

INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2020/004327

A. CLASSIFICATION OF SUBJECT MATTER

H04W 74/00(2009.01)i, H04W 72/04(2009.01)i, H04W 72/12(2009.01)i, H04W 74/08(2009.01)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)

H04W 74/00; H04L 5/00; H04W 72/04; H04W 72/12; H04W 74/08

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 Korean utility models and applications for utility models: IPC as above
 Japanese utility models and applications for utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS (KIPO internal) & Keywords: PRACH(physical random access channel), RO(RACH occasion), timing gap duration, SCS(subcarrier spacing), PRACH format

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| Y | SAMSUNG. Enhancements to Initial Access Procedure for NR-U. R1-1902258. 3GPP TSG RAN WG1 Meeting #96. Athens, Greece. 15 February 2019 See sections 3-3.1; and figure 3. | 1-15 |
| Y | NOKIA et al. Initial Access Signals and Channels for NR-U. R1-1902435. 3GPP TSG RAN WG1 Meeting #96. Athens, Greece. 15 February 2019 See section 3.1; and figure 4. | 1-15 |
| Y | WO 2018-062841 A1 (LG ELECTRONICS INC.) 05 April 2018 See paragraphs [0152]-[0160]; and figure 11. | 5,10,15 |
| A | LG ELECTRONICS. Initial access and mobility for NR-U. R1-1902041. 3GPP TSG RAN WG1 Meeting #96. Athens, Greece. 16 February 2019 See section 3; and figure 6. | 1-15 |
| A | VIVO. Discussion on enhancements to initial access procedure. R1-1901676. 3GPP TSG RAN WG1 Meeting #96. Athens, Greece. 15 February 2019 See section 2.3. | 1-15 |



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

22 JULY 2020 (22.07.2020)

Date of mailing of the international search report

23 JULY 2020 (23.07.2020)

Name and mailing address of the ISA/KR



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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2020/004327

| Patent document cited in search report | Publication date | Patent family member | Publication date |
|---|---------------------|-------------------------|---------------------|
| WO 2018-062841 A1 | 05/04/2018 | US 2019-0215217 A1 | 11/07/2019 |