

ABSTRACT

A radio communication apparatus has a storage section for correlating and storing positional information and identification information of the base station, a receiving section for receiving radio signals transmitted from the base station and containing the identification information and a position estimating section for estimating position of the radio communication apparatus based on the positional information stored in the storage section. In the storage section, the positional information of a first base station within a first coverage is represented by using a first discrete value obtained by quantizing the position of the first base station by setting the first coverage as a quantization coverage and a first quantization number as a quantization number and the positional information of a second base station within a second coverage whose area is narrower than the first coverage and where the base stations are more densely installed than the first coverage is represented by using a second discrete value obtained by quantizing the position of the second base station by setting the second coverage as a quantization coverage and a second quantization number that is smaller than the first quantization number as a quantization number.