

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2020/079556

**A. CLASSIFICATION OF SUBJECT MATTER**

H04L 5/00(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

H04L; H04W; H04Q

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)

CNPAT, CNKI, WPI, EPODOC, 3GPP: 解调参考信号, DMRS, 端口, 配置, 分配, 指示, CDM, 组, QCL, 非准共址, NC-JT, 索引, 编号, 前置, 前导, Front-loaded, 秩, rank, 类型, port, configuration, indication, group, index, type

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 108809609 A (HUAWEI TECHNOLOGIES CO., LTD.) 13 November 2018 (2018-11-13) claims 1-12, description, paragraphs [0014]-[0178], [0241]-[0352], [0719]-[0728]	1-40
X	CATT. "3GPP TSG RAN WG1 #96bis R1-1904561" <i>Consideration on multi-TRP/panel transmission</i> , 30 March 2019 (2019-03-30), sections 2-3	1-40
A	US 2019068308 A1 (SAMSUNG ELECTRONICS CO., LTD.) 28 February 2019 (2019-02-28) entire document	1-40
A	WO 2019000177 A1 (MOTOROLA MOBILITY LLC.) 03 January 2019 (2019-01-03) entire document	1-40
A	CATT. "3GPP TSG RAN WG1 Meeting #92bis R1-1803736" <i>Remaining issues on codeword mapping</i> , 20 April 2018 (2018-04-20), entire document	1-40

 Further documents are listed in the continuation of Box C.
  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

03 June 2020

Date of mailing of the international search report

15 June 2020

Name and mailing address of the ISA/CN

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

International application No.

**PCT/CN2020/079556**

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
CN	108809609	A	13 November 2018	WO	2019029329	A1	14 February 2019
				CA	3053864	A1	14 February 2019
				KR	20190110618	A	30 September 2019
				EP	3584975	A1	25 December 2019
				IN	201947033357	A	24 January 2020
				VN	67450	A	25 December 2019
US	2019068308	A1	28 February 2019	WO	2019039917	A1	28 February 2019
				EP	3639462	A1	22 April 2020
				CN	111052662	A	21 April 2020
				KR	20190022252	A	06 March 2019
WO	2019000177	A1	03 January 2019	CN	110771232	A	07 February 2020
				US	20200119874	A1	16 April 2020
				IN	201937046707	A	20 December 2019