

ABSTRACT

An object is to make it possible to determine and output an accurate current position reliably in a short time and at a low cost, even in environments where signals from positioning satellites are complicatedly affected by structures, geographical features, etc. Therefore, the present invention provides a position detection device comprising: a receiving unit receiving signals from a positioning satellite, and calculating a pseudo range to the positioning satellite based on the signals, and a positioning unit calculating an initial position based on the pseudo range calculated by the receiving unit, calculating the pseudo range to the positioning satellite at plural positions around the initial position using a three-dimensional map data and a ray-tracing method, selecting candidate positions from the plural positions based on the pseudo range, and deciding a current position based on the candidate positions within such a short distance from the initial position that predetermined conditions are satisfied.