



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 17 78 99 20

Classification of the application (IPC):
H04B 7/0404, H04B 7/0456

Technical fields searched (IPC):
H04B, H04L

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	SAMSUNG : "MIMO for 5G new radio interface: sub-6GHz", 02 April 2016 (2016-04-02) URL: http://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_84b/Docs/ [retrieved on 02 April 2016 (2016-04-02)] XP051080019 * Section 4.1 *	1, 6-8, 13-15
X	US 2012082102 A1 (KANG BYEONG WOO [KR] ET AL) 05 April 2012 (2012-04-05) * paragraphs [0063], [0064], [0071]; figure 10 *	1-5, 8-12, 14, 15
X	US 2009262695 A1 (CHEN RUNHUA [US] ET AL) 22 October 2009 (2009-10-22) * paragraphs [0043], [0081], [0082]; figures 2,3 *	1-5, 8-12, 14, 15

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 13 March 2019	Examiner Epple, Ulrich
---------------------------	---	---------------------------

CATEGORY OF CITED DOCUMENTS

- | | |
|---|--|
| X: particularly relevant if taken alone | P: intermediate document |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention |
| A: technological background | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure | D: document cited in the application |
| &: member of the same patent family, corresponding document | L: document cited for other reasons |

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 17 78 99 20

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 13-03-2019
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 2012082102	A1	05-04-2012	KR	20100095354 A	30-08-2010
			US	2012082102 A1	05-04-2012
			WO	2010095884 A2	26-08-2010
US 2009262695	A1	22-10-2009	CN	102017451 A	13-04-2011
			CN	104052585 A	17-09-2014
			US	2009262695 A1	22-10-2009
			US	2014362943 A1	11-12-2014
			WO	2009132092 A2	29-10-2009