Title (en)

METHOD FOR CALIBRATING 3D IMAGE SENSORS

Title (de)

VERFAHREN ZUR KALIBRIERUNG VON 3D-BILDAUFNEHMERN

Title (fr)

PROCEDE D'ETALONNAGE D'APPAREILS DE PRISE DE VUES 3D

Publication

EP 1573356 A1 20050914 (DE)

Application

EP 03799433 A 20031218

Priority

- DE 0304182 W 20031218
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Abstract (en)

[origin: WO2004055544A1] The invention relates to a method for calibrating 3D image sensors. Work tolerances, temperature variations and aging processes result in that the various pixels in a receiving array deviate from one another to different degrees. The aim of the invention is therefore to calibrate the entire receiving array with respect to every pixel. During operation of the 3D image sensor there is usually no reference scene available with which every pixel could be calibrated based on known phase relations. According to the invention, the entire receiving array is illuminated at defined intervals exclusively with one modulated light source. Alternatively, the emitted light source can be used via a deflection device. Two different distances can be simulated by carrying out two calibrating measurements with different phase relations between emitted and received signal, thereby making it possible to detect distance-related errors for every pixel individually.

IPC 1-7

G01S 7/497; G01S 17/89

IPC 8 full level

G01S 17/89 (2020.01); **G01S 7/497** (2006.01)

CPC (source: EP US)

G01S 7/497 (2013.01 - EP US); **G01S 17/89** (2013.01 - EP US)

Citation (search report)

See references of WO 2004055544A1

Citation (examination)

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- LUAN XUMING: "Experimental Investigation of Photonic Mixer Device and Development of TOF 3D Ranging Systems Based on PMD Technology", INTERNET CITATION, 1 January 2001 (2001-01-01), pages Complete, XP007911249, Retrieved from the Internet <URL:http://www.zess.uni-siegen.de/cms/diss/2001/luan/luan.pdf> [retrieved on 20100121]

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DOCDB simple family (application)

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