Title (en)

OBJECT RECOGNITION SYSTEM BASED ON AN ADAPTIVE 3D GENERIC MODEL

Title (de)

OBJEKTERKENNUNGSSYSTEM BASIEREND AUF EINEM ADAPTIVEN GENERISCHEN 3D-MODELL

Title (fr)

SYSTÈME DE RECONNAISSANCE D'OBJETS BASÉ SUR UN MODÈLE GÉNÉRIQUE 3D ADAPTATIF

Publication

EP 3555802 A1 20191023 (FR)

Application

EP 17811644 A 20171121

Priority

- FR 1662455 A 20161214
- FR 2017053191 W 20171121

Abstract (en)

[origin: CA3046312A1] The invention relates to a method for automatically configuring a system for recognizing a class of objects of variable morphology, comprising the following steps: providing a machine learning system with an initial data set (10) sufficient to recognize instances of objects of the class in a sequence of images of a target scene; providing a generic three-dimensional model specific to the class of objects, whose morphology is definable by a set of parameters; acquiring a sequence of images of the scene with the aid of a camera (12); recognizing image instances (14) of objects of the class in the acquired sequence of images using the initial data set; mapping the generic three-dimensional model (16) with recognized image instances (14); recording ranges of variation of the parameters (20) resulting from the mappings of the generic model; synthesizing multiple three-dimensional objects (22) on the basis of the generic model by varying the parameters in the recorded ranges of variation; and completing the data set (10) of the learning system by projections of the synthesized objects (24) in the plane of the images.

IPC 8 full level

G06V 10/772 (2022.01)

CPC (source: EP IL KR US)

G06F 18/2148 (2023.01 - IL US); **G06F 18/24** (2023.01 - IL US); **G06F 18/28** (2023.01 - IL KR US); **G06N 20/00** (2018.12 - KR); **G06T 15/04** (2013.01 - US); **G06T 17/20** (2013.01 - US); **G06V 10/772** (2022.01 - EP US); **G06V 20/64** (2022.01 - EP KR US)

Citation (search report)

See references of WO 2018109298A1

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

FR 3060170 A1 20180615; **FR 3060170 B1 20190524**; CA 3046312 A1 20180621; CN 110199293 A 20190903; EP 3555802 A1 20191023; IL 267181 A 20190829; IL 267181 B 20221101; IL 267181 B2 20230301; JP 2020502661 A 20200123; JP 7101676 B2 20220715; KR 102523941 B1 20230420; KR 20190095359 A 20190814; US 11036963 B2 20210615; US 2019354745 A1 20191121; WO 2018109298 A1 20180621

DOCDB simple family (application)

FR 1662455 A 20161214; CA 3046312 A 20171121; CN 201780076996 A 20171121; EP 17811644 A 20171121; FR 2017053191 W 20171121; IL 26718119 A 20190610; JP 2019531411 A 20171121; KR 20197020073 A 20171121; US 201716469561 A 20171121