

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
 518057
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 Geosciences Base, No.8 Yuexing 3rd Road, High-Tech
 Industrial Estate, Nanshan, Shenzhen, Guangdong

CHINA WISPRO INTELLECTUAL PROPERTY
 LLP.:

PCT

WRITTEN OPINION OF THE
 INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

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| Date of mailing (day/month/year) 31 October 2018 | |
| Applicant's or agent's file reference WOCN1813411 | FOR FURTHER ACTION See paragraph 2 below |
| International application No. PCT/CN2018/099862 | International filing date (day/month/year) 10 August 2018 |
| Priority date (day/month/year) 11 August 2017 | |
| International Patent Classification (IPC) or both national classification and IPC H04W 72/02(2009.01)i | |
| Applicant JRD COMMUNICATION (SHENZHEN) LTD | |

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/ STATE INTELLECTUAL PROPERTY OFFICE OF THE P.R.CHINA China 6, Xitucheng Rd., Jimen Bridge, Haidian District, Beijing 100088 | Date of completion of this opinion 24 October 2018 | Authorized officer LI,Xiaoli |
| Facsimile No. (86—10) 62019451 | Telephone No. 86-(10)-53961772 | |

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/CN2018/099862

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:
 - a. forming part of the international application as filed:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. furnished subsequent to the international filing date for the purposes of international search only:
 - in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
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 forming part of 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**

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PCT/CN2018/099862

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

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|-------------------------------|--------|-------------|-----|
| Novelty (N) | Claims | <u>1-15</u> | YES |
| | Claims | <u>None</u> | NO |
| Inventive step (IS) | Claims | <u>None</u> | YES |
| | Claims | <u>1-15</u> | NO |
| Industrial applicability (IA) | Claims | <u>1-15</u> | YES |
| | Claims | <u>None</u> | NO |

2. Citations and explanations :

- [1] Reference is made to the following document:
- [2] D1: SPS and Grant-free operation for NR, 3GPP TSG-RAN WG2#NR AdHoc#2, R2-1706687, INTERDIGITAL (29.06.2017)
- [3] Novelty and Inventive step
- [4] D1 discloses SPS and Grant-free operation for NR (sections 2-4): RAN1 agreed that “if network configures, L1 signaling for activation/deactivation and/or modification on parameters for UL data transmission without UL grant can be applied”. We think that as in LTE SPS, it should always be possible for the network to utilize L1 signaling for activation, deactivation or modification of the parameters and there does not seem to be any benefit in disabling this functionality by RRC. Therefore, we propose that UL SPS and “UL data transmission without grant” are not differentiated, i.e. NR should specify a single scheme called SPS to support UL data transmission with reduced DCI overhead and any additional enhancement should be specified as part of SPS. In addition, the L1 signaling for activation/deactivation agreed to be supported in RAN1 can be based on LTE principles as a starting point, i.e. where the activation command contains all applicable grant parameters.
- [5] The subject-matter of claim 1 differs from D1 in that: D1 does not disclose L1 signaling includes an indication.
- [6] Therefore, the subject-matter of claims 1-12 is novel in the sense of PCT Article 33(2).
- [7] With regard to the above difference, D1 discloses L1 signaling for activation/deactivation and/or modification on parameters for UL data transmission without UL grant can be applied, and, it is common knowledge that BS tells UE configuration and parameters by an indication included in a control message. Therefore, it would be obvious for a person skilled in the art to know that L1 signaling includes an indication for activation/deactivation and/or modification on parameters for UL data transmission without UL grant. Hence, the subject-matter of claim 1 does not involve an inventive step in the sense of PCT Article 33(3).
- [8] The additional features of claims 2-12 are disclosed by D1 in part, and the other is common knowledge. Therefore, the subject-matter of claims 2-12 does not involve an inventive step in the sense of PCT Article 33(3).
- [9] The subject-matter of claims 13-15 refers to a UE, or a BS, or a non-transitory computer readable medium for performing the methods of claims 1-12. It is common knowledge that a UE and a BS both comprising a processor, a storage unit, a communications interface. And, it is also common knowledge that a non-transitory computer readable medium having computer readable instructions stored thereon for execution by a processor to perform a method. Referring to the comments on claims 1-12, the subject-matter of claims 13-15 is not novel in the sense of PCT Article 33(2), and does not involve an inventive step in the sense of PCT Article 33(3).
- [10] Industrial applicability
- [11] Claims 1-15 meet the criteria set out in PCT 33(4).