Claims

[1] A traffic control device (50) that controls a traffic light (S) installed on a route of a vehicle (B) running on a basis of an operation diagram, comprising:

an acquisition unit (51) that acquires vehicle information from a wireless base station (20) that receives vehicle information including information regarding the operation diagram and a current position of the vehicle (B);

a determination unit (52) that calculates, on a basis of the vehicle information acquired by the acquisition unit, an estimated time of arrival at the traffic light (S), and determines whether or not the estimated time is delayed from a scheduled time; and

a signal generation unit (53) that generates, where it is determined that the estimated time is delayed from the scheduled time, a control signal for causing the traffic light (S) to execute signal control for preferentially causing the vehicle (B) to pass therethrough.

[2] The traffic control device (50) as claimed in claim 1, wherein

the signal generation unit (53) generates, where the delay is determined, a control signal for controlling the traffic light (S) such that the traffic light (S) turns a light color in which the vehicle (B) is capable of passing through the traffic light (S) at an estimated time at which the vehicle (B) arrives at the traffic light.

[3] The traffic control device (50) as claimed in claim 1 or 2, wherein

the acquisition unit (51) further obtains congestion information of the route, and

the determination unit (52) calculates, on a basis of the vehicle information and the congestion information, an estimated time of arrival at the traffic light (S).

[4] A traffic light (S) installed on a route of a vehicle running on a basis of an operation diagram, comprising:

a signal lamp (1V); and

a signal control device (10) that includes

an acquisition unit (51) that acquires vehicle information from a wireless base station (20) that receives vehicle information including information regarding the operation diagram and a current position of the vehicle (B);

a determination unit (52) that calculates, on a basis of the vehicle information acquired by the acquisition unit, an estimated time of arrival at the traffic light (S), and determines whether or not the estimated time is delayed from a scheduled time; and

a signal generation unit (53) generates, where it is determined that the estimated time is delayed from the scheduled time, a control signal for controlling the signal lamp (1V) such that the signal lamp (1V) turns a light color in which the vehicle is capable of passing through the traffic light (S).