

Title (en)

METHOD AND DEVICE FOR DETERMINING THE CURVATURE OF A VEHICLE LANE

Title (de)

VERFAHREN UND VORRICHTUNG ZUM BESTIMMEN DER KRÜMMUNG EINER FAHRSPUR EINES FAHRZEUGS

Title (fr)

PROCEDE ET DISPOSITIF POUR DETERMINER LA COURBE D'UNE VOIE DE CIRCULATION DE VEHICULE

Publication

EP 1506365 A1 20050216 (DE)

Application

EP 03727462 A 20030509

Priority

- DE 10221900 A 20020516
- EP 0304888 W 20030509

Abstract (en)

[origin: WO03098098A1] The invention relates to a method and device for determining the curvature of a vehicle lane. The inventive method involves the determination of the vehicle speed, the yaw rate and the steering angle. The method is characterized in that, according to the measured vehicle speed and the measured yaw rate, the curvature of the lane is calculated by using a single-lane model based on the vehicle speed and the measured steering-wheel angle or by using a yaw rate model based on the measured yaw rate and the vehicle speed. The inventive device comprises a vehicle speed sensor (2), a yaw rate sensor (1) and a steering angle sensor (14). Said device is characterized by having a decision unit (7), which is coupled to both the vehicle speed sensor (2) and the yaw rate sensor (1) and which receives, as input signals, the vehicle speed (vSP) and measured yaw rate (dpsi/dt), and these input signals enable a single-lane model or a yaw rate model to be selected as a calculation model on the basis of the speed (vSP) and the measured yaw rate (dpsi/dt). The inventive device is also characterized by having a calculating device (8, 9, 11) with which the curvature of the lane can be calculated by using the selected model. When using the single-lane model, the curvature is determined based on the vehicle speed and the measured steering angle. When using the yaw rate model, the curvature is calculated based on the measured yaw rate and the vehicle speed.

IPC 1-7

F21V 7/16; F21V 14/00; G01C 21/26; B60K 31/02; B60Q 1/12

IPC 8 full level

G01C 21/26 (2006.01)

CPC (source: EP)

G01C 21/26 (2013.01); **B60W 2050/0031** (2013.01); **B60W 2520/10** (2013.01); **B60W 2520/14** (2013.01); **B60W 2552/20** (2020.02); **B60W 2552/30** (2020.02)

Citation (search report)

See references of WO 03098098A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 03098098 A1 20031127; DE 10221900 A1 20031127; EP 1506365 A1 20050216

DOCDB simple family (application)

EP 0304888 W 20030509; DE 10221900 A 20020516; EP 03727462 A 20030509