

**BANDWIDTH PREDICTION APPARATUS,
BANDWIDTH PREDICTION SYSTEM,
BANDWIDTH PREDICTION PROGRAM,
BANDWIDTH PREDICTION METHOD
AND RECORDING MEDIUM**

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TECHNICAL FIELD

The present invention relates to a bandwidth prediction apparatus, a bandwidth prediction system, a bandwidth prediction program, a bandwidth prediction method and a recording medium.

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RELATED ART

Non-Patent Document 1 discloses a technology of repeatedly making a measurement to prepare a network bandwidth map of a road network. Also, it suggests carrying out a simulation test by using measured data, thereby using a geographical effect of the bandwidth obtained by the bandwidth map to improve a service quality of the network.

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Non-Patent Document 1: Jun Yao, Salil S. Kanhere, Member, IEEE, and Mahbub Hassan, Snior Member, IEEE, "Improving QoS in High Speed Mobility Using Bandwidth Maps", IEEE TRANSACTIONS ON MOBILE COMPUTING VOL.11 NO.4, APRIL 2012

When measuring a variation in the bandwidth of a point at which the measurement of the bandwidth has been completed by the repeated measurement or simulation, it is not possible to calculate a value of a bandwidth at a point at which a bandwidth has not been measured.

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SUMMARY

It is therefore an object of the present invention to predict a bandwidth at any position, except for a position at which a bandwidth has been measured.

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According to a first aspect of the embodiments of the present invention, there is provided a bandwidth prediction apparatus comprising: an acquisition unit configured to acquire position information indicating a first position at which a bandwidth is to be predicted; and a prediction unit configured to predict a bandwidth at the first position by using respective measured values of bandwidths measured in advance at a plurality of second positions.

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According to a second aspect of the embodiments of the present invention, there is provided the bandwidth prediction apparatus according to the first aspect, wherein the prediction unit is configured to predict the bandwidth at the first position by using a spatial variation to make a prediction.

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According to a third aspect of the embodiments of the present invention, there is provided the bandwidth prediction apparatus according to the first aspect or the second aspect, wherein the prediction unit is configured to minimize an error of a predicted value of the