

Title (en)  
METHOD AND DEVICE FOR DETECTING FOG AT NIGHT

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR ERKENNUNG VON NEBEL IN DER NACHT

Title (fr)  
PROCEDE ET DISPOSITIF DE DETECTION DE BROUILLARD, LA NUIT

Publication  
**EP 2622324 A2 20130807 (FR)**

Application  
**EP 11779751 A 20110928**

Priority  
• FR 1057802 A 20100928  
• FR 2011052262 W 20110928

Abstract (en)  
[origin: WO2012042171A2] The invention relates to a method for detecting the presence of an element (fog, rain, etc.) disrupting visibility of a scene illuminated by a headlight (105, 107) at night. According to the method: a) an image is acquired using a camera (120); b1) the light sources are detected in the image; b2) the presence of the disrupting element is detected on the basis of the halation (H) appearing in the vicinity of the light sources in the image; c) the presence of the disrupting element is detected in the image on the basis of the backscattering of the light emitted by the light sources; d) the results of the detections carried out in steps b2) and c) are weighted so as to output an indication of the presence of the element disrupting the visibility of the scene. Said method provides satisfactory results in an illuminated or non-illuminated environment. The invention also relates to a computer program and device for implementing said method.

IPC 8 full level  
**G01N 21/53** (2006.01); **B60Q 1/04** (2006.01); **B60R 16/023** (2006.01); **G01S 17/02** (2006.01); **G01W 1/00** (2006.01); **G06K 9/00** (2006.01); **G06T 7/00** (2006.01)

CPC (source: EP KR US)  
**B60Q 1/04** (2013.01 - KR); **B60R 16/023** (2013.01 - KR); **G01N 21/53** (2013.01 - KR); **G01N 21/538** (2013.01 - EP US); **G01W 1/00** (2013.01 - EP KR US); **G06F 18/00** (2023.01 - KR); **G06V 20/58** (2022.01 - US); **G06V 20/584** (2022.01 - EP US); **B60Q 2300/312** (2013.01 - EP US); **G01N 2021/4709** (2013.01 - EP US)

Citation (search report)  
See references of WO 2012042171A2

Citation (examination)  
• JP 2008267837 A 20081106 - TOYOTA MOTOR CORP  
• EP 2195688 A2 20100616 - VALEO SCHALTER & SENSOREN GMBH [DE]  
• US 2004143380 A1 20040722 - STAM JOSEPH S [US], et al

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

DOCDB simple family (publication)  
**FR 2965354 A1 20120330; FR 2965354 B1 20121012**; EP 2622324 A2 20130807; JP 2013546038 A 20131226; JP 5952822 B2 20160713; KR 20130138791 A 20131219; US 2014029790 A1 20140130; US 9171216 B2 20151027; WO 2012042171 A2 20120405; WO 2012042171 A3 20130718

DOCDB simple family (application)  
**FR 1057802 A 20100928**; EP 11779751 A 20110928; FR 2011052262 W 20110928; JP 2013530786 A 20110928; KR 20137010774 A 20110928; US 201113876138 A 20110928