

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>WPI19TW0867</b>	<b>FOR FURTHER ACTION</b>	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. <b>PCT/CN2019/119071</b>	International filing date ( <i>day/month/year</i> ) <b>18 November 2019</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>27 November 2018</b>
Applicant <b>MEDIATEK INC.</b>		

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 3 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. 1

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/CN2019/119071

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
H04W 72/04(2009.01)i		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) H04L; H04W		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) CNABS,CNTXT,CNKI,VEN,EPTXT,USTXT,WOTXT,3GPP: UE, BS, physical uplink control channel, PUCCH, resource, set, index, indicator, downlink control information, DCI, payload, size, uplink control information, UCI, determine		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Samsung. "3GPP TSG RAN WG1 Meeting 90bis, R1-1717655" <i>Resource Allocation for PUCCH transmission</i> , 13 October 2017 (2017-10-13), pages 1 to 4	1-16
A	WO 2017049641 A1 (HUAWEI TECHNOLOGIES CO., LTD.) 30 March 2017 (2017-03-30) the whole document	1-16
A	CN 106060930 A (BEIJING SAMSUNG COMMUNICATION TECHNOLOGY) 26 October 2016 (2016-10-26) the whole document	1-16
A	CN 108809610 A (HUAWEI TECHNOLOGIES CO., LTD) 13 November 2018 (2018-11-13) the whole document	1-16
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 <b>20 January 2020</b>		Date of mailing of the international search report <b>10 February 2020</b>
Name and mailing address of the ISA/CN <b>National Intellectual Property Administration, PRC 6, Xitucheng Rd., Jimen Bridge, Haidian District, Beijing 100088 China</b> Facsimile No. (86-10)62019451		Authorized officer <b>MEN,Xiaojing</b> Telephone No. 86-010-62087677

**INTERNATIONAL SEARCH REPORT**  
**Information on patent family members**

International application No.

**PCT/CN2019/119071**

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
WO	2017049641	A1	30 March 2017	CN	107005373	A	01 August 2017
CN	106060930	A	26 October 2016	EP	3281334	A4	14 March 2018
				US	2018054280	A1	22 February 2018
				EP	3281334	A1	14 February 2018
				WO	2016163720	A1	13 October 2016
CN	108809610	A	13 November 2018	CN	108809610	B	11 June 2019
				US	2018213524	A1	26 July 2018
				EP	3343987	A1	04 July 2018
				CN	107113820	A	29 August 2017
				WO	2017049463	A1	30 March 2017
				RU	2690767	C1	05 June 2019
				JP	2018534823	A	22 November 2018
				US	10433290	B2	01 October 2019
				ZA	201802158	B	30 January 2019
				BR	112018005458	A2	09 October 2018
				EP	3343987	A4	12 September 2018
				IN	201817011091	A	13 July 2018
				VN	58426	A	25 July 2018