

Title (en)
VEHICLE ANTENNA DISC OR VEHICLE DISC ANTENNA FOR A TOLL PAYMENT SYSTEM

Title (de)
FAHRZEUGANTENNENSCHIBE ODER FAHRZEUGSCHEIBENANTENNE FÜR EIN MAUTBEZAHLSYSTEM

Title (fr)
VITRE SERVANT D'ANTENNE DE VÉHICULE OU VITRE SERVANT D'ANTENNE DE VÉHICULE POUR UN SYSTÈME DE PÉAGE ROUTIER

Publication
EP 3374972 A1 20180919 (DE)

Application
EP 16793881 A 20161109

Priority
• EP 15193874 A 20151110
• EP 2016077072 W 20161109

Abstract (en)
[origin: WO2017081052A1] The invention relates to a vehicle antenna disc (100) for operating a toll payment system, at least comprising: a disc (1); a first receiver (10) for receiving a first signal (S1) from a toll booth transmitter (31); a signal converter (5) for converting the first signal (S1) into a second signal (S2) and for converting a third signal (S3) into a fourth signal (S4); a second transmitter (21) for transmitting the second signal (S2) to a mobile radio device (6); a second receiver (20) for receiving the third signal (S3) from the mobile radio device (6); a first transmitter (11) for transmitting the fourth signal (S4) to a toll booth receiver (30), wherein the receiver (10, 20) and the transmitter (11, 21) are designed for receiving and transmitting short-range radio signals (S1-S4).

IPC 8 full level
B32B 17/00 (2006.01); **G07B 15/06** (2011.01); **H01Q 1/12** (2006.01)

CPC (source: EP KR RU US)
B32B 17/10 (2013.01 - RU); **B32B 17/10036** (2013.01 - EP KR US); **B32B 17/10192** (2013.01 - EP KR US);
B32B 17/10761 (2013.01 - EP KR US); **B32B 17/10779** (2013.01 - KR); **B32B 17/10788** (2013.01 - EP KR US); **G06Q 20/04** (2013.01 - KR);
G06Q 20/30 (2013.01 - RU); **G07B 15/06** (2013.01 - RU); **G07B 15/063** (2013.01 - EP KR US); **G07F 17/00** (2013.01 - RU);
H01Q 1/1271 (2013.01 - EP KR US); **H04B 5/00** (2013.01 - RU); **H04W 4/80** (2018.01 - US); **B32B 2605/08** (2013.01 - EP KR US);
H01Q 1/3208 (2013.01 - US); **H04W 84/12** (2013.01 - US)

Citation (search report)
See references of WO 2017081052A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2017081052 A1 20170518; BR 112018001398 A2 20180911; CA 2993482 A1 20170518; CN 108027988 A 20180511;
CN 108027988 B 20210618; DE 202016009078 U1 20220120; EP 3374972 A1 20180919; JP 2018534678 A 20181122;
JP 6609044 B2 20191120; KR 102032203 B1 20191015; KR 20180069006 A 20180622; MX 2018005815 A 20180801;
RU 2703749 C1 20191022; US 10262468 B2 20190416; US 2018240284 A1 20180823

DOCDB simple family (application)
EP 2016077072 W 20161109; BR 112018001398 A 20161109; CA 2993482 A 20161109; CN 201680002619 A 20161109;
DE 202016009078 U 20161109; EP 16793881 A 20161109; JP 2018518739 A 20161109; KR 20187013129 A 20161109;
MX 2018005815 A 20161109; RU 2018121283 A 20161109; US 201615740341 A 20161109