CLAIMS

1. A system comprising a remote control device and a vehicle travel control device,

wherein the remote control device is in communication with the vehicle travel control device via a network;

wherein the vehicle travel control device is configured to:

control traveling of a vehicle based on position information of the vehicle, the vehicle travel control device being connected to the remote control device; and

operate the traveling of the vehicle;

wherein the vehicle travel control device comprises:

an absolute position calculation unit configured to acquire GNSS information from a GNSS receiver mounted on the vehicle and calculate an absolute position of the vehicle using the GNSS information;

a reception determination unit configured to determine whether GNSS correction information can be received from an external reference station;

a relative position calculation unit configured to calculate a relative position of the vehicle using the GNSS correction information; and

a communication unit configured to:

transmit the position information of the vehicle to the remote control device;

transmit position information based on the relative position in a case in which the GNSS correction information can be received; and

transmit position information based on the absolute position in a case in which the GNSS correction information cannot be received; and

a correction position calculation unit configured to acquire acceleration and angular velocity information of the vehicle from an inertial measurement unit mounted on the vehicle and calculate a corrected relative position obtained by correcting the relative position of the vehicle based on the GNSS correction information and the acceleration and angular velocity information, wherein in a case in which the GNSS correction information can be received, the position information of the vehicle is position information specified using the corrected relative position obtained by correcting the relative position,

wherein the reception determination unit is further configured to

determine whether the GNSS information can be received, and

determine, in response to determining that the GNSS information can be received, whether the GNSS correction information can be subsequently received, and

wherein in response to determining that the GNSS information cannot be received, the correction position calculation unit specifies the position of the vehicle using an estimated position of the vehicle calculated based on the latest received GNSS information and the acceleration and angular velocity information.

2. A method for acquiring vehicle position information executed by a computer configured to control traveling of a vehicle based on position information of the vehicle, the method comprising, by the computer connected to a remote control device configured to operate the traveling of the vehicle through communication via a network:

acquiring GNSS information from a GNSS receiver mounted on the vehicle, and calculating an absolute position of the vehicle using the GNSS information;

determining whether GNSS correction information can be received from an external reference station;

calculating a relative position of the vehicle using the GNSS correction information;

transmitting position information based on the relative position to the remote control device in a case in which the GNSS correction information can be received;

transmitting position information based on the absolute position to the remote control device in a case in which the GNSS correction information cannot be received;

acquiring acceleration and angular velocity information of the vehicle from an inertial measurement unit mounted on the vehicle and calculating a corrected relative position obtained by correcting the relative position of the vehicle based on the GNSS correction information and the acceleration and angular velocity information, wherein in a case in which the GNSS correction information can be received, the position information of the vehicle is position information specified using the corrected relative position obtained by correcting the relative position;

determining whether the GNSS information can be received;

determining, in response to determining that the GNSS information can be received, whether the GNSS correction information can be subsequently received, and

in response to determining that the GNSS information cannot be received, specifying the position of the vehicle using an estimated position of the vehicle calculated based on the

latest received GNSS information and the acceleration and angular velocity information.

3. A computer-readable recording medium storing a program for acquiring vehicle position information, the program causing a computer, the computer serving as a vehicle travel control device configured to control traveling of a vehicle based on position information of the vehicle, to execute the method of claim 2.

4. A program for acquiring vehicle position information, the program causing a computer serving as a vehicle travel control device configured to control traveling of a vehicle based on position information of the vehicle to execute the method of claim 2.