

Title (en)  
SYSTEMS AND METHODS FOR THREE-DIMENSIONAL VIDEO GENERATION

Title (de)  
SYSTEME UND VERFAHREN ZUR ERZEUGUNG DREIDIMENSIONALER VIDEOS

Title (fr)  
SYSTÈMES ET PROCÉDÉS DE GÉNÉRATION DE VIDÉO TRIDIMENSIONNELLE

Publication  
**EP 2462539 A4 20141022 (EN)**

Application  
**EP 10807018 A 20100803**

Priority  
• US 23128509 P 20090804  
• US 2010044229 W 20100803

Abstract (en)  
[origin: WO2011017310A1] A device for generating a three-dimensional (3D) video based on a two dimensional (2D) image sequence including at least one 2D image includes: an object segmentation and tracking module configured to segment out objects in the 2D image and track the objects in the 2D image sequence; an object classification module configured to classify the objects in the 2D image; an object orientation estimation module configured to estimate orientations of the objects and generate depth information for the 2D image; a scene structure estimation module configured to estimate a scene structure in the 2D image; an object topological relationship determination module configured to determine a topological relationship of the objects in the 2D image; and a depth-image based rendering module configured to generate the 3D video based on the depth information for the 2D image and the topological relationship of the objects.

IPC 8 full level  
**G06K 9/34** (2006.01)

CPC (source: EP)  
**G06T 7/187** (2016.12); **G06T 7/536** (2016.12); **H04N 13/264** (2018.04); **G06T 2207/10004** (2013.01)

Citation (search report)  
• [XYI] US 2009116732 A1 20090507 - ZHOU SAMUEL [CA], et al  
• [Y] SEBASTIANO BATTIATO ET AL: "Depth map generation by image classification", PROCEEDINGS OF SPIE, S P I E - INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, US, vol. 5302, 1 January 2004 (2004-01-01), pages 95 - 104, XP002527303, ISSN: 0277-786X, ISBN: 978-0-8194-9876-2  
• [Y] XIAO-LING DENG ET AL: "Automatic Depth Map Estimation of Monocular Indoor Environments", MULTIMEDIA AND INFORMATION TECHNOLOGY, 2008. MMIT '08. INTERNATIONAL CONFERENCE ON, IEEE, PISCATAWAY, NJ, USA, 30 December 2008 (2008-12-30), pages 646 - 649, XP031477084, ISBN: 978-0-7695-3556-2  
• See references of WO 2011017310A1

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