

provider terminal that provides a service targeted for the vehicular communication terminal,

wherein

until the transmission terminal determiner determines that the transmission terminal is the service provider terminal that provides the service targeted for the vehicular communication terminal, the wireless communication controller does not initiate communication with the transmission terminal by using the service channel designated by the service channel information included in the service initiation information transmitted from the transmission terminal;

the vehicular communication terminal further comprising:

a degree-of-change calculator (F6) that calculates a degree of reception strength increase in signal transmitted from the transmission terminal, the reception strength being acquired by the reception strength acquirer;

wherein:

when the degree of increase calculated by the degree-of-change calculator is equal to or greater than an approach threshold value, the transmission terminal determiner determines that the transmission terminal is the service provider terminal that provides the service targeted for the vehicular communication terminal, the approach threshold value being used to determine whether the vehicular communication terminal is approaching the service provider terminal that provides the service targeted for the vehicular communication terminal;

wherein

the degree-of-change calculator calculates a degree of reception strength decrease in signal transmitted from the transmission terminal acquired by the reception strength acquirer; and

when the degree of decrease calculated by the degree-of-change calculator is equal to or greater than a departure threshold value, the transmission terminal determiner determines that the transmission terminal is the service provider terminal that provides the service targeted for the vehicular

communication terminal, the departure threshold value being used to determine whether the vehicular communication terminal is leaving the service provider terminal that provides the service targeted for the vehicular communication terminal.

5

2. The vehicular communication terminal according to claim 1, wherein

the degree-of-change calculator calculates, as the degree of increase, an amount of increase in the reception strength with respect to a movement distance of the vehicular communication terminal.

10

3. The vehicular communication terminal according to any one of claims 1 or 2, wherein

the degree-of-change calculator calculates, as the degree of increase, an amount of increase in the reception strength per unit time.

15

4. The vehicular communication terminal according to claim 3, further comprising:

a movement information acquirer (F3) that acquires movement information for determining movement speed of the vehicular communication terminal;

20

wherein the transmission terminal determiner does not compare the degree of increase with the approach threshold value when the movement speed of the vehicular communication terminal determined from the movement information acquired by the movement information acquirer is equal to or lower than a predetermined threshold value.

25

5. The vehicular communication terminal according to any one of claims 1 to 4, wherein:

when the transmission terminal is not determined to be the service provider terminal that provides the service targeted for the vehicular

30

communication terminal, the transmission terminal determiner successively determines, each time the wireless communicator receives a signal from the transmission terminal, whether the transmission terminal is the service provider terminal that provides the service targeted for the vehicular communication terminal; and

until the transmission terminal is determined to be the service provider terminal that provides the service targeted for the vehicular communication terminal, the transmission terminal continues to be determined not to be the service provider terminal that provides the service targeted for the vehicular communication terminal.

6. A vehicular communication terminal comprising:

a wireless communicator (12) that wirelessly communicates with a service provider terminal (2), the service provider terminal providing a predetermined service by using a control channel and any one of a plurality of service channels, the control channel being used to provide connection control for communication, the service channels being different from the control channel and assigned to provide the service; and

a wireless communication controller (F1) that controls operations of the wireless communicator;

wherein the wireless communicator is adapted to receive at least service initiation information including service type information and service channel information, the service type information being transmitted on the control channel from the service provider terminal and indicative of type of service provided by the service provider terminal, the service channel information designating one of the service channels that is to be used for communication between the service provider terminal and the vehicular communication terminal;

the vehicular communication terminal further comprising:

a reception strength acquirer (F2) that acquires reception strength of a signal transmitted from the service provider terminal and received by the

wireless communicator; and

a transmission terminal determiner (F5) that, when the wireless communicator receives a signal corresponding to the service initiation information from the service provider terminal, determines, based on at least
5 either one of magnitude of the reception strength of the received signal acquired by the reception strength acquirer and a degree of reception strength change in signal received from the service provider terminal serving as a transmission source of the received signal (hereinafter referred to as a transmission terminal), whether the transmission terminal is the service
10 provider terminal that provides a service targeted for the vehicular communication terminal,

wherein

until the transmission terminal determiner determines that the
15 **transmission terminal is the service provider terminal that provides the service targeted for the vehicular communication terminal, the wireless communication controller does not initiate communication with the transmission terminal by using the service channel designated by the service channel information included in the service initiation information transmitted from the transmission terminal;**

20 the vehicular communication terminal further comprising:

a degree-of-change calculator (F6) that calculates a degree of reception strength increase in signal transmitted from the transmission terminal, the reception strength being acquired by the reception strength acquirer;

wherein

25 when the degree of increase calculated by the degree-of-change calculator is equal to or greater than an approach threshold value, or when the reception strength acquired by the reception strength acquirer is equal to or greater than a strength threshold value, the transmission terminal determiner determines that the transmission terminal is the service provider terminal that
30 provides the service targeted for the vehicular communication terminal, the approach threshold value being used to determine whether the vehicular

communication terminal is approaching the service provider terminal that provides the service targeted for the vehicular communication terminal, the strength threshold value being used to determine whether the signal transmitted from the service provider terminal that provides the service targeted for the vehicular communication terminal is received;

wherein

the degree-of-change calculator calculates a degree of reception strength decrease in signal transmitted from the transmission terminal acquired by the reception strength acquirer; and

when the degree of decrease calculated by the degree-of-change calculator is equal to or greater than a departure threshold value, the transmission terminal determiner determines that the transmission terminal is the service provider terminal that provides the service targeted for the vehicular communication terminal, the departure threshold value being used to determine whether the vehicular communication terminal is leaving the service provider terminal that provides the service targeted for the vehicular communication terminal.

7. The vehicular communication terminal according to claim 6, wherein:

the service initiation information includes information about required reception strength specifying the strength threshold value; and

when the service initiation information including the information about the required reception strength is received from the service provider terminal and the reception strength acquired by the reception strength acquirer is equal to or greater than the strength threshold value determined by the information about the required reception strength included in the service initiation information received from the service provider terminal, the transmission terminal determiner determines that the service provider terminal is the service provider terminal that provides the service targeted for the vehicular communication terminal.

8. The vehicular communication terminal according to claim 6 or 7,
wherein

5 the degree-of-change calculator calculates, as the degree of increase,
an amount of increase in the reception strength with respect to a movement
distance of the vehicular communication terminal.

9. The vehicular communication terminal according to any one of
claims 6 to 8, wherein

10 the degree-of-change calculator calculates, as the degree of increase,
an amount of increase in the reception strength per unit time.

10. The vehicular communication terminal according to claim 7,
further comprising:

15 a movement information acquirer (F3) that acquires movement
information for determining movement speed of the vehicular communication
terminal;

wherein the transmission terminal determiner does not compare the
degree of increase with the approach threshold value when the movement
20 speed of the vehicular communication terminal determined from the movement
information acquired by the movement information acquirer is equal to or lower
than a predetermined threshold value.

11. The vehicular communication terminal according to any one of
25 claims 6 to 10, wherein:

when the transmission terminal is not determined to be the service
provider terminal that provides the service targeted for the vehicular
communication terminal, the transmission terminal determiner successively
determines, each time the wireless communicator receives a signal from the
30 transmission terminal, whether the transmission terminal is the service provider
terminal that provides the service targeted for the vehicular communication

terminal; and

until the transmission terminal is determined to be the service provider terminal that provides the service targeted for the vehicular communication terminal, the transmission terminal continues to be determined not to be the service provider terminal that provides the service targeted for the vehicular communication terminal.

12. A vehicular communication terminal comprising:

a wireless communicator (12) that wirelessly communicates with a service provider terminal (2), the service provider terminal providing a predetermined service by using a control channel and any one of a plurality of service channels, the control channel being used to provide connection control for communication, the service channels being different from the control channel and assigned to provide the service; and

a wireless communication controller (F1) that controls operations of the wireless communicator;

wherein the wireless communicator is adapted to receive at least service initiation information including service type information and service channel information, the service type information being transmitted on the control channel from the service provider terminal and indicative of type of service provided by the service provider terminal, the service channel information designating one of the service channels that is to be used for communication between the service provider terminal and the vehicular communication terminal;

the vehicular communication terminal further comprising:

a reception strength acquirer (F2) that acquires reception strength of a signal transmitted from the service provider terminal and received by the wireless communicator; and

a transmission terminal determiner (F5) that, when the wireless communicator receives a signal corresponding to the service initiation information from the service provider terminal, determines, based on at least

either one of magnitude of the reception strength of the received signal acquired by the reception strength acquirer and a degree of reception strength change in signal received from the service provider terminal serving as a transmission source of the received signal (hereinafter referred to as a transmission terminal), whether the transmission terminal is the service provider terminal that provides a service targeted for the vehicular communication terminal,

wherein

until the transmission terminal determiner determines that the transmission terminal is the service provider terminal that provides the service targeted for the vehicular communication terminal, the wireless communication controller does not initiate communication with the transmission terminal by using the service channel designated by the service channel information included in the service initiation information transmitted from the transmission terminal;

the vehicular communication terminal further comprising:

a departure determiner (F8) that, when there is a tendency of decrease in the reception strength of signals transmitted from the transmission terminal, determines that the vehicular communication terminal is leaving the transmission terminal, the reception strength being acquired by the reception strength acquirer;

wherein

when the departure determiner determines that the vehicular communication terminal is leaving the transmission terminal, the transmission terminal determiner excludes the transmission terminal from a process of determining whether the transmission terminal is the service provider terminal that provides the service targeted for the vehicular communication terminal.

13. A vehicular communication terminal comprising:

a wireless communicator (12) that wirelessly communicates with a service provider terminal (2), the service provider terminal providing a

predetermined service by using a control channel and any one of a plurality of service channels, the control channel being used to provide connection control for communication, the service channels being different from the control channel and assigned to provide the service; and

5 a wireless communication controller (F1) that controls operations of the wireless communicator;

 wherein the wireless communicator is adapted to receive at least service initiation information including service type information and service channel information, the service type information being transmitted on the
10 control channel from the service provider terminal and indicative of type of service provided by the service provider terminal, the service channel information designating one of the service channels that is to be used for communication between the service provider terminal and the vehicular communication terminal;

15 the vehicular communication terminal further comprising:

 a reception strength acquirer (F2) that acquires reception strength of a signal transmitted from the service provider terminal and received by the wireless communicator; and

 a transmission terminal determiner (F5) that, when the wireless
20 communicator receives a signal corresponding to the service initiation information from the service provider terminal, determines, based on at least either one of magnitude of the reception strength of the received signal acquired by the reception strength acquirer and a degree of reception strength change in signal received from the service provider terminal serving as a
25 transmission source of the received signal (hereinafter referred to as a transmission terminal), whether the transmission terminal is the service provider terminal that provides a service targeted for the vehicular communication terminal,

 wherein

30 until the transmission terminal determiner determines that the transmission terminal is the service provider terminal that provides the service

targeted for the vehicular communication terminal, the wireless communication controller does not initiate communication with the transmission terminal by using the service channel designated by the service channel information included in the service initiation information transmitted from the transmission terminal;

the vehicular communication terminal further comprising:

a degree-of-change calculator (F6) that calculates a degree of reception strength increase in signal transmitted from the transmission terminal, the reception strength being acquired by the reception strength acquirer;

wherein:

when the degree of increase calculated by the degree-of-change calculator is equal to or greater than an approach threshold value, the transmission terminal determiner determines that the transmission terminal is the service provider terminal that provides the service targeted for the vehicular communication terminal, the approach threshold value being used to determine whether the vehicular communication terminal is approaching the service provider terminal that provides the service targeted for the vehicular communication terminal;

wherein

the degree-of-change calculator calculates, as the degree of increase, an amount of increase in the reception strength per unit time.

14. The vehicular communication terminal according to claim 13, further comprising:

a movement information acquirer (F3) that acquires movement information for determining movement speed of the vehicular communication terminal;

wherein the transmission terminal determiner does not compare the degree of increase with the approach threshold value when the movement speed of the vehicular communication terminal determined from the movement information acquired by the movement information acquirer is equal to or lower

than a predetermined threshold value.

15. A vehicular communication terminal comprising:

5 a wireless communicator (12) that wirelessly communicates with a service provider terminal (2), the service provider terminal providing a predetermined service by using a control channel and any one of a plurality of service channels, the control channel being used to provide connection control for communication, the service channels being different from the control channel and assigned to provide the service; and

10 a wireless communication controller (F1) that controls operations of the wireless communicator;

wherein the wireless communicator is adapted to receive at least service initiation information including service type information and service channel information, the service type information being transmitted on the control channel from the service provider terminal and indicative of type of service provided by the service provider terminal, the service channel information designating one of the service channels that is to be used for communication between the service provider terminal and the vehicular communication terminal;

20 the vehicular communication terminal further comprising:

a reception strength acquirer (F2) that acquires reception strength of a signal transmitted from the service provider terminal and received by the wireless communicator; and

25 a transmission terminal determiner (F5) that, when the wireless communicator receives a signal corresponding to the service initiation information from the service provider terminal, determines, based on at least either one of magnitude of the reception strength of the received signal acquired by the reception strength acquirer and a degree of reception strength change in signal received from the service provider terminal serving as a transmission source of the received signal (hereinafter referred to as a transmission terminal), whether the transmission terminal is the service

provider terminal that provides a service targeted for the vehicular communication terminal,

wherein

5 until the transmission terminal determiner determines that the transmission terminal is the service provider terminal that provides the service targeted for the vehicular communication terminal, the wireless communication controller does not initiate communication with the transmission terminal by using the service channel designated by the service channel information included in the service initiation information transmitted from the transmission
10 terminal;

the vehicular communication terminal further comprising:

a degree-of-change calculator (F6) that calculates a degree of reception strength increase in signal transmitted from the transmission terminal, the reception strength being acquired by the reception strength acquirer;

15 wherein:

when the degree of increase calculated by the degree-of-change calculator is equal to or greater than an approach threshold value, the transmission terminal determiner determines that the transmission terminal is the service provider terminal that provides the service targeted for the vehicular
20 communication terminal, the approach threshold value being used to determine whether the vehicular communication terminal is approaching the service provider terminal that provides the service targeted for the vehicular communication terminal;

wherein

25 a plurality of different approach threshold values are prepared based on movement speed so that the different approach threshold values increase with an increase in the movement speed, or the approach threshold value is based on a predetermined speed and dynamically corrected based on the movement speed.