

Title (en)
METHOD FOR CALIBRATING AN ASSEMBLY USING AT LEAST ONE OMNIDIRECTIONAL CAMERA AND AN OPTICAL DISPLAY UNIT

Title (de)
VERFAHREN ZUM KALIBRIEREN EINER ANORDNUNG MIT MINDESTENS EINER OMNIDIREKTIONALEN KAMERA UND EINER OPTISCHEN ANZEIGEEINHEIT

Title (fr)
PROCÉDÉ D'ÉTALONNAGE D'UN ENSEMBLE CONSTITUÉ D'AU MOINS UNE CAMÉRA OMNIDIRECTIONNELLE ET D'UNE UNITÉ D'AFFICHAGE OPTIQUE

Publication
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Application
EP 08802513 A 20080923

Priority
• EP 2008008023 W 20080923
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Abstract (en)
[origin: WO2009049750A2] The invention relates to a method for calibrating an assembly consisting of at least one omnidirectional camera (2) that is located on a vehicle (1) and an optical display unit. In said method: an image that is displayed by the display unit reproduces the perspective of an imaginary virtual camera above the object (1); an image from the virtual camera is projected into an object co-ordinate system and the resultant co-ordinates (Xw, Xw.Y) are projected into the omnidirectional camera; during the projection of the image of the virtual camera into the object co-ordinate system, pixels (xp) of the image of the virtual camera within an imaginary circle or ellipse (1) around the object are projected onto an imaginary plane, whilst pixels (xp) of the image outside the circle or ellipse are transformed by the virtual camera into the object co-ordinate system in such a way that they are projected onto an imaginary surface that rises from the edge of the circle or ellipse.

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CPC (source: EP US)
G06T 3/047 (2024.01 - EP US); **G06T 7/80** (2017.01 - EP US); **G06V 20/56** (2022.01 - EP US)

Citation (examination)
• EP 1302365 A2 20030416 - MATSUSHITA ELECTRIC IND CO LTD [JP]
• EP 2254334 A1 20101124 - SANYO ELECTRIC CO [JP]
• JURGEN ACKERMANNI: "Brief Paper Robust Decoupling, Ideal Steering Dynamics and Yaw Stabilization of 4WS Cars*", AUTOMATICA, vol. 30, no. 11, 1 January 1994 (1994-01-01), pages 1761 - 1768, XP055176526
• MATUSZYK L ET AL: "Stereo panoramic vision for monitoring vehicle blind-spots", INTELLIGENT VEHICLES SYMPOSIUM, 2004 IEEE PARMA, ITALY JUNE 14-17, 2004, PISCATAWAY, NJ, USA, IEEE, 14 June 2004 (2004-06-14), pages 31 - 36, XP010727438, ISBN: 978-0-7803-8310-4, DOI: 10.1109/IVS.2004.1336351

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