FORM 2
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COMPLETE SPECIFICATION

(See section 10 and rule 13)

Title: ELECTRONIC VEHICLE IDENTIFICATION SYSTEM

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PREAMBLE TO THE DESCRIPTION:

The following specification particularly describes the invention and the manner in which it is to be performed.

(1) FIELD OF THE INVENTION

The present invention generally relates to the field of online vehicle identification system. The invention, particularly relates to an electronic vehicle system for identifying authenticity of a vehicle using a device. An authorize person may identify authenticity of the vehicle based on a plurality of data associated with the vehicle number and stored in said RTO server.

(2) BACKGROUND OF THE INVENTION

When a buyer purchases a new vehicle, the dealer may need to issues a TR (To Register) sticker. It may be a temporary number which may be valid only for one month. Further, the district's RTO to officially register the vehicle and get a standard license plate. The process of registration may include verification of the vehicle, address, ID proof, license, insurance, or the like.

Hence, in the RTO database all the plurality of data associated with the vehicle and owner of the vehicle may be stored. But to access the data, an authorize person may be limited to the office and the workspace. Moreover, the number of challans registered now-a-days increases exponentially because of the absence of documents of the driver. Hence, in the IT growing world, the problem may need to be solved by developing software which can provide all the documents and other details of the Vehicle and its owner, only through the Vehicle's number.

A number of different type of the tools and methods for replacing/changing the electronic vehicle identification system are available in the prior art. For example, the following patents are provided for their supportive teachings and are all generallyincorporated by reference: US8344849B2 disclosesa method for assuring that the operator of a vehicle is an authorized driver, the method including utilizing an onboard, multi-mode driver identification system to ascertain whether an operator is an authorized driver. A first driver

identification procedure is performed on a present operator of the vehicle and determining whether the present operator is an authorized or unauthorized driver of the vehicle. A second driver identification procedure is performed on the present operator of the vehicle and determining whether the present operator is an authorized or unauthorized driver of the vehicle, wherein the first and second driver identification procedures are performed with a time interval therebetween, the time interval being dependent upon the nature of the work being performed by the operator. A remedial measure is exercised to avert potentially negative impact when the present operator of the vehicle is determined to be an unauthorized driver based upon at least one of the performed identification procedures.However,this prior art document does not appear to disclose that it can be used in any IOT device which can be accessed at a distance from the RTO server.

Another prior art document,US6711495B1 discloses a method of gathering and analyzing vehicle information is disclosed. A central vehicle-information management center gathers first vehicle information gathered in real time, including position of the vehicle, control of vehicle, and conditions of vehicle parts, and gathers second vehicle information including vehicle type, vehicle identification number, and information regarding users of the vehicles. The central vehicle information management center performs a statistical analysis for the plurality of vehicles based on the first and second information. The first information is transmitted by a transmitter provided on each vehicle, and acquired via a satellite communication system and/or a land-based wireless communication system.However,this prior art document may be limited to the offices and workplace.

Another prior art document,US7676392B2 disclosesa method of identifying a vehicle in a toll system which includes accessing a set of toll transaction entries. Each entry in the set designates a toll transaction between a vehicle and the toll system and includes a transaction descriptor and a transaction time stamp. A series of toll transaction pictures is accessed. The series includes a

plurality of pictures, each of which is associated with a picture time stamp. A toll transaction entry is identified from the set as a violation transaction entry based on the transaction descriptor. The transaction time stamp of the violation transaction is compared, using a processing device, with the picture time stamp of the selected toll transaction picture. The selected toll transaction picture is identified as a violation picture corresponding to the violation transaction entry based on a result of the comparison.However,this prior art document may verify the Toll-Transactions, there may be chances of violation of Toll Rules, as people may go through their way with paying Toll-Taxes.

Another prior art document,US7412078B2 disclosesa system and method for automatically recognizing a license plate number of a subject vehicle in use of a surveillance vehicle, which mounts automatic license plate number recognition equipment including a camera to a vehicle such as police patrol car, security company car, taxi, and so on, recognizes the license plate of a different vehicle on the run or in parking or stopping through the camera, verifying whether the vehicle is stolen, in search, or has a forged license plate, and can deal with the vehicle early when the vehicle is in question.However,this prior art document there may be chance that the chance that thetime-stamp may not clear or blurred.

Another prior art document, US8855575B2 discloses a device-vehicle interoperability verification method.Vehicle information is obtained by a mobile communications device, and this vehicle information pertains to a vehicle within which the device is being used or is going to be used. The vehicle information and device identification information is transmitted from the device to a server. The transmission occurs in response to a command generated by an application resident on the device, which includes computer readable code, embedded on a tangible, non-transitory computer readable medium, for performing the transmission. A data aggregator at the server queries a database to obtain data pertaining to an interoperability between the device and the vehicle, and a communications module at the server sends a

message to the device that includes at least the data pertaining to the interoperability between the device and the vehicle.However,this prior art document authorizes the driver with the current vehicle, he is driving at the time of checking.

Another prior art document, US9021384B1 discloses an interactive vehicle information map system is disclosed in which, in various embodiments, geographical, geospatial, vehicle, and other types of data, geodata, objects, features, and/or metadata are efficiently presented to a user on an interactive map interface. In an embodiment, the user may search vehicle-related data via the interactive map by providing search criteria including, for example, information regarding a geographic area, a time period, a vehicle, a vehicle owner, and/or a license plate number, among other items. The map system may provide search results including a list of vehicles that match the search criteria, vehicle information, and/or points on the interactive map that indicate license-plate recognition read locations, among other information. In an embodiment, the user may view detailed information associated with particular vehicles including, for example, captured images, vehicle-owner data, event history, and the like. Further, the user may export data and/or create search alerts. However, this prior art document there might be a chance that you forgot your Security Pin, Password due to which you would be unable to access the documents at the time of checking.

However, above mentioned references and many other similar references has one or more

of the following shortcomings: (a) a Computer Desktop or a system with a printer is needed; (b) limited to Offices and Workspaces; (c) There is a chance that Time-Stamp is not clear or blurred;(d)Only authorizes the driver with the current vehicle, he is driving at the time of checking; (e) Need to update the document by the user; and (f) As it verifies the Toll-Transactions, there may be a chance of violation of Toll Rules, as people may go through their way with paying Toll-Taxes.

The present application addresses the above-mentioned concerns and shortcomings (andother similar concerns/shortcomings) with regard to providing anelectronic vehicle identification system.

There remains a constant need in society for a continuous flow of new and innovative novelty of electronic vehicle identification system. It is in this context, that the subject invention is useful, not only to provide cheap and easy to operate/use but to provide electronic vehicle identification system in which an authorize person may identify the authenticity of the vehicle based on the plurality of data stored in the RTO server.

(3) SUMMARY OF THE INVENTION:

In the view of the foregoing disadvantages inherent in the known types of vehicle identification systemnow present in the prior art, the present invention provides an improved electronic vehicle identification system. As such, the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new and improved electronic vehicle identification system which has all the advantages of the prior art and none of the disadvantages.

It is object of the invention is to provide an electronic vehicle identification system for identifying a vehicle by an authorize person, said system comprising: an RTO (Regional Transport Office) server, a vehicle with number plate, and a device, wherein said device further comprising an application, a processor, and a memory communicatively coupled to the processor, and wherein the memory stores processor instructions, which, on execution, causes the processor to identify the authentication of said vehicle based on a plurality of data stored in said RTO server.

It is another object of the present invention is to provide a device which may include at least one of desktop, a laptop, a notebook, a netbook, a tablet, a smartphone, a mobile phone, or any other computing device.

Yet another object of the present invention is that theplurality of data associated with said vehicle number may include at least one of registration card, driving license, pollution certificate, insurance policy, or the like.

Yet another object of the present invention is that the authorize person may require to enter an authentication pin to access said RTO server through said application assembled in said device.

Yet another object of the present invention to provide an electronic vehicle identification method for identifying authenticity of a vehicle using a device by an authorize person, said method may include: receiving, by said device, a vehicle number to identify authenticity of said vehicle by said authorize person; connecting said device to the RTO (Regional Transport Office) server over internet for verifying a plurality of data associated with said vehicle number; fetching, by said device, said plurality of data stored in said RTO server, wherein said plurality of data is associated with said vehicle number; and displaying, by said device, said plurality of data associated with said vehicle number to said authorize person, wherein said authorize person identifies authenticity of said vehicle based on said plurality of data. The method may further includes sending a pop-up SMS to a registered number of said driver regarding authenticity of said vehicle.

Yet another object of the present invention is thatthe device may receive said vehicle number by at least of manual entry or by an image of said vehicle number.

In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

(4) BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

Fig. 1 illustrates an electronic vehicle identification system foridentifying authenticity of a vehicle, according to an embodiment herein.

Fig. 2 depicts an exemplary system architecture foridentifying authenticity of the vehicle, according to an embodiment herein.

Fig. 3depicts aflowchart of the method of identifying authenticity of the vehicle by an authorize person, according to an embodiment herein.

Fig. 4depicts a detailed exemplary method of identifying authenticity of the vehicle using adevice by an authorize person, according to an embodiment

herein.

(5) DETAILED DESCRIPTION OF THE INVENTION

In the following detailed description, reference is made to the accompanying drawings which form a part hereof, and in which is shown by way of illustration specific embodiments in which the invention may be practiced. These embodiments are described in sufficient detail to enable those skilled in the art to practice the invention, and it is to be understood that the embodiments may be combined, or that other embodiments may be utilized and that structural and logical changes may be made without departing from the spirit and scope of the present invention. The following detailed description is, therefore, not to be taken in a limiting sense, and the scope of the present invention is defined by the appended claims and their equivalents.

Exemplary embodiments are described with reference to the accompanying drawings. Wherever convenient, the same reference numbers are used throughout the drawings to refer to the same or like parts. While examples and features of disclosed principles are described herein, modifications, adaptations, and other implementations are possible without departing from the spirit and scope of the disclosed embodiments. It is intended that the following detailed description be considered as exemplary only, with the true scope and spirit being indicated by the following claims. Additional illustrative embodiments are listed below.

References will now be made in detail to the exemplary embodiment of the present disclosure. Before describing the detailed embodiments that are in accordance with the present disclosure, it should be observed that the embodiments reside primarily in combinations arrangement of the system according to an embodiment herein and as exemplified in **FIG. 1 – FIG. 4**.

In the following description, for the purpose of explanation, numerous specific details are set forth in order to provide a thorough understanding of the arrangement of the system according to an embodiment herein. It will be apparent, however, to one skilled in the art, that the present embodiment can be practiced without these specific details. In other instances, structures are shown in block diagram form only in order to avoid obscuring the present invention.

Fig. 1 illustrates an electronic vehicle identification system **100** for identifying authenticity of a vehicle, according to an embodiment herein. In particular, saidelectronic vehicle identification system **100** may include adevice (for example, a server, a desktop, a laptop, a notebook, a netbook, a tablet, a smartphone, a mobile phone, or any other computing device) in which the electronic vehicle identification system **100** is implemented. The device may further include an application which may be assembled in the device, a processor, anda memory communicatively coupled to the processor. It should be noted that the memory stores processor instructions, which, on execution, causes the processor to identify the authentication of said vehicle based on a plurality of data stored in said RTO server.

The system **100** may include a processor **102**, a computer-readable medium **104** (for example, a memory), and a display **106**. The computer-readable storage medium **104** may store instructions that, when executed by the processor **102**, may cause the processor **102** to generate the unique username for each user. The computer-readable storage medium **104** may also store various data (for example- a plurality of data of each vehicle number as history, vehicle number, or the like) that may be captured, processed, and/or required by the system **100**. The system **100** may interact with a user via a user interface **108** accessible via the display **106**. The system **100** may also interact with one or more of external devices **110** over a communication network **112** for sending or receiving various data. The external devices **110**

may include, but are not be limited to a remote server, a digital device, or another computing system. The system **100** may be adapted to exchange data with other components or service providers using the communication network **112**.

Fig. 2 depicts an exemplary system architecture **200** for identifying authenticity of the vehicle, according to an embodiment herein.The exemplary system architecture **200** may include a driver **203** drivinga vehicle**201**having the number plate **202.** Once the traffic police may catch the vehicle **201** to identify the authenticity of the vehicle **201**then, the traffic police may search for the vehicle number of the number plate **202.** Further, the traffic police may open the application assembled in the device **204** and may enter the vehicle number in the device **204.** It should be noted that the device **204** may have the internet connectivity **205**.

Once, the traffic police may search the vehicle number, then the device **204** may be communicatively coupled with the DTO server **207.** Further, the device **204** may identify the plurality of data associated with the vehicle number of the vehicle **201**. It should be noted that the plurality of data associated with the vehicle number may be stored in the DTO server **207.** As will be appreciated the plurality of data associated with said vehicle number may include at least one of registration card, driving license, pollution certificate, insurance policy, or the like.

Hence, the traffic police may receive each of the plurality of data associated with the vehicle number in the device **204.** Further, based on the authenticity of the plurality of data, the traffic police may leave the driver **203** when each of the plurality of data may be valid or may charge a challan when the plurality of data may be invalid or expired. As will be appreciated the electronic vehicle identification system **100** may also send a pop-up SMS to a registered number

of the driver **203** regarding authenticity of said vehicle. Hence, the traffic police can not make a fake challan to the driver **203.**

Fig. 3 depicts a flowchart **300** of the method of identifying authenticity of the vehicle by an authorize person, according to an embodiment herein. For identifying the authenticity of the vehicle **201,** the traffic police may need to open the Cops device application at step **301**. Further, at step **302,** the traffic police may enter the vehicle number of the vehicle **201** in the Cops device application. As will be appreciated, the Cops device application may identify that the vehicle number is valid or not at step **303.** When the vehicle number may be fake or not valid, the Cops device application may redirect to home page for entering the vehicle number with a pop-up message 'INVALID VEHICLE NUMBER'.

However, when the vehicle number may be valid, the Cops device application may authenticate the vehicle number successfully at step **304.** Further, at step **305**, after successful authentication of the vehicle number, the Cops device application may connect to the RTI database **305.** Further, the Cops device application may extract the plurality of data associated with the vehicle number and stored on the RTI database at step **306.** It should be noted that the plurality of data may include but may not be limited to registration card, driving license, pollution certificate, insurance policy, or the like. Further, the plurality of data associated with the vehicle number may be displayed to the Cops device application at step **301.** Based on the plurality of data the traffic police may charge a challan or leave the driver. Moreover, at step **307,** the driver **203** may receive a pop-up message in the driver's device application regarding the authenticity of the vehicle. Hence, the traffic police may not fraud with the driver.

Fig. 4 depicts a detailed exemplary method **400** for identifying authenticity of the vehicle using a device by an authorize person, according to an embodiment

herein. At step **401,** the electronic vehicle identification system **100** may receive, by said device, a vehicle number to identify authenticity of said vehicle by said authorize person. It should be noted that the device may include but may not be limited to desktop, a laptop, a notebook, a netbook, a tablet, a smartphone, a mobile phone, or any other computing device.The device may receive said vehicle number by at least of manual entry or by an image of said vehicle number.

Further, at step **402,** the electronic vehicle identification system **100** may connect said device to the RTO (Regional Transport Office) server over internet for verifying a plurality of data associated with said vehicle number. It should be noted that the plurality of data may include at least one of registration card, driving license, pollution certificate, insurance policy, or the like.

Further, at step **403,** the electronic vehicle identification system **100** may fetch, by said device, said plurality of data stored in said RTO server. It should be noted that said plurality of data may be associated with said vehicle number. Moreover, the authorize person may require to enter an authentication pin to access said RTO server through said application assembled in said device.

Further, at step **404,** the electronic vehicle identification system **100** may display, by said device, said plurality of data associated with said vehicle number to said authorize person. It should be noted that the authorize person may identify authenticity of the vehicle based on said plurality of data. As will be appreciated, the electronic vehicle identification system **100** may also send a pop-up SMS to a registered number of said driver regarding authenticity of said vehicle. Hence, the authorize person can not make fraud with the driver.

It is to be understood that the above description is intended to be illustrative, and not restrictive. For example, the above-discussed embodiments may be

used in combination with each other. Many other embodiments will be apparent to those of skill in the art upon reviewing the above description.

The benefits and advantages which may be provided by the present invention have been described above with regard to specific embodiments. These benefits and advantages, and any elements or limitations that may cause them to occur or to become more pronounced are not to be construed as critical, required, or essential features of any or all of the embodiments.

While the present invention has been described with reference to particular embodiments, it should be understood that the embodiments are illustrative and that the scope of the invention is not limited to these embodiments. Many variations, modifications, additions and improvements to the embodiments described above are possible. It is contemplated that these variations, modifications, additions and improvements fall within the scope of the invention.

Signature of Patent Agent on Behalf of Applicant

Dr. Pareshkumar C. Dave
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CLAIMS

We / I Claim:

1. An electronic vehicle identification system for identifying a vehicle by an authorize person, said system comprising:

anRTO (Regional Transport Office) server,

a vehicle with number plate, and

a device, wherein said device further comprising an application, a processor, anda memory communicatively coupled to the processor, and wherein the memory stores processor instructions, which, on execution, causes the processor to identify the authentication of said vehicle based on a plurality of data stored in said RTO server.

2. The system as claimed in claim 1, wherein said device is at least one of desktop, a laptop, a notebook, a netbook, a tablet, a smartphone, a mobile phone, or any other computing device.

3. The system as claimed in claim 1, wherein said plurality of data associated with said vehicle number comprises at least one of registration card, driving license, pollution certificate, insurance policy, or the like.

4. The system as claimed in claim 1, wherein said authorize person required to enter an authentication pin to access said RTO server through said application assembled in said device.

5. An electronic vehicle identification method for identifying authenticity of a vehicle using a device by an authorize person, said method comprising:

receiving, by said device, a vehicle number to identify authenticity of said vehicleby said authorize person;

connecting said device to the RTO (Regional Transport Office) server over internet for verifying a plurality of data associated with said vehicle number;

fetching, by said device, said plurality of data stored in said RTO server, wherein said plurality of data is associated with said vehicle number; and

displaying, by said device, said plurality of data associated with said vehicle number to said authorize person, wherein said authorize person identifies authenticity of said vehicle based on said plurality of data.

6. The method as claimed in claim 5 further comprises sending a pop-up SMS to a registered number of said driver regarding authenticity of said vehicle.

7. The method as claimed in claim 5, wherein said device receives said vehicle number by at least of manual entry orby an image of said vehicle number.

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Title: ELECTRONIC VEHICLE IDENTIFICATION SYSTEM

ABSTRACT

The invention discloses an electronic vehicle identification system for identifying a vehicle by an authorize person, said system comprising: an RTO (Regional Transport Office) server, a vehicle with number plate, and a device, wherein said device further comprising an application, a processor, and a memory communicatively coupled to the processor, and wherein the memory stores processor instructions, which, on execution, causes the processor to identify the authentication of said vehicle based on a plurality of data stored in said RTO server. The method of identifying the vehicle may include receiving a vehicle number to identify authenticity of said vehicle by said authorize person; connecting said device to the RTO server over internet for verifying a plurality of data associated with said vehicle number; fetching said plurality of data stored in said RTO server, and displaying said plurality of data associated with said vehicle number to said authorize person.

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