22.03.2007) entire document	1, 5, 8, 12, 13, 17
Y		---
Y	US 2008/0002916 A1 (VINCENT) 03 January 2008 (03.01.2008) entire document	2-4, 6, 7, 9-11, 14-16, 18, 19
Y	US 2008/0002916 A1 (VINCENT) 03 January 2008 (03.01.2008) entire document	2, 9, 14
Y	US 5,031,225 A (TACHIKAWA et al.) 09 July 1991 (09.07.1991) entire document	3, 4, 6, 7, 10, 11, 15, 16
Y	US 2014/0023271 A1 (BAHETI et al.) 23 January 2014 (23.01.2014) entire document	6, 18
Y	US 4,162,482 A (SU) 24 July 1979 (24.07.1979) entire document	7, 19
A	US 2010/0246963 A1 (AL-MUHTASEB et al.) 30 September 2010 (30.09.2010) entire document	1-19
A	US 2010/0310172 A1 (NATARAJAN et al.) 09 December 2010 (09.12.2010) entire document	1-19
A	US 2013/0322757 A1 (PAN et al.) 05 December 2013 (05.12.2013) entire document	1-19
A	US 2013/0330004 A1 (BALA et al.) 12 December 2013 (12.12.2013) entire document	1-19
A	US 2006/0056696 A1 (JUN et al.) 16 March 2006 (16.03.2006) entire document	1-19

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

17 May 2016

Date of mailing of the international search report

20 JUN 2016

Name and mailing address of the ISA/

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