

Title (en)
SYSTEM AND METHOD FOR CALCULATING PHYSICAL DIMENSIONS FOR FREELY MOVABLE OBJECTS IN WATER

Title (de)
SYSTEM UND VERFAHREN ZUR BERECHNUNG DER PHYSIKALISCHEN ABMESSUNGEN FÜR FREI BEWEGLICHE OBJEKTE IN WASSER

Title (fr)
SYSTÈME ET PROCÉDÉ POUR CALCULER DES DIMENSIONS PHYSIQUES POUR OBJETS POUVANT SE DÉPLACER LIBREMENT DANS L'EAU

Publication
EP 2936051 A4 20160824 (EN)

Application
EP 13864165 A 20131220

Priority

- NO 20121541 A 20121220
- NO 2013050231 W 20131220

Abstract (en)
[origin: WO2014098614A1] Method and system for calculating physical dimensions for freely movable objects in water, by illuminating the object or projecting a known or selected light pattern (13) on the object by means of at least one light source (10) at selected wavelength or wavelengths, recording illuminated object or objects with the projected light pattern (13) by means of recording means (11, 11a-b) in the form of at least one 2D camera provided with filters (12, 12a-b) arranged to only accept light having selected wavelengths or provided with image producing sensors arranged to only collect light with selected wavelengths, including generation of a 3D model based on recorded images and/or video from the recording means (11, 11a-b) as basis for calculating the physical dimensions.

IPC 8 full level
G01B 11/25 (2006.01); **A01K 61/00** (2006.01); **G01B 11/04** (2006.01); **G01B 11/24** (2006.01); **G06V 10/145** (2022.01); **G06V 20/64** (2022.01)

CPC (source: EP US)
A01K 61/95 (2017.01 - EP); **G01B 11/25** (2013.01 - EP US); **G06V 10/145** (2022.01 - EP US); **G06V 20/653** (2022.01 - EP US); **Y02A 40/81** (2018.01 - EP)

Citation (search report)

- [A] WO 2010098954 A2 20100902 - BODY SURFACE TRANSLATIONS INC [US], et al
- [A] US 7399220 B2 20080715 - KRIESEL MARSHALL S [US], et al
- [IY] PIOTR JASIOBEDZKI ET AL: "Underwater 3D modelling and photosynthetic life detection", OCEANS, 2012, IEEE, 14 October 2012 (2012-10-14), pages 1 - 9, XP032299756, ISBN: 978-1-4673-0829-8, DOI: 10.1109/OCEANS.2012.6404779
- [A] "Digital Image Processing, 5th edition", 2002, SPRINGER, article BERND JAHNE: "3-D imaging", pages: 205 - 216, XP055288616
- [YA] CLEMENT PIERRE M ET AL: "Fishery applications of optical technologies", ICES COOPERATIVE RESEARCH REPORT RAPPORT DES RECHERCHES COLLECTIVES, April 2012 (2012-04-01), XP055288261, Retrieved from the Internet <URL:www.vliz.be/imisdocs/publications/236653.pdf> [retrieved on 20160713]
- [I] BRUNO F ET AL: "Experimentation of structured light and stereo vision for underwater 3D reconstruction", ISPRS JOURNAL OF PHOTOGRAMMETRY AND REMOTE SENSING, AMSTERDAM [U.A.] : ELSEVIER, AMSTERDAM, NL, vol. 66, no. 4, 23 February 2011 (2011-02-23), pages 508 - 518, XP028224089, ISSN: 0924-2716, [retrieved on 20110303], DOI: 10.1016/J.ISPRSJPRS.2011.02.009
- [A] JUNJIE LIU ET AL: "Practical issues and development of underwater 3D laser scanners", EMERGING TECHNOLOGIES AND FACTORY AUTOMATION (ETFA), 2010 IEEE CONFERENCE ON, IEEE, PISCATAWAY, NJ, USA, 13 September 2010 (2010-09-13), pages 1 - 8, XP031937167, ISBN: 978-1-4244-6848-5, DOI: 10.1109/ETFA.2010.5641223
- [A] BONIN-FONT FRANCISCO ET AL: "Imaging systems for advanced underwater vehicles", JOURNAL OF MARITIME RESEARCH: JMR, vol. 8, no. 1, 2011, ES, pages 65 - 86, XP055093772, ISSN: 1697-4840

Citation (examination)

- WO 2009008733 A1 20090115 - FEED CONTROL NORWAY AS [NO], et al
- ALMANSA C ET AL: "Use of laser scanning to evaluate turbot (*Scophthalmus maximus*) distribution in raceways with different water velocities", AQUACULTURAL ENGINEERING, vol. 51, November 2012 (2012-11-01), pages 7 - 14, XP028944568, ISSN: 0144-8609, DOI: 10.1016/J.AQUAENG.2012.04.002
- See also references of WO 2014098614A1

Cited by
CN111491508A; CN111511201A; CN111511202A; CN111511203A

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