

[CLAIMS]

[Claim 1]

A road pricing system which performs billing for use of a specific zone by a vehicle, the road pricing system comprising:

5 a GPS reception device which is provided in the vehicle and receives radio waves from a GPS satellite to measure a current position;

a roadside wireless device which is provided in an approach path in which it is difficult to receive the radio waves from the GPS satellite among approach paths leading to the specific zone, and wirelessly transmits zone data indicating the specific zone
10 corresponding to the approach path;

a billing-processing device which performs a billing process for use of the specific zone by the vehicle; and

a billing request device which requests the billing-processing device to perform the billing process for use of the specific zone when the vehicle enters the specific zone,

15 wherein the billing request device includes

a billing request unit which requests the billing-processing device to perform the billing process for use of the specific zone when the current position measured by the GPS reception device corresponds to the specific zone and the billing process has not been performed for use of the specific zone, and requests the billing-processing device to
20 perform the billing process for use of the specific zone when the billing request unit has received the zone data from the roadside wireless device and the billing process has not been performed for use of the specific zone indicated by the zone data.

[Claim 2]

The road pricing system according to claim 1, wherein:

25 the billing request device further comprises a fee calculation unit which

calculates a usage fee of the specific zone, and

the billing request unit requests the billing-processing device to perform a billing process of the usage fee calculated by the fee calculation unit.

[Claim 3]

5 The road pricing system according to claim 1 or 2, wherein:

the billing request device further comprises a billing determination unit which determines whether the billing process has been performed for use of the specific zone, and

the billing request unit requests the billing-processing device to perform the
10 billing process for use of the specific zone when the billing determination unit determines that the billing process has not been performed for use of the specific zone.

[Claim 4]

The road pricing system according to any one of claims 1 to 3, wherein:

the billing request device further comprises a position determination unit which
15 determines whether the current position measured by the GPS reception device corresponds to the specific zone, and

when the position determination unit has determined that the current position measured by the GPS reception device corresponds to the specific zone and the billing process has not been performed for use of the specific zone, the billing request unit
20 requests the billing-processing device to perform the billing process for use of the specific zone.

[Claim 5]

A billing request device which requests a billing-processing device which performs a billing process for use of a specific zone by a vehicle to perform the billing
25 process for use of the specific zone when the vehicle enters the specific zone, the billing

request device comprising:

5 a billing request unit which requests the billing-processing device to perform the billing process for use of the specific zone when a current position measured by a GPS reception device, which is provided in the vehicle and receives radio waves from a GPS satellite to measure the current position, corresponds to the specific zone and the billing process has not been performed for use of the specific zone, and requests the billing-processing device to perform the billing process for use of the specific zone when the billing request unit has received zone data from a roadside wireless device, which is provided in an approach path in which it is difficult to receive the radio waves from the
10 GPS satellite among approach paths leading to the specific zone and wirelessly transmits the zone data indicating the specific zone corresponding to the approach path, and the billing process has not been performed for use of the specific zone indicated by the zone data.

[Claim 6]

15 A control method for controlling a billing request device which requests a billing-processing device which performs a billing process for use of a specific zone by a vehicle to perform the billing process for use of the specific zone when the vehicle enters the specific zone, the control method comprising:

20 a billing request step for requesting the billing-processing device to perform the billing process for use of the specific zone when a current position measured by a GPS reception device, which is provided in the vehicle and receives radio waves from a GPS satellite to measure the current position, corresponds to the specific zone and the billing process has not been performed for use of the specific zone, and requesting the billing-processing device to perform the billing process for use of the specific zone when
25 zone data has been received from a roadside wireless device, which is provided in an

approach path in which it is difficult to receive the radio waves from the GPS satellite among approach paths leading to the specific zone and wirelessly transmits the zone data indicating the specific zone corresponding to the approach path, and the billing process has not been performed for use of the specific zone indicated by the zone data.

5 [Claim 7]

A program for a billing request device which requests a billing-processing device which performs a billing process for use of a specific zone by a vehicle to perform the billing process for use of the specific zone when the vehicle enters the specific zone, the program causing the billing request device to function as:

- 10 a billing request unit which requests the billing-processing device to perform the billing process for use of the specific zone when a current position measured by a GPS reception device, which is provided in the vehicle and receives radio waves from a GPS satellite to measure the current position, corresponds to the specific zone and the billing process has not been performed for use of the specific zone, and requests the
- 15 billing-processing device to perform the billing process for use of the specific zone when the billing request unit has received zone data from a roadside wireless device, which is provided in an approach path in which it is difficult to receive the radio waves from the GPS satellite among approach paths leading to the specific zone and wirelessly transmits the zone data indicating the specific zone corresponding to the approach path, and the
- 20 billing process has not been performed for use of the specific zone indicated by the zone data.

[CLAIMS]

[Claim 1]

A road pricing system which performs billing for use of a specific zone by a vehicle, the road pricing system comprising:

a GPS reception device which is provided in the vehicle and receives radio waves from a GPS satellite to measure a current position;

a roadside wireless device which is provided in an approach path in which it is difficult to receive the radio waves from the GPS satellite among approach paths leading to the specific zone, and wirelessly transmits zone data indicating the specific zone corresponding to the approach path;

a billing-processing device which performs a billing process for use of the specific zone by the vehicle; and

a billing request device which requests the billing-processing device to perform the billing process for use of the specific zone when the vehicle enters the specific zone,

wherein the billing request device includes

a billing request unit which requests the billing-processing device to perform the billing process for use of the specific zone when the current position measured by the GPS reception device corresponds to the specific zone and the billing process has not been performed for use of the specific zone, and requests the billing-processing device to perform the billing process for use of the specific zone when the billing request unit has received the zone data from the roadside wireless device and the billing process has not been performed for use of the specific zone indicated by the zone data.

[Claim 2]

The road pricing system according to claim 1, wherein:

the billing request device further comprises a fee calculation unit which calculates a usage fee of the specific zone, and

the billing request unit requests the billing-processing device to perform a billing process of the usage fee calculated by the fee calculation unit.

[Claim 3]

The road pricing system according to claim 1 or 2, wherein:

the billing request device further comprises a billing determination unit which determines whether the billing process has been performed for use of the specific zone, and

the billing request unit requests the billing-processing device to perform the billing process for use of the specific zone when the billing determination unit determines that the billing process has not been performed for use of the specific zone.

[Claim 4]

The road pricing system according to any one of claims 1 to 3, wherein:

the billing request device further comprises a position determination unit which determines whether the current position measured by the GPS reception device corresponds to the specific zone, and

when the position determination unit has determined that the current position measured by the GPS reception device corresponds to the specific zone and the billing process has not been performed for use of the specific zone, the billing request unit requests the billing-processing device to perform the billing process for use of the specific zone.

[Claim 5]

A billing request device which requests a billing-processing device which performs a billing process for use of a specific zone by a vehicle to perform the billing process for use of the specific zone when the vehicle enters the specific zone, the billing request device comprising:

a billing request unit which requests the billing-processing device to perform the billing process for use of the specific zone when a current position measured by a GPS reception device, which is provided in the vehicle and receives radio waves from a GPS satellite to measure the current position, corresponds to the specific zone and the billing process has not been performed for use of the specific zone, and requests the billing-processing device to perform the billing process for use of the specific zone when the billing request unit has received zone data from a roadside wireless device, which is provided in an approach path in which it is difficult to receive the radio waves from the GPS satellite among approach paths leading to the specific zone and wirelessly transmits the zone data indicating the specific zone corresponding to the approach path, and the billing process has not been performed for use of the specific zone indicated by the zone data.

[Claim 6]

A control method for controlling a billing request device which requests a billing-processing device which performs a billing process for use of a specific zone by a vehicle to perform the billing process for use of the specific zone when the vehicle enters the specific zone, the control method comprising:

a billing request step for requesting the billing-processing device to perform the billing process for use of the specific zone when a current position measured by a GPS reception device, which is provided in the vehicle and receives radio waves from a GPS satellite to measure the current position, corresponds to the specific zone and the billing process has not been performed for use of the specific zone, and requesting the billing-processing device to perform the billing process for use of the specific zone when zone data has been received from a roadside wireless device, which is provided in an approach path in which it is difficult to receive the radio waves from the GPS satellite among approach paths leading to the specific zone and wirelessly transmits the zone data indicating the specific zone corresponding to the approach path, and the billing process has not been performed for use of the specific zone indicated by the zone data.

[Claim 7]

A program for a billing request device which requests a billing-processing device which performs a billing process for use of a specific zone by a vehicle to perform the billing process for use of the specific zone when the vehicle enters the specific zone, the program causing the billing request device to function as:

a billing request unit which requests the billing-processing device to perform the billing process for use of the specific zone when a current position measured by a GPS reception device, which is provided in the vehicle and receives radio waves from a GPS satellite to measure the current position, corresponds to the specific zone and the billing process has not been performed for use of the specific zone, and requests the billing-processing device to perform the billing process for use of the specific zone when the billing request unit has received zone data from a roadside wireless device, which is provided in an approach path in which it is difficult to receive the radio waves from the GPS satellite among approach paths leading to the specific zone and wirelessly transmits the zone data

indicating the specific zone corresponding to the approach path, and the billing process has not been performed for use of the specific zone indicated by the zone data.