[CLAIMS]

1. A parking fee management device configured to manage a parking fee of a parking lot, the parking fee management device comprising:

an estimation unit configured to estimate a vehicle exit peak time during which outgoing vehicles are concentrated;

a discount information creation unit configured to create discount information based on an estimation result from the estimation unit, the discount information including time ranges and discount rates or discount amounts associated with each other;

a fee information creation unit configured to, when the fee information creation unit received a fee disclosure request including identification information on an incoming vehicle from a user terminal used by a user or an information terminal installed in a parking lot or in a facility built around the parking lot and used by a user, create individual fee information from a vehicle entry time associated with the identification information on the incoming vehicle and from the discount information, the individual fee information including a vehicle exit time range and a parking fee associated with each other; and

a communication unit configured to transmit the individual fee information to the sender of the fee disclosure request,

wherein the discount information creation unit sets a discount rate or a discount amount applied to a time other than the vehicle exit peak time to be higher than a discount rate or a discount amount applied to the vehicle exit peak time and reflects discount information to the individual fee information, the discount information being in accordance with purchase information on a user within a facility associated with a parking lot.

2. The parking fee management device according to claim 1,

wherein the estimation unit estimates the vehicle exit peak time by using at least one

of past vehicle exit record information, event information of the day, weather information of the day, day-of-the-week information of the day, and public holiday information of the day.

3. The parking fee management device according to claim 1,

wherein the discount information creation unit updates a discount rate or a discount amount in accordance with a vehicle exit reservation state.

4. The parking fee management device according to claim 3,

wherein the discount information creation unit sets a discount rate or a discount amount of one time range such that, as the number of vehicle exit reservations in the one time range increases, the discount rate or the discount amount for the one time range decreases continuously or stepwise.

5. The parking fee management device according to claim 3 or 4,

wherein the discount information creation unit sets an initial value of a discount rate or a discount amount for each time range in accordance with an estimation result from the estimation unit and updates the initial value in accordance with a vehicle exit reservation state.

6. The parking fee management device according to any one of claims 1 to 5,

the communication unit transmits the discount information to a user terminal used by a user or an information terminal installed in a parking lot or in a facility built around the parking lot and used by a user.

7. The parking fee management device according claim 1,

wherein the communication unit transmits, to the user terminal or the information terminal, information used for displaying an additional purchase amount to increase a discount of the parking fee.

8. The parking fee management device according to claim 1 or 5,

wherein the estimation unit estimates a vehicle entry peak time during which incoming vehicles are concentrated,

the parking fee management device further comprising:

a benefit information creation unit configured to create benefit information, the benefit information including a predetermined period and information on a benefit associated with each other, the predetermined period being before or after a time range determined from the vehicle entry peak time estimated by the estimation unit, and the benefit being given to a user.

9. The parking fee management device according to claim 8,

the communication unit transmits the benefit information to a user terminal used by a user.

10. A parking fee management method for managing a parking fee of a parking lot, wherein a computer performs steps of:

estimating a vehicle exit peak time during which outgoing vehicles are concentrated;

creating discount information based on the estimated vehicle exit peak time, the discount information including time ranges and discount rates or discount amounts associated with each other;

when a fee disclosure request including identification information on an incoming

vehicle is received from a user terminal used by a user or an information terminal installed in a parking lot or in a facility built around the parking lot and used by a user, creating individual fee information from a vehicle entry time associated with the identification information on the incoming vehicle and from the discount information, the individual fee information including a vehicle exit time range and a parking fee associated with each other; and

transmitting the individual fee information to the sender of the fee disclosure request,

wherein the step of creating discount information sets a discount rate or a discount amount applied to a time other than the vehicle exit peak time to be higher than a discount rate or a discount amount applied to the vehicle exit peak time and reflects discount information to the individual fee information, the discount information being in accordance with purchase information on a user within a facility associated with a parking lot.

11. The parking fee management method according to claim 10,

wherein the computer performs step of:

updating a discount rate or a discount amount of the discount information in accordance with a vehicle exit reservation state.

12. A control program of a parking fee management device configured to manage a parking fee of a parking lot, the control program being for causing a computer to perform processes of:

estimating a vehicle exit peak time during which outgoing vehicles are concentrated;

creating discount information based on the estimated vehicle exit peak time, the discount information including time ranges and discount rates or discount amounts associated with each other;

when a fee disclosure request including identification information on an incoming vehicle is received from a user terminal used by a user or an information terminal installed in a parking lot or in a facility built around the parking lot and used by a user, creating individual fee information from a vehicle entry time associated with the identification information on the incoming vehicle and from the discount information, the individual fee information including a vehicle exit time range and a parking fee associated with each other; and

transmitting the individual fee information to the sender of the fee disclosure request,

wherein the process of creating discount information sets a discount rate or a discount amount applied to a time other than the vehicle exit peak time to be higher than a discount rate or a discount amount applied to the vehicle exit peak time and reflects discount information to the individual fee information, the discount information being in accordance with purchase information on a user within a facility associated with a parking lot.

13. The control program according to claim 12 for causing a computer to perform processes of:

at the user terminal or the information terminal,

receiving discount information from a parking fee management device configured to manage a parking fee of the parking lot, the discount information including time ranges and discount rates or discount amounts associated with each other; and

displaying the received discount information on a display unit.

14. The control program according to claim 12 for causing a computer to perform processes of:

at the user terminal or the information terminal,

transmitting identification information on an incoming vehicle and a fee disclosure request to a parking fee management device configured to manage a parking fee of the parking lot;

receiving individual fee information from the parking fee management device, the individual fee information including vehicle exit time ranges and parking fees associated with each other; and

displaying the received individual fee information on a display unit.

15. The control program according to claim 14 for causing a computer to perform processes of:

displaying a vehicle exit reservation input used for making a vehicle exit reservation on a display screen of the individual fee information; and

in response to the vehicle exit reservation input being operated, transmitting a vehicle exit reservation request including a vehicle exit time range to a predetermined destination.