The non-image-processing vehicle detector performs spot measurement such as counting up the number of passing vehicles (traffic volume) through a relatively narrow detection spot (refer to Patent Literature 2, for example).

Meanwhile, as another vehicle detector for collecting the above data, an image-processing vehicle detector (television camera) has also been known. The image-processing vehicle detector has a photographing range including a relatively long road section, and digitally analyzes a photographed image of a vehicle to measure the speed of the vehicle, and the like (refer to Patent Literature 3, for example).

CITATION LIST

PATENT LITERATURE

[0004]

PATENT LITERATURE 1: Japanese Laid-Open Patent Publication No. 2006-215977

PATENT LITERATURE 2: Japanese Laid-Open Patent Publication No. 2003-187379

PATENT LITERATURE 3: Japanese Laid-Open Patent Publication No. 2013-175131

SUMMARY

[0005]

For example, in order to install an ultrasonic vehicle detector on a road, it is necessary to erect a support strut on each approach path, and mount a detector head, for each

lane, to a beam member provided at an upper end of the support strut. This work may result in an increase in costs for installation of support struts and the like, and the ultrasonic vehicle detector may adversely affect the scenery around the intersection.

Further, since the work for installing the support struts needs to be redone when detection points of the installed ultrasonic vehicle detector are adjusted, there is also a problem that it is difficult to adjust the detection points.

[0006]

In the case of the image-processing vehicle detector, since one image-processing vehicle detector can measure the traffic volumes in a plurality of lanes, the number of vehicle detectors to be installed can be reduced as compared to the case of the ultrasonic vehicle detector. However, the image-processing vehicle detector also needs to be installed on each approach path, which results in almost the same problem as above.

In view of the conventional problems, an object of the present invention is to generate, even when a vehicle detector is not actually installed, traffic indices of the same kinds as those obtained when a vehicle detector is installed, thereby to collect the traffic indices at low costs.

[0007]

(1) A traffic index generation device according to one aspect of the present disclosure is a device configured to generate a traffic index used for traffic signal control, and includes: a storage unit configured to store therein area information on a coordinate system, the area information forming a predetermined area on a road; a communication unit configured to receive probe information including a vehicle position and temporal information of a traveling vehicle; and a control unit configured to generate the traffic index on the basis of the area

information and the probe information.

[0008]

(16) A computer program according to one aspect of the present disclosure is a computer program for causing a computer to function as a device configured to generate a traffic index used for traffic signal control, and includes: a step of causing a storage unit of the traffic index generation device to store area information on a coordinate system, the area information forming a predetermined area on a road; a step of causing a communication unit of the traffic index generation device to receive probe information including a vehicle position and temporal information of a traveling vehicle; and a step of causing a control unit of the traffic index generation device to generate the traffic index on the basis of the area information and the probe information.

[0009]

(17) A traffic index generation method according to one aspect of the present disclosure is a traffic index generation method executed by a device configured to generate a traffic index used for traffic signal control, and includes: a step of causing a storage unit of the traffic index generation device to store area information on a coordinate system, the area information forming a predetermined area on a road; a step of causing a communication unit of the traffic index generation device to receive probe information including a vehicle position and temporal information of a traveling vehicle; and a step of causing a control unit of the traffic index generation device to generate the traffic index on the basis of the area information and the probe information.

[0010]

According to various embodiments, even when a vehicle detector is not actually