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SUMMARY OF INVENTION

TECHNICAL PROBLEM

[0004]

A problem with conventional congestion prediction devices is that although it is necessary to predict a turnout and prepare entry and exit data in advance, it is difficult to prepare entry and exit data for a first-time event or a place where an event is held for the first time.

[0005]

The present invention is made in order to solve the above-mentioned problem, and it is therefore an object of the present invention to eliminate the necessity to prepare data used for congestion prediction in advance, and make it possible to perform congestion prediction in a first-time event or at a place where an event is held for the first time.

SOLUTION TO PROBLEM

[0006]

A congestion prediction device according to the present invention, includes: a prediction data generating unit for predicting the number of persons who will pass through a measurement point in a future time, by using measurement data outputted by a sensor for measuring the number of persons who have passed through the measurement point, thereby generating prediction data; and at least one congestion prediction processing unit for predicting a congestion state of the measurement point in a future time by using the prediction data generated by the prediction data generating unit, thereby generating and outputting congestion prediction data, wherein the at least one congestion prediction processing unit reflects measurement data which the sensor newly outputs during a process of predicting the congestion state, in the congestion prediction data during the process of predicting, thereby outputting the congestion prediction data.

ADVANTAGEOUS EFFECTS OF INVENTION

[0007]

According to the present invention, because the number of persons who will pass in a future time is predicted by using measurement data about the number of persons who have passed through the measurement point, and a congestion state of the measurement point in a future time is predicted by using the prediction data, and measurement data which the sensor newly outputs during a process of predicting the congestion state is reflected in the congestion prediction data during the process of predicting, it is not necessary to prepare data used for the congestion prediction in advance, and it is possible to perform the congestion prediction in a first-time event or at a place where an event is held for the first time.

BRIEF DESCRIPTION OF DRAWINGS

[0008]

Fig. 1 is a diagram of a functional configuration of a congestion prediction device according to Embodiment 1 of the present invention;

Fig. 2 is a diagram of a hardware configuration of the congestion prediction device according to Embodiment 1;

Fig. 3 is a sequence diagram showing processing performed by the congestion prediction device according to Embodiment 1;

Fig. 4 is a flow chart showing processing performed by a measurement data storage unit of the congestion prediction device according to Embodiment 1;

Fig. 5 is a flow chart showing processing performed by a prediction data generating unit of the congestion prediction device according to Embodiment 1;

Fig. 6 is a flow chart showing processing performed by a prediction data storage unit of the congestion prediction device according to Embodiment 1;

Fig. 7 is a flow chart showing processing performed by a congestion prediction processing unit of the congestion

CLAIMS

[1] A congestion prediction device comprising:

a prediction data generating unit for predicting the number of persons who will pass through a measurement point in a future time, by using measurement data outputted by a sensor for measuring the number of persons who have passed through the measurement point, thereby generating prediction data; and

at least one congestion prediction processing unit for predicting a congestion state of the measurement point in a future time by using the prediction data generated by the prediction data generating unit, thereby generating and outputting congestion prediction data,

wherein the at least one congestion prediction processing unit reflects measurement data which the sensor newly outputs during a process of predicting the congestion state, in the congestion prediction data during the process of predicting, thereby outputting the congestion prediction data.

[2] The congestion prediction device according to claim 1,

further comprising a difference calculating unit for selecting, from among plural prediction data generated by the prediction data generating unit, prediction data having a smallest difference between the prediction data and the measurement data which the sensor newly outputs during the process of predicting the congestion state,

wherein the at least one congestion prediction processing unit generates plural congestion prediction data by using the respective plural prediction data generated by the prediction data generating unit, and outputs, among the plural congestion prediction data, congestion prediction data which is generated using the prediction data selected by the difference calculating unit.

[3] A congestion prediction method comprising:

a prediction data generating step of, in a prediction data generating unit, predicting the number of persons who will pass through a measurement point in a future time, by using measurement data outputted by a sensor for measuring the number of persons who have passed through the measurement point, thereby generating

prediction data; and

a congestion prediction processing step of, in at least one congestion prediction processing unit, predicting a congestion state of the measurement point in a future time by using the prediction data generated in the prediction data generating step, thereby generating and outputting congestion prediction data,

wherein the congestion prediction processing step reflects measurement data which the sensor newly outputs during a process of predicting the congestion state, in the congestion prediction data during the process of predicting, thereby outputting the congestion prediction data.