

Title (en)
OPTICAL STEREO DEVICE AND AUTOFOCUS METHOD THEREFOR

Title (de)
OPTISCHE STEREOVORRICHTUNG UND AUTOFOKUSVERFAHREN DAFÜR

Title (fr)
DISPOSITIF STÉRÉO OPTIQUE ET PROCÉDÉ D'AUTOFOCUS S'Y RAPPORTANT

Publication
EP 2553929 A1 20130206 (EN)

Application
EP 11709649 A 20110321

Priority
• EP 10003380 A 20100329
• EP 2011001388 W 20110321
• EP 11709649 A 20110321

Abstract (en)
[origin: EP2373043A1] The present invention provides an optical stereo device with an autofocus feature as well as a corresponding autofocus method for optical stereo devices. The optical stereo device comprises imaging means configured to provide a stereo image of an object of interest by means of combining a right eye image and a left eye image and a control unit operatively connected to the imaging means and configured to receive the right eye image and the left eye image and to adjust the focus position of the imaging means. The control unit is further configured to: (i) identify a feature in the right eye image and identify the same feature in the left eye image; (ii) determine the direction and/or the magnitude of a displacement vector defined by the displacement of the feature identified in the right eye image relative to the same feature identified in the left eye image; and (iii) to adjust the focus position relative to the identified feature on the basis of the direction and/or the magnitude of the displacement vector. According to preferred embodiments, the imaging means comprise a first and a second imaging unit and the control unit is further configured to adjust the focus position by increasing the focus position in case the displacement of the identified feature is a shift to the right or decreasing the focus position in case the displacement is a shift to the left.

IPC 8 full level
H04N 13/239 (2018.01); **H04N 5/232** (2006.01)

CPC (source: EP KR US)
G06T 7/97 (2016.12 - EP KR); **H04N 13/236** (2018.04 - KR); **H04N 13/239** (2018.04 - EP KR US); **H04N 13/246** (2018.04 - KR); **H04N 13/25** (2018.04 - KR); **H04N 13/296** (2018.04 - KR); **H04N 23/61** (2023.01 - EP KR US); **H04N 23/675** (2023.01 - EP KR US); **G06T 2207/10012** (2013.01 - EP); **G06T 2207/10056** (2013.01 - EP)

Citation (search report)
See references of WO 2011120645A1

Citation (examination)
• EP 2136230 A1 20091223 - SONY CORP [JP]
• KROTKOV E ET AL: "STEREO RANGING WITH VERGING CAMERAS", IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE, IEEE COMPUTER SOCIETY, USA, vol. 12, no. 12, 1 December 1990 (1990-12-01), pages 1200 - 1205, XP000168821, ISSN: 0162-8828, DOI: 10.1109/34.62610

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)
EP 2373043 A1 20111005; BR 112012025607 A2 20190402; CN 102948155 A 20130227; CN 102948155 B 20161109; EP 2553929 A1 20130206; JP 2013528006 A 20130704; JP 5886827 B2 20160316; KR 20130009996 A 20130124; RU 2012145888 A 20140510; RU 2576485 C2 20160310; WO 2011120645 A1 20111006

DOCDB simple family (application)
EP 10003380 A 20100329; BR 112012025607 A 20110321; CN 201180022979 A 20110321; EP 11709649 A 20110321; EP 2011001388 W 20110321; JP 2013501666 A 20110321; KR 20127027813 A 20110321; RU 2012145888 A 20110321