CLAIMS

1. An on-board device comprising:

a positional information acquisition means acquiring positional information of a mobile object;

a map information storage means storing map information in which a road is divided into a plurality of line segments in a pseudo manner and each of the divided line segments is made to correspond to unique identification information and the positional information;

a line segment specifying means specifying a line segment on the map information corresponding to current positional information of the mobile object;

an interpolated route information storage means storing interpolated route information in which a combination of two discontinuous line segments and a line segment constituting an interpolated route for connecting the former line segments are uniquely defined;

a route interpolation means using the interpolated route information to interpolate a discontinuous zone in a case where two line segments consecutively specified by the line segment specifying means are discontinuous on the map information;

a fee-charging information storage means storing notified line segment information in which the identification information

of a line segment which is required to be notified relating to fee-charging is registered;

a determination means determining whether or not the line segments specified by the line segment specifying means and the line segment constituting the interpolated route interpolated by the route interpolation means are registered in the notified line segment information in the fee-charging information storage means; and

a notification means notifying information concerning the fee-charging in a case where the determination means determines the registration.

2. The on-board device according to claim 1, wherein

the interpolated route information is updated at a predetermined time interval.

3. The on-board device according to claim 1, wherein

the interpolated route information is prepared depending on at least one of a time zone and a type of vehicles, and

the route interpolation means uses a interpolated route information satisfying a condition to interpolate the discontinuous line segments.

4. The on-board device according to claim 1, wherein

in the interpolated route information, fee-charging cancel information is made addible as attribute information to the line segment constituting the interpolated route.

5. A route interpolating method for an on-board device in which map information in which a road is divided into a plurality of line segments in a pseudo manner and each of the divided line segments is made to correspond to unique identification information and the positional information, and interpolated route information in which a combination of two discontinuous line segments and line segments constituting an interpolated route for connecting the former line segments are uniquely defined are prepared in advance, the method comprising:

a positional information acquisition step of acquiring positional information of a mobile object;

a line segment specifying step of specifying a line segment on the map information corresponding to current positional information of the mobile object;

a route interpolation step of using the interpolated route information to interpolate a discontinuous zone in a case where two line segments consecutively specified in the line segment specifying step are discontinuous on the map information;

a storing step of storing notified line segment information in which the identification information of a line segment which

is required to be notified relating to fee-charging is registered;

a determining step of determining whether the line segments specified by the line segment specifying step and the line segment constituting the interpolated route are registered in the notified line segment information; and

a notifying step of notifying information concerning the fee-charging in a case where the determination means determines the registration.

6. A route interpolating program for an on-board device in which map information in which a road is divided into a plurality of line segments in a pseudo manner and each of the divided line segments is made to correspond to unique identification information and the positional information, and interpolated route information in which a combination of two discontinuous line segments and line segments constituting an interpolated route for connecting the former line segments are uniquely defined are stored in a storage means in advance, the program causing a computer to execute:

a positional information acquisition process of acquiring positional information of a mobile object;

a line segment specifying process of specifying a line segment on the map information corresponding to current

positional information of the mobile object;

a route interpolation process of using the interpolated route information to interpolate a discontinuous zone in a case where two line segments consecutively specified in the line segment specifying process are discontinuous on the map information;

a storing step of storing notified line segment information in which the identification information of a line segment which is required to be notified relating to fee-charging is registered;

a determining step of determining whether the line segments specified by the line segment specifying step and the line segment constituting the interpolated route are registered in the notified line segment information; and

a notifying step of notifying information concerning the fee-charging in a case where the determination means determines the registration.