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(54) **VEHICLE WITH OPTIMIZED SYSTEM FOR TRANSCIVING DATA**

(57) Vehicle (100) comprising a system (200) for transceiving data on board the vehicle itself, characterised in that the said system (200) for transceiving data comprises at least a first set of millimeter-wave antennas (1) for transceiving data in the 5G frequency band, and wherein, relative to a first and second planes (E, F) per-

pendicular to each other that virtually divide the vehicle (100) into four quadrants (A, B, C, D), the at least one first set of millimeter-wave antennas (1) comprises at least four antennas (1) which are installed each in a corresponding quadrant of said four quadrants (A, B, C, D).

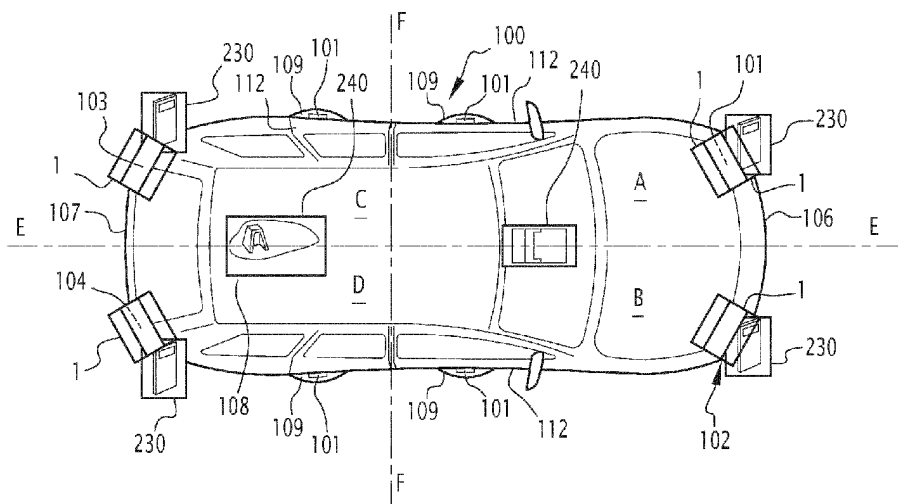


FIG.10



EUROPEAN SEARCH REPORT

Application Number

EP 22 15 7411

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EPO FORM 1503 03:82 (P04C01)

DOCUMENTS CONSIDERED TO BE RELEVANT			
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A	* paragraph [0130] - paragraph [0190]; figures 3-5 *	3-5, 10	H01Q9/04 H01Q21/06 H01Q19/00
X	US 2018/288672 A1 (SAI SEII [JP]) 4 October 2018 (2018-10-04)	1, 2, 5-9	H01Q21/20 H01Q21/28
A	* paragraph [0027] - paragraph [0055]; figure 3 *	3, 4, 10	H01Q5/30
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Y	* paragraph [0002] - paragraph [0027];	4	
A	figures 1, 2 *	5, 7-10	
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X, P	WO 2021/133408 A1 (INTEL CORP [US]) 1 July 2021 (2021-07-01)	1, 3, 4, 7-10	TECHNICAL FIELDS SEARCHED (IPC) H01Q
	* paragraph [0119] - paragraph [0239]; figures 18-35 *		
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 14 June 2022	Examiner Sípal, Vít
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-10

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-10

Optimum coverage of the vehicle surroundings

2. claims: 11, 12

Improvement of antenna matching

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

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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
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