CENTRUM TRANSFERU TECHNOLOGII POLITECHNIKI POZNAŃSKIEJ

Invitation to tender for a license / purchase of rights to solution from Poznań University of Technology entitled:

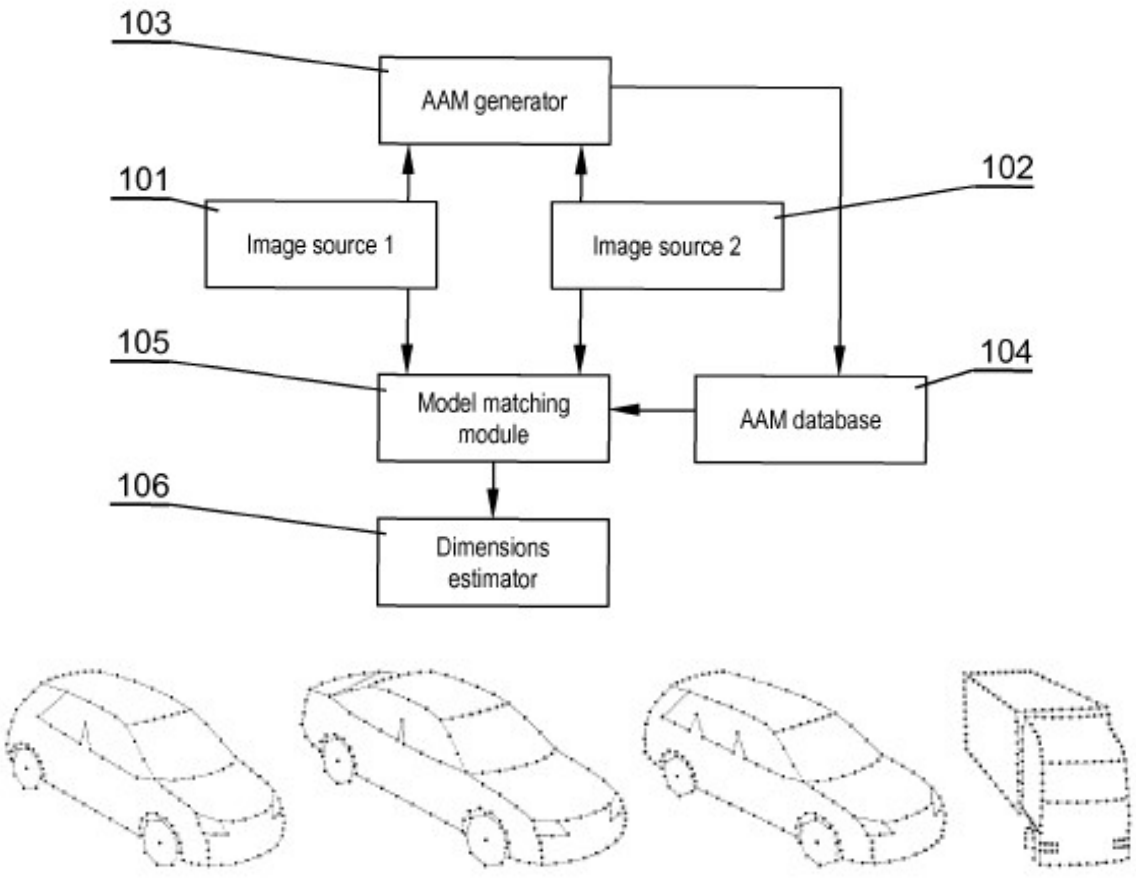
A system and method for object dimension estimation

Type of solution

Invention

Idea of solution

The subject of the invention is a system and method of object size estimation with the use of three-dimensional models. In particular, the invention relates to a road traffic surveillance system for the purpose of estimating vehicle sizes. The components of computer vision include such activities as: scene reconstruction, event detection, object tracking on image sequences, object recognition, machine learning, indexing, motion estimation, image reproduction. The system includes two image sources (101,102), for example two stereoscopic cameras of the surveillance system. Images from sources (101, 102) can be used to generate a database of 3D Morphable Model (103), stored in the 3DMM model database module (104), containing three-dimensional shapes of typical objects for which they are to be designated sizes, e.g. different types of vehicles: hatchback, sedan, station wagon, truck. The 3DMM models along with the images from the sources (101, 102) are entered into the model fit (105). Once the model is fitted to the image, the dimensions of the object can be computed in the dimension estimator (106).



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Solution advantages / Market advantage

Computer vision can be used in road traffic surveillance systems, for example to estimate vehicle sizes, e.g. to enable automatic toll collection, to identify oversized vehicles that exceed the legal dimensions or to identify vehicles that cannot move, e.g. tunnels, under bridges, etc. The system for estimating the size of an object and the method of estimating the size of an object can also be used to estimate the size of other objects, such as, for example, human figures, packages in sorting plants, products on production lines, etc.

Clients

Video surveillance, monitoring, vehicle traffic control.
More information: http://multimedia.edu.pl/projects/POIG132/Flyer-Cars.pdf

Technology Readiness Level (TRL)

TRL 7 - system prototype demonstration in operational environment

Status of legal protection

Patent no. EP 3073442 validated: PL, DE, FR, GB
https://patents.google.com/patent/EP3073442B1/en?oq=EP+3073442
Patent no. US 9430850
https://patents.google.com/patent/US9430850B1/en?oq=US9430850
Patent no. US 9384417
https://patents.google.com/patent/US9384417B1/en?oq=US+9384417

Preferred form of commercialization

Non-exclusive license
Exclusive license
Sale of patent rights
Spin-off company
R&D and implementation projects

Form of transfer of rights

Patent documentation.

Additional information

1. This Invitation to submit offers does not constitute an offer within the meaning of the provisions of the Civil Code.
2. Poznan University of Technology will reject the offer if it contains an abnormally low price in relation to the value of the solution.
3. Poznan University of Technology, in order to determine whether the offer contains an abnormally low

price in relation to the value of the solution, will ask the Tenderer to provide explanations within a specified time limit regarding the elements of the offer affecting the price.

4. If in the competition procedure it is not possible to select the best offer due to the fact that offers of the same price have been submitted, the Poznan University of Technology will call the Tenderers who submitted these offers to submit additional offers within the time limit specified by the Poznan University of Technology.
5. Poznan University of Technology reserves the right to cancel the competition procedure if the submitted offers contain prices whose value will not exceed the value of the solution.
6. Poznan University of Technology reserves the right to negotiate with selected Bidders.
7. Poznan University of Technology has the right to withdraw from the procedure without giving any reason, without choosing an offer.
8. The conclusion of the contract is conditional on the fulfillment of procedures provided for by legal regulations applicable to universities.

Method of submitting offers

Offers should be submitted in Polish, in writing to the address of the Technology Transfer Center of the Poznan University of Technology or electronically to the unit's e-mail address.

Contact details

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