CLAIMS

1. A measurement apparatus comprising:

a first speed calculation module configured to calculate a first speed of a railway vehicle, based on satellite radio waves from a satellite in a global navigation satellite system;

a second speed calculation module configured to calculate a second speed of the railway vehicle from a detection value of a sensor installed in the railway vehicle;

a first position calculation module configured to calculate a position of the railway vehicle based on the satellite radio waves; and

a determination module configured to determine which of the first speed and the second speed is employed based on a preset condition, wherein

the determination module determines which of the first speed and the second speed is employed, based on a direction vector connecting a position and a position of the railway vehicle at different times with each other.

2. The measurement apparatus according to claim 1, further comprising a satellite selection module configured to select the satellite to be used for calculating the first speed, wherein

the determination module determines which of the first speed and the second speed is employed, based on a selection result of the satellite selection module.

3. The measurement apparatus according to claim 2, wherein the satellite selection module selects the

satellite within a selection range for speed including a travel direction of the railway vehicle, as the satellite to be used for calculating the first speed.

4. The measurement apparatus according to any one of claims 1 to 3, further comprising a second position calculation module configured to calculate a position of the railway vehicle, wherein

the determination module acquires position information on a position of an object on a route on which the railway vehicle travels and determines which of the first speed and the second speed is employed based on the position of the railway vehicle and the position of the object.