

ABSTRACT

Performance data acquisition unit 1111 acquires performance data that indicates a relationship between navigation speed and fuel consumption per unit time in cases where a ship navigates in a plurality of weather/maritime environments. Weather/maritime condition data acquisition unit 1113 acquires weather/maritime condition data that indicates weather/maritime conditions in one or more sea areas for each of a plurality of past time periods. With use of the performance data and the weather/maritime condition data, for each of a plurality of past times, calculation unit 114 calculates a value that indicates a time required for navigation or a fuel consumption amount in a case where the ship navigates a designated ship route from the time as a departure time while maintaining a designated navigation speed or fuel consumption per unit time. Statistical processing unit 115 estimates the probability distribution of a population of samples of the time or the fuel consumption amount calculated by calculation unit 114.