November 21, 2013

Certification

Park IP Translations

This is to certify that the attached translation is, to the best of my knowledge and belief, a true and accurate translation from Japanese into English of the patent that is entitled: Predicted Path Display Apparatus for Vehicles

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     PREDICTED PATH DISPLAY APPARATUS FOR VEHICLES

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Specification

1. Title of Invention

PREDICTED PATH DISPLAY APPARATUS FOR VEHICLES

2. Claims

(1) A predicted path display apparatus for vehicles, in which an image in a field of rear vision, or a field of lateral rear vision and a predicted path are displayed on a screen at the time of reverse travel of a vehicle, characterized by a camera for photographing a field of rear vision, or a field of lateral rear vision, a steering sensor for detecting a steering angle of a steering wheel, an image processing device for storing a predicted path corresponding to a steering angle of a steering wheel at the time of reverse travel and reading an image of a predicted path on the basis of a signal from the steering sensor at the time of reverse travel of a vehicle, and a display device for superposing and displaying a projected image by the camera and an image of a predicted path by the image processing device.

(2) The predicted path display apparatus for vehicles, according to claim 1, wherein a profile line of a vehicle is added to an image of a predicted path .

3. Detailed Description of the Invention

(Industrially Applicable Field)

The present invention relates to a display apparatus for

displaying, as a projected image by a video camera, a field
of rear vision, or a field of lateral   rear vision at the
time of reverse travel of a vehicle, which constitutes a blind
spot, and   more specifically   , to a predicted path display apparatus
for vehicles, in which a predicted path of a vehicle is
superposed on a projected image of a field of vision.

(Prior Art)

When driving a vehicle   a   driver   can   directly   grasp   surrounding
in a forward direction,
circumstances along a predicted   path   in a field of vision,
  and thus
confirmation of safety can be adequately performed

                                    However, the rear area and   lateral
    rear area at the time of reverse travel are in many cases
not in the field of vision of a driver. Therefore, it is necessary
to compensate for the field of vision with the use of a fender
mirror   or   a rearview mirror.

        In particular, there are many dead spots in a field of
rear vision, or a field of lateral   rear vision for a driver
on a vehicle, and specifically, the larger the vehicles are
such as trucks, buses, or the like, the more difficult it is
to reduce dead spots   only with a mirror.   Accordingly,
the use of a TV camera is conceivable in order to perceive a
field of rear vision, and   in   a recent example,
a camera for ensuring a field of rear vision is installed in
large-sized vehicles, such as buses or the like, so as to easily
afford confirmation of safety at the time of reverse travel.

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(Problems to be Solved by the Invention)

Because a field of vision from a position of a camera is different from a field of rear vision as seen from a driver's seat, however, there is involved a problem that the relationship between the operation of driving and driving behavior is hard to grasp from the screen. Further, due to limits on the angle of view of a camera, the operation of driving while seeing a screen is actually put in a considerably difficult situation.

It is an object of the invention to obtain an image of 10 a field of rear vision and a field of lateral rear vision with the use of a camera, so as to display the image in a manner that is cognitively familiar in driving. 13

(Measure for Solving the Problems)

Therefore, the invention provides a predicted path display apparatus for vehicles, in which an image in a field of rear vision, or a field of lateral rear vision and a predicted path are displayed on a screen at the time of reverse 18 travel of a vehicle, characterized by a camera for photographing a field of rear vision, or a field of lateral rear vision, 20 a steering sensor for detecting a steering angle of a steering wheel , an image processing device for storing an image of a predicted path corresponding to a steering angle of a steering wheel at the time of reverse travel and reading an image of a predicted path on the basis of a signal from the steering sensor at the time 25

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