



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 18 73 60 23

Classification of the application (IPC):
H04W 68/02, H04W 52/02, H04B 7/0408, H04B 7/022, H04B 7/08

Technical fields searched (IPC):
H04B, H04W

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	HUAWEI HISILICON: "Discussion on beam management aspects for DL MIMO", 13 November 2016 (2016-11-13)	1, 4, 5, 8, 9, 12, 13
Y	URL: http://www.3gpp.org/ftp/Meetings_3GPP_SYNC/RAN1/Docs/ [retrieved on 13 November 2016 (2016-11-13)] XP051175642 * Sections 2.1, 2.2, 2.3 *	2, 3, 6, 7, 10, 11, 14, 15
X	SAMSUNG: "QCL relations for different types of RS", 13 November 2016 (2016-11-13)	1, 4, 5, 8, 9, 12, 13
Y	URL: http://www.3gpp.org/ftp/Meetings_3GPP_SYNC/RAN1/Docs/ [retrieved on 13 November 2016 (2016-11-13)]	3, 7, 11, 15
A	XP051176439 * Sections 3, 3.1 *	2, 6, 10, 14
Y	US 2016192439 A1 (PHUYAL UMESH [US] ET AL) 30 June 2016 (2016-06-30) * paragraph [0039] *	2, 3, 6, 7, 10, 11, 14, 15
X,P	WO 2017123060 A1 (SAMSUNG ELECTRONICS CO LTD [KR]) 20 July 2017 (2017-07-20) * the whole document *	1-15

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 The Hague	Date of completion of the search 08 August 2019	Examiner Tavares, José
------------------------------	--	---------------------------

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 18 73 60 23

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 08-08-2019.
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 2016192439 A1	30-06-2016	CN 107113689 A	29-08-2017
		EP 3241386 A1	08-11-2017
		KR 20170099877 A	01-09-2017
		TW 201633818 A	16-09-2016
		US 2016192439 A1	30-06-2016
		WO 2016109032 A1	07-07-2016
WO2017123060 A1	20-07-2017	US 2017207843 A1	20-07-2017
		WO 2017123060 A1	20-07-2017