

Title (en)

METHOD FOR IDENTIFYING AN OBJECT INSTANCE AND/OR ORIENTATION OF AN OBJECT

Title (de)

VERFAHREN ZUR ERKENNUNG EINER OBJEKTINSTANZ UND/ODER ORIENTIERUNG EINES OBJEKTS

Title (fr)

PROCÉDÉ DE RECONNAISSANCE D'UNE INSTANCE D'OBJET ET/OU D'UNE ORIENTATION D'UN OBJET

Publication

EP 3685303 A1 20200729 (DE)

Application

EP 18759883 A 20180815

Priority

- DE 102017216821 A 20170922
- EP 2018072085 W 20180815

Abstract (en)

[origin: WO2019057402A1] The invention relates to a method for identifying an object instance of located objects (10) in noisy environments (14) by means of an artificial neural network (CNN), having the steps of: recording a plurality of images (x) of at least one object (10) for the purpose of obtaining a plurality of samples (s) containing image data (x), object identity (c) and orientation (q); generating a training set (Strain) and a template set (Sdb) from the samples; training the artificial neural network (CNN) using the training set (Strain) and a loss function (L), determining the object instance and/or the orientation of the object (10) by evaluating the template set (Sdb) using the artificial neural network. The invention proposes that the loss function used for training has a dynamic margin.

IPC 8 full level

G06K 9/00 (2006.01); **G06T 7/70** (2017.01)

CPC (source: EP US)

G06F 17/11 (2013.01 - US); **G06F 18/214** (2023.01 - US); **G06F 18/22** (2023.01 - US); **G06N 3/08** (2013.01 - US); **G06T 7/74** (2016.12 - EP US); **G06V 10/82** (2022.01 - EP US); **G06V 20/64** (2022.01 - EP US); **G06T 2207/10028** (2013.01 - EP); **G06T 2207/20081** (2013.01 - EP US); **G06T 2207/20084** (2013.01 - EP)

Citation (search report)

See references of WO 2019057402A1

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)

WO 2019057402 A1 20190328; CN 111149108 A 20200512; DE 102017216821 A1 20190328; EP 3685303 A1 20200729; US 2020211220 A1 20200702

DOCDB simple family (application)

EP 2018072085 W 20180815; CN 201880060873 A 20180815; DE 102017216821 A 20170922; EP 18759883 A 20180815; US 201816646456 A 20180815