

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

|   |  |
|---|--|
| Applicant's or agent's file reference<br>see form PCT/ISA/220 | <b>FOR FURTHER ACTION</b><br>See paragraph 2 below |
|---|--|

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|--|--|--|
| International application No.<br>PCT/US2019/063628 | International filing date (day/month/year)<br>27.11.2019 | Priority date (day/month/year)<br>27.11.2018 |
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International Patent Classification (IPC) or both national classification and IPC  
INV. H04R3/00

Applicant  
GOOGLE LLC

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 usually 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.

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|--|--|---|
| Name and mailing address of the ISA:<br> European Patent Office<br>P.B. 5818 Patentlaan 2<br>NL-2280 HV Rijswijk - Pays Bas<br>Tel. +31 70 340 - 2040<br>Fax: +31 70 340 - 3016 | Date of completion of<br>this opinion<br>see form<br>PCT/ISA/210 | Authorized Officer<br>De Haan, Aldert<br>Telephone No. +31 70 340-0 |
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**Box No. I Basis of the opinion**

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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:

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

|                               |             |                       |
|-------------------------------|-------------|-----------------------|
| Novelty (N)                   | Yes: Claims | <u>5-10, 15-19</u>    |
|                               | No: Claims  | <u>1-4, 11-14, 20</u> |
| Inventive step (IS)           | Yes: Claims |                       |
|                               | No: Claims  | <u>1-20</u>           |
| Industrial applicability (IA) | Yes: Claims | <u>1-20</u>           |
|                               | No: Claims  |                       |

2. Citations and explanations

see separate sheet

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Reference is made to the following documents:

- D1 WO 2017/048476 A1 (APPLE INC [US]) 23 March 2017 (2017-03-23)
- D2 US 2015/245129 A1 (DUSAN SORIN V [US] ET AL) 27 August 2015 (2015-08-27)
- D3 WO 2018/183020 A1 (MICROSOFT TECHNOLOGY LICENSING LLC [US]) 4 October 2018 (2018-10-04)
- D4 WO 2018/183636 A1 (BOSE CORP [US]) 4 October 2018 (2018-10-04)

2. Claims 1, 11 and 20 are not supported by the description as required by Article 6 PCT, as their scope is broader than justified by the description and drawings.

Figure 1 and 2 clearly show that the application relates to microphones of portable computing devices, such as mobile phones. Paragraphs 0002 and 0017 of the description refer to earbuds. Claim 1 however relates to just any device, which may be in wireless communication with another device, where at least one of them comprises a microphone and a loudspeaker.

3. The features of claims 1, 11 and 20 are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

4. The present application does not meet the criteria of Article 33(2) PCT, because the subject-matter of claims 1, 11 and 20 is not new.

4.1. Claim 1

4.1.1. Document D1 discloses:

"A system, comprising:

a first device in wireless communication with a second device,

(par. 0013)

the first device comprising:

a speaker;

(par. 0013)

a microphone configured to operate in an active mode wherein it captures audio input for transmission to a computing device, and in an inactive mode in which it does not capture audio input; and

(par. 0012, 0013)

one or more processors;

(par. 0012)

wherein when the first device microphone is in the active mode and the second device microphone is in the inactive mode, the one or more processors of the first device are configured to:

receive speech input through the first device microphone;

detect an endpoint in the received speech input; and

provide an opportunity for the second device microphone to switch to the active mode."

(par. 0034, 0060)

4.1.2. Document D2 also discloses the features of claim 1:

Document D2 discloses:

"A system, comprising:  
a first device in wireless communication with a second device,

(par. 0019, 0020)

the first device comprising:

a speaker;

(par. 0020)

a microphone configured to operate in an active mode wherein it captures audio input for transmission to a computing device, and in an inactive mode in which it does not capture audio input; and

(par. 0019, 0020)

one or more processors;

(par. 0020)

wherein when the first device microphone is in the active mode and the second device microphone is in the inactive mode, the one or more processors of the first device are configured to:

receive speech input through the first device microphone;

detect an endpoint in the received speech input; and

provide an opportunity for the second device microphone to switch to the active mode."

(par. 0042)

#### 4.2. Claims 11 and 20

The same reasoning applies, *mutatis mutandis*, to the subject-matter of the corresponding independent claims 11 and 20, which therefore are also considered not new.

5. Dependent claims 2 - 10 and 12 - 19 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.

- the technical features of claim 2 and 12 are disclosed in document D1 (par. 0060) and document D2 (par. 0042)

- the technical features of claim 3 and 13 are disclosed in document D1 (par. 0060, "leaving the other earbud microphones in a standby or periodic sampling mode") and document D2 (par. 0033)

- the technical features of claim 4 and 14 are disclosed in document D1 (par. 0060) and document D2 (par. 0042)

- the technical features of claim 6, 9, 16 and 18 are disclosed in document D3 (par. 0056)

- the technical features of claim 10 and 19 are disclosed in document D4 (par. 0018)

The technical features of claims 5, 7, 8, 15 and 17 are merely one of several straightforward possibilities which the skilled person would select, depending on the circumstances, without exercising inventive skill.

**Re Item VIII**

**Certain observations on the international application**

It is clear from the description in par. 0004 - 0006 that features describing the second device are essential to the definition of the invention.

Claim 1 clearly states that the first device comprises a speaker and a microphone. The components of the second device are not explicitly claimed in claim 1 but this is clarified in par. 0004 - 0006 of the description.

Since independent claim 1 does not contain these features it does not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.