

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

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| Applicant's or agent's file reference WPI16CN0470 | FOR FURTHER ACTION | | See item 4 below |
| International application No. PCT/CN2016/096670 | International filing date (<i>day/month/year</i>) 25 August 2016 (25.08.2016) | Priority date (<i>day/month/year</i>) | |
| International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237 | | | |
| Applicant ALIBABA GROUP HOLDING LIMITED | | | |

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|--|-------------------------------------|---|---------------------|--------------------------|------------|----------|--------------------------|-------------|--|--------------------------|------------|----------------------------|-------------------------------------|-----------|---|--------------------------|------------|-------------------------|--------------------------|-------------|--|--------------------------|--------------|---|
| <p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>3. This report contains indications relating to the following items:</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p> | <input checked="" type="checkbox"/> | Box No. I | Basis of the report | <input type="checkbox"/> | Box No. II | Priority | <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | <input type="checkbox"/> | Box No. IV | Lack of unity of invention | <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | <input type="checkbox"/> | Box No. VI | Certain documents cited | <input type="checkbox"/> | Box No. VII | Certain defects in the international application | <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. II | Priority | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VI | Certain documents cited | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application | | | | | | | | | | | | | | | | | | | | | | |

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| | Date of issuance of this report 26 February 2019 (26.02.2019) |
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From the INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

| | | |
|---|--------------------------------|--|
| Applicant's or agent's file reference WPI16CN0470 | | Date of mailing (day/month/year) 31 May 2017 |
| International application No. PCT/CN2016/096670 | | FOR FURTHER ACTION See paragraph 2 below |
| International filing date (day/month/year) 25 August 2016 | Priority date (day/month/year) | |
| International Patent Classification (IPC) or both national classification and IPC G06F 17/30(2006.01)i | | |
| Applicant ALIBABA GROUP HOLDING LIMITED | | |

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

| | | |
|--------------------------------------|------------------------------------|--------------------|
| Name and mailing address of the ISA/ | Date of completion of this opinion | Authorized officer |
| | | |

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/CN2016/096670

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established 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)).
2. This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a)).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
 - a. (means)
 - on paper
 - in electronic form
 - b. (time)
 - in the international application as filed
 - together with the international application in electronic form
 - subsequently to this Authority for the purposes of search
4. In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/CN2016/096670

| Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement | | |
|---------------------------------|--|-------------|-----|
| 1. Statement | | | |
| Novelty (N) | Claims | <u>2-25</u> | YES |
| | Claims | <u>1</u> | NO |
| Inventive step (IS) | Claims | <u>None</u> | YES |
| | Claims | <u>1-25</u> | NO |
| Industrial applicability (IA) | Claims | <u>1-25</u> | YES |
| | Claims | <u>None</u> | NO |
| 2. Citations and explanations : | | | |
| [1] | 2.1 Cited reference documents | | |
| [2] | D1: CN 103853743 A, 11 June 2014 (11.06.2014) | | |
| [3] | D2: CN 101488026 A, 22 July 2009 (22.07.2009) | | |
| [4] | 2.2 Novelty and Inventive step | | |
| [5] | D1 is the closest prior art, and discloses a distributed system and a log query method therefor, the method comprising (see description, paragraphs [0046] - [0059], and figures 1 and 2): an interaction unit in the system carrying a keyword and time information in a query request and sending same to a control unit; when the control unit receives the query request from the interaction unit, acquiring the keyword and the time information from the query request, inputting the keyword and the time information as a parameter value to a pre-set log query script template, generating a log query script and sending same to a machine cluster (equivalent to a data storage system), wherein the machine cluster comprises one or more machines (equivalent to a database server); and a log query unit of a machine querying a log in a storage unit according to the log query script, and returning the found log to the control unit. | | |
| [6] | It can be seen that all the technical features of claim 1 are disclosed in D1, and claim 1 lacks novelty under PCT Article 33(2). | | |
| [7] | The additional technical features of claims 2-5 are not disclosed in D1, and therefore, claims 2-5 are novel under PCT Article 33(2). However, the above-mentioned additional technical features are all customary means in the art. Therefore, claims 2-5 do not involve an inventive step under PCT Article 33(3). | | |
| [8] | Comparing claim 6 with D1, the differences lie in: (1) an application server; and (2) executing corresponding functions by means of a first acquisition module, a generation module and a receiving module. | | |
| [9] | Comparing claim 11 with D1, the difference merely lies in difference (1) mentioned above. | | |
| [10] | Comparing claim 17 with D1, the differences lie in: difference (1) mentioned above; and (3) executing corresponding functions by means of an acquisition module, an execution module and a feedback module. | | |
| [11] | Comparing claim 23 with D1, the difference merely lies in difference (1) mentioned above. | | |
| [12] | Comparing claim 24 with D1, the differences lie in: difference (1) mentioned above; (4) realizing a query operation for a database server by means of middleware; and (5) executing corresponding functions by means of a first acquisition module, a determination module, a sending module and a second acquisition module. | | |
| [13] | Based on the above-mentioned differences, claims 6-24 are novel under PCT Article 33(2). | | |
| [14] | With regard to difference (1), applying the control unit in D1 to an application server is a customary means in the art. | | |
| [15] | With regard to differences (2), (3) and (5), arranging corresponding functional modules according to functions to be realized is a customary means in the art. | | |
| [16] | With regard to difference (4), D2 discloses (see description, pages 2 and 3, and figure 1): serving-end data collection middleware comprising a service collection and query module which can query data in a | | |

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/CN2016/096670

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability;
citations and explanations supporting such statement

database according to a configuration condition. It can be seen that D2 provides the technical motivation to use middleware to execute a database query function.

[17] Therefore, claims 6, 11, 17, 23 and 24 do not involve an inventive step under PCT Article 33(3).

[18] The additional technical features of claims 7-10, 12-16 and 18-22 are all customary means in the art. Therefore, claims 7-10, 12-16 and 18-22 do not involve an inventive step under PCT Article 33(3).

[19] Claim 25 sets forth a data query system. It can be seen in conjunction with the comments on claims 6-10, 17-22 and 24 that claim 25 is novel under PCT Article 33(2), but does not involve an inventive step under PCT Article 33(3).

[20] 2.3 Industrial applicability

[21] Claims 1-25 can be made or used in the industry of communications, and therefore comply with PCT Article 33(4).