ABSTRACT

METHOD AND SYSTEM FOR ESTIMATING POSITION BY COLLABORATIVE READJUSTMENT ON LANDMARKS HAVING INACCURATE POSITIONS

Method for the collaborative readjustment of at least one platform or node in a network comprising at least two platforms and a landmark having known but inaccurate positions exchanging information by means of a communication protocol, said method comprising at least the following steps:

Determining an observation vector m of dimension equal to 2M+K+L measurements, with:

- M measurements of position of the platforms and of the landmarks, one position observation per platform or per landmark,
- L measurements of angles with at most one angle measurement for each pair of platform/landmark entities,
- K measurements of distances between a platform and a landmark,

Estimating the state vector u using a maximum likelihood criterion that takes into account the observation vector m representative of all of the positions of the platforms and of the landmark or of the landmarks,

Deducing, from the estimated state vector and jointly, the coordinates of the positions of at least two platforms and of a landmark, and transmitting these new coordinates to the platforms and landmarks in contact with said readjusted platforms.

Figure 3 to be published