

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference EIE230339PCT		FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/CN2023/093882	International filing date (<i>day/month/year</i>) 12 May 2023	(Earliest) Priority Date (<i>day/month/year</i>)	
Applicant NOKIA SHANGHAI BELL CO., LTD. et al.			

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. 5
☒ 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/CN2023/093882

A. CLASSIFICATION OF SUBJECT MATTER

H04W 72/231(2023.01)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)

IPC: 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)

3GPP,CNXTX,DWPI,ENTXTC,CNKI:active+, inactive+, deactiv+, MAC, CE, CSI, resource, configuration, report, set, subset

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2017128800 A1 (QUALCOMM INCORPORATED) 03 August 2017 (2017-08-03) description, paragraphs [0058]-[0138]	1-33
X	WO 2022047759 A1 (QUALCOMM INCORPORATED) 10 March 2022 (2022-03-10) description, paragraphs [0082]-[0136]	1-33
X	CN 111316568 A (TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)) 19 June 2020 (2020-06-19) description, paragraphs [0073]-[0117]	1-33
X	CN 113647045 A (TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)) 12 November 2021 (2021-11-12) description, paragraphs [0069]-[0131]	1-33
X	QUALCOMM INCORPORATED. "R2-1810456, Corrections on SP CSI reporting on PUCCH Activation/Deactivation MAC CE" 3GPP TSG-RAN WG2 Meeting #AH-1807, 06 July 2018 (2018-07-06), sections 2 and 5	1-33



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

"D" document cited by the applicant in the international application

"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

12 December 2023

Date of mailing of the international search report

19 December 2023

Name and mailing address of the ISA/CN

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2023/093882

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)		Publication date (day/month/year)	
WO	2017128800	A1	03 August 2017	CA	3008326	A1	03 August 2017
				US	2018375560	A1	27 December 2018
				WO	2017128175	A1	03 August 2017
				BR	112018015225	A2	18 December 2018
				EP	3409041	A1	05 December 2018
				JP	2019511853	A	25 April 2019
				AU	2016390195	A1	05 July 2018
				US	2021351826	A1	11 November 2021
				CN	108605237	A	28 September 2018
				IN	201847022264	A	16 November 2018
				WO	2017128175	A1	03 August 2017

WO	2022047759	A1	10 March 2022	None			

CN	111316568	A	19 June 2020	US	2020412506	A1	31 December 2020
				WO	2019097482	A1	23 May 2019
				US	2022376868	A1	24 November 2022
				EP	3711179	A1	23 September 2020
				CN	115833883	A	21 March 2023

CN	113647045	A	12 November 2021	US	2022190991	A1	16 June 2022
				EP	3949220	A1	09 February 2022
				WO	2020201124	A1	08 October 2020
