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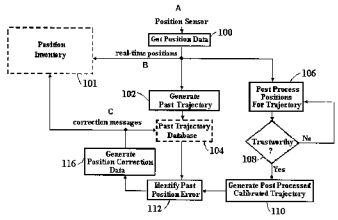
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(54) **Title:** AUTOMATIC PAST ERROR CORRECTIONS FOR LOCATION AND INVENTORY TRACKING



101 inventaire de localisation
A capteur de position
100 obtenir données de position
B positions en temps réel
102 générer trajectoire passée
104 base de données de trajectoires passées
NO= non
106 effectuer post-traitement de positions pour la trajectoire
108 fiable ?
YES= oui
110 générer trajectoire étalonnée post-traitée
C messages de correction
116 générer données de correction de position
112 identifier l'erreur de position passée

(57) **Abstract:** A system is provided for tracking and maintaining an inventory of location of containers that are stored on cargo ships or in a container yard. The system includes one or more sensors, such as GPS and INS sensors for obtaining real-time position information, as well as a processor configured to automatically provide post processing to recover lost data and to correct erroneous data, such as when real-time position signals are blocked or distorted, the post processing performed by estimating trajectories and correcting the location errors. Post-processed positioning techniques are continuously applied to the stored position data to iteratively determine calibrated position locations to provide calibrated second trajectory segments in a real-time fashion. The calibrated second trajectories are then used to identify the errors in the past real-time position data as soon as a segment of the second calibrated trajectory becomes statistically trustworthy. Corrections can be automatically made in inventory locations stored in a database to correct position errors for the containers.

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