

There are no translations available.

5 października 2016



Inteligentny System Kompleksowej Identyfikacji Pojazdów – ISKIP został wdrożony w Polsce i kilku krajach europejskich. W związku z planowanym wdrożeniem ISKIP w USA Instytut Badawczy Dróg i Mostów uzyskał amerykański patent na ten wynalazek.

Twórcami rozwiązania objętego patentem są: Michał Karkowski, Tadeusz Dzienis, Cezary Dołęga i Paweł Mrówka.

Inteligentny System Kompleksowej Identyfikacji Pojazdów - ISKIP to uniwersalny, rozwojowy system automatycznej identyfikacji pojazdów, dokonywanej na podstawie równoległego rozpoznawania jego cech takich jak rodzaj (osobowy, dostawczy, ciężarowy, autobus itp.), kolor, marka, typ oraz numer rejestracyjny.

Rozpoznawanie wszystkich wyżej wymienionych cech pojazdu dokonywane jest jedynie na podstawie analizy zdjęcia pojazdu, bez potrzeby jakiegokolwiek ingerencji technicznej w strukturę i otoczenie drogi lub innego punktu pracy systemu.

Inteligentny System Kompleksowej Identyfikacji Pojazdów - ISKIP może być instalowany zarówno w wersji stacjonarnej, jak i mobilnej. Może być też integrowany z innymi elementami Inteligentnych Systemów Transportu – tzn. systemami ważenia dynamicznego (Weight In Motion), systemami pomiaru prędkości przejazdowej, systemami wykrywania przejazdu na czerwonym świetle, itp.

The
United
States
of
America



The Director of the United States
Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b) See the Maintenance Fee Notice on the inside of the cover

Michelle K Lee

Director of the United States Patent and Trademark Office

MAINTENANCE FEE NOTICE

If the application for this patent was filed on or after December 12, 1980, maintenance fees are due three years and six months, seven years and six months, and eleven years and six months after the date of the grant, or within a grace period of six months thereafter upon payment of a surcharge as provided by law. The amount, number and timing of the maintenance fees required may be changed by law or regulation. Certain payment of the applicable maintenance fee is required in the United States Patent and Trademark Office on or before the date the fee is due or within a grace period of six months thereafter the patent will expire at the end of such grace period.

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If the application for this patent was filed on or after June 8, 1995, the term of this patent begins on the date on which the patent issues and ends twenty years from the filing date of the application or, if the application contains a specific reference to an earlier filed application or application under 35 U.S.C. 101, 102, 361(a), or 361(b), twenty years from the filing date of the earliest such application ("the twenty-year term"), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b), and any extension as provided by 35 U.S.C. 154(b) or 154(c) or any disclaimer under 35 U.S.C. 211.

If this application was filed prior to June 8, 1995, the term of this patent begins on the date on which this patent issues and ends on the later of seventeen years from the date of the grant of this patent or the twenty-year term set forth above for patents resulting from applications filed on or after June 8, 1995, subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b), and any extension as provided by 35 U.S.C. 156 or any disclaimer under 35 U.S.C. 211.



(12) **United States Patent**
Karkowski et al.

(10) **Patent No.:** **US 9,396,403 B2**
(45) **Date of Patent:** **Jul. 19, 2016**

(54) **METHOD OF VEHICLE IDENTIFICATION AND A SYSTEM FOR VEHICLE IDENTIFICATION**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No. **14/359,306**

(22) PCT Filed: **Dec. 31, 2012**

(86) PCT No. **PCT/EP2012/077109**

§ 371 (c)(1),
(2) Date: **May 20, 2014**

(87) PCT Pub. No. **WO2014/101970**

PCT Pub. Date: **Jul. 3, 2014**

(65) **Prior Publication Data**

US 2015/0294174 A1 Oct. 15, 2015

(51) **Int. Cl.**
G06K 9/18 (2006.01)
G06K 9/32 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC **G06K 9/18** (2013.01); **G06F 17/30256** (2013.01); **G06K 9/325** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC **G06F 17/30256**; **G06K 2209/15**; **G06T 2207/3052**
See application file for complete search history.

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(57) **ABSTRACT**

A method for vehicle identification to determine at least one vehicle characteristic, comprising: obtaining an input image (101) of the vehicle from an image source (101); normalization of the input image (301) of the vehicle in a normalization unit (103, 104) to obtain a normalized image; determining the vehicle characteristic in a classification unit (111, 112) by comparing parameters of a normalized image obtained in a parametrization unit (107-108) with parameters of reference images obtained from a reference database (113, 114). Normalization in the normalization unit (103, 104) comprises the steps of: detecting a registration plate area (303) within the input image (301); processing the input image (301) basing on normalization attributes defining at least one scaling coefficient (x_{norm} , y_{norm} , v_{norm}); choosing from the scaled image (307) a RoI area (308) of a normalized size and location dependent on the location of the registration plate area (303); and presenting data from the RoI area (308) as a normalized image (311).

10 Claims, 8 Drawing Sheets

