

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 87086495PCT2	FOR FURTHER ACTION	See item 4 below
International application No. PCT/CN2022/087722	International filing date (<i>day/month/year</i>) 19 April 2022 (19.04.2022)	Priority date (<i>day/month/year</i>) 26 April 2021 (26.04.2021)
International Patent Classification (IPC) or national classification and IPC See relevant information in Form PCT/ISA/237		
Applicant HUAWEI TECHNOLOGIES CO., LTD.		

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).
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

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.

3. This report contains indications relating to the following items:

<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 and 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
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).

	Date of issuance of this report 24 October 2023 (24.10.2023)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Xiaofan Tang e-mail pct.team2@wipo.int

From the INTERNATIONAL SEARCHING AUTHORITY

To:

PCTWRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference 87086495PCT2		Date of mailing (day/month/year)	19 July 2022
		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/CN2022/087722	International filing date (day/month/year) 19 April 2022	Priority date (day/month/year) 26 April 2021	
International Patent Classification (IPC) or both national classification and IPC G06F 3/0481(2022.01)i; G06F 3/0484(2022.01)i; G06F 3/0488(2022.01)i			
Applicant HUAWEI TECHNOLOGIES CO., LTD.			

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

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|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <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 Rule 43bis.1(a)(i) with regard to novelty, inventive step and 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 |

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/CN2022/087722

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 43bis.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 13ter.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 13ter.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13ter.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**

International application No.

PCT/CN2022/087722

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	1-11	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-11	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims	None	NO

2. Citations and explanations:

[1] The following documents are cited:

[2] D1: CN 111684778 A, 18 September 2020

[3] D2: CN 110958475 A, 03 April 2020

[4] D3: CN 104581402 A, 29 April 2015

[5] 1. Claim 1 relates to a device discovery method. D1 discloses an application function implementation method, and discloses (claims 1-4): a first electronic device establishing a first wireless link by using a first wireless communications protocol; the first electronic device displaying a first interface, wherein the first interface comprises: a first control associated with data that a user of the first electronic device wants to share; in response to the first operation, the first electronic device displaying a shortcut menu, wherein the shortcut menu comprises a second control; the first electronic device receiving a second operation for the second control; in response to the second operation, the first electronic device displaying a discovery device list, wherein the discovery device list comprises an identifier of a second electronic device; the first electronic device receiving a third operation for the identifier of the second electronic device; in response to the third operation, the first electronic device establishing a second wireless link with the second electronic device by means of a second wireless communications protocol, wherein the first electronic device and the second electronic device are associated with each other; and the first electronic device sending first information to the second electronic device by means of the second wireless link, wherein the first information comprises data to be shared and an identifier, and the identifier is used for indicating an application module.

[6] Comparing claim 1 with D1, the differences lie in: (1) the first device detecting M second devices, wherein each second device comprises: a device in the same network as the first device, and/or a device logging in to the same user account as the first device; and (2) the N second devices comprising the M second devices installed with a second application program among the M second devices; the second application program and the first application program providing the same resource; and the first device calling a resource of a second device corresponding to an identifier on which the first operation acts. The technical problems actually to be solved thereby are: (1) the specific means for selecting a discovery device; and (2) the specific interaction means after a device is discovered. Therefore, claims 1-8 comply with PCT Article 33(2).

[7] With regard to difference (1), D2 discloses the same features (as provided in claim 12) and provides the motivation for combination.

[8] With regard to difference (2), D3 discloses (description, paragraphs [0047]-[0049]): determining whether there is an input device and corresponding software in each second electronic device and whether the second electronic device can interact with a first electronic device. Furthermore, calling a resource is merely a selection of customary means.

[9] In summary, it would have been obvious to arrive at claim 1 by combining D1-D3 and the above-mentioned customary means. Therefore, claim 1 does not comply with PCT Article 33(3).

[10] 2. With regard to claims 2-8, the additional features of claim 2 are disclosed in D3 (see description, paragraph [0055]).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/CN2022/087722

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
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| | <p>[11] The third operation of D1 is the second operation of claim 3.</p> <p>[12] The additional features of claim 4 are disclosed in D1 (see the comments on claim 1).</p> <p>[13] The additional features of claims 5-8 are customary means.</p> <p>[14] Therefore, claims 2-8 do not comply with PCT Article 33(3).</p> <p>[15] 6. On the basis of similar reasoning, claims 9-11 comply with PCT Article 33(2), but do not comply with PCT Article 33(3).</p> <p>[16] 7. Claims 1-11 are industrially applicable and comply with PCT Article 33(4).</p> |
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