CLAIMS

[Claim 1] A method performed by an information processing apparatus including a communication interface configured to communicate with a terminal apparatus and a vehicle, and a controller, the method comprising:

receiving, by the controller from the terminal apparatus via the communication interface, a start request signal requesting start of a remote service related to the vehicle;

determining, by the controller, an expiration period of an operation interface used for the remote service;

transmitting, by the controller to the terminal apparatus via the communication interface, information causing the terminal apparatus to function as the operation interface;

upon receiving, from the terminal apparatus via the communication interface within the expiration period, an operation request signal indicating an operation request for the remote service inputted using the operation interface, generating, by the controller based on the operation request signal, an instruction signal for controlling the vehicle; and

transmitting, by the controller, the instruction signal to the vehicle via the communication interface.

[Claim 2] The method according to claim 1, further comprising rejecting, by the controller, a start request signal from another terminal apparatus different from the terminal apparatus, within the expiration period.

[Claim 3] The method according to claim 1, further comprising:

receiving, by the controller from the terminal apparatus via the communication interface, terminal location information indicating a location of the terminal apparatus;

receiving, by the controller from the vehicle via the communication interface, vehicle location information indicating a location of the vehicle;

determining, by the controller, whether a distance between the terminal apparatus and the vehicle is less than a predetermined distance, based on the terminal location information and the vehicle location information; and

when the distance is less than the predetermined distance, rejecting, by the controller, a start request signal from another terminal apparatus

different from the terminal apparatus.

[Claim 4] The method according to claim 1, further comprising, upon receiving, from the terminal apparatus via the communication interface within the expiration period, a termination request signal requesting termination of the remote service, rejecting, by the controller, a subsequent operation request signal from the terminal apparatus.

[Claim 5] The method according to claim 1, further comprising:

receiving, by the controller from the terminal apparatus via the communication interface, terminal location information indicating a location of the terminal apparatus;

receiving, by the controller from the vehicle via the communication interface, vehicle location information indicating a location of the vehicle;

determining, by the controller, whether a distance between the terminal apparatus and the vehicle is greater than or equal to a predetermined distance, based on the terminal location information and the vehicle location information; and

when the distance is greater than or equal to the predetermined distance, rejecting, by the controller, the start request signal from the terminal apparatus.

[Claim 6] The method according to claim 1, further comprising:

upon receiving the start request signal from the terminal apparatus, transmitting, by the controller to the vehicle via the communication interface, a start notification indicating the start of the remote service; and

when the expiration period elapses or when receiving, from the terminal apparatus via the communication interface, a termination request signal requesting termination of the remote service, transmitting, by the controller to the vehicle via the communication interface, a termination notification indicating the termination of the remote service.

[Claim 7] The method according to claim 6, further comprising transmitting, by the controller to the vehicle via the communication interface, a signal instructing that a state of the vehicle be returned to a state prior to transmission of the start notification.

[Claim 8] The method according to claim 1, further comprising:

receiving, by the controller from a master terminal apparatus different from the terminal apparatus via the communication interface, management information indicating permission or denial of provision of the remote service to the terminal apparatus; and

when the management information indicates denial, rejecting, by the controller, the start request signal from the terminal apparatus.

[Claim 9] The method according to claim 8, further comprising, upon receiving, from the master terminal apparatus via the communication interface, a master start request signal requesting start of the remote service, rejecting, by the controller, a subsequent operation request signal from the terminal apparatus.

[Claim 10] The method according to any one of claims 1 to 9, wherein the information causing the terminal apparatus to function as the operation interface includes an address to a web application and/or a setting for launching the web application.

[Claim 11] An information processing apparatus comprising:

a communication interface configured to communicate with a terminal apparatus and a vehicle; and

a controller configured to:

receive, from the terminal apparatus via the communication interface, a start request signal requesting start of a remote service related to the vehicle;

determine an expiration period of an operation interface used for the remote service;

transmit, to the terminal apparatus via the communication interface, information causing the terminal apparatus to function as the operation interface;

upon receiving, from the terminal apparatus via the communication interface within the expiration period, an operation request signal indicating an operation request for the remote service inputted using the operation interface, generate, based on the operation request signal, an

instruction signal for controlling the vehicle; and

transmit the instruction signal to the vehicle via the communication interface.

[Claim 12] The information processing apparatus according to claim 11, wherein the controller is configured to reject a start request signal from another terminal apparatus different from the terminal apparatus, within the expiration period.

[Claim 13] The information processing apparatus according to claim 11, wherein the controller is configured to:

receive, from the terminal apparatus via the communication interface, terminal location information indicating a location of the terminal apparatus;

receive, from the vehicle via the communication interface, vehicle location information indicating a location of the vehicle;

determine whether a distance between the terminal apparatus and the vehicle is less than a predetermined distance, based on the terminal location information and the vehicle location information; and

when the distance is less than the predetermined distance, reject a start request signal from another terminal apparatus different from the terminal apparatus.

[Claim 14] The information processing apparatus according to claim 11, wherein the controller is configured to, upon receiving, from the terminal apparatus via the communication interface within the expiration period, a termination request signal requesting termination of the remote service, reject a subsequent operation request signal from the terminal apparatus.

[Claim 15] A non-transitory computer readable medium storing a program configured to cause a computer as an information processing apparatus to execute operations, the information processing apparatus including a communication interface configured to communicate with a terminal apparatus and a vehicle, and a controller, the operations comprising:

receiving, from the terminal apparatus via the communication interface, a start request signal requesting start of a remote service related to the vehicle;

determining an expiration period of an operation interface used for the remote service;

transmitting, to the terminal apparatus via the communication interface, information causing the terminal apparatus to function as the operation interface;

upon receiving, from the terminal apparatus via the communication interface within the expiration period, an operation request signal indicating an operation request for the remote service inputted using the operation interface, generating, based on the operation request signal, an instruction signal for controlling the vehicle; and

transmitting the instruction signal to the vehicle via the communication interface.