

## CLAIMS

1. An apparatus for managing inventory, the apparatus comprising:

a communication component configured to receive location information indicating at least one space location among a plurality of space units organized in a hierarchical structure and space information corresponding to the location information; and

an operation component configured to calculate a state change amount related to the at least one space location based on at least one of the location information, the space information, or information on a previous space state for each of the plurality of space units and update the information on the previous space state for each of the plurality of space units with information on a current space state based on the state change amount accumulated for a predetermined period of time, wherein

the state change amount indicates a difference value between the previous space state and the current space state of the at least one space location.

2. The apparatus of claim 1, wherein the space information includes at least one of a number of inventories, a number of inventory types, a total inventory volume, or a total loadable volume regarding a space corresponding to the location information.

3. The apparatus of claim 2, wherein the operation component is configured to update the information on the previous space state with the information on the current space state by calculating the state change amount and updating at least one of a number of inventories, a number of inventory types, a total inventory volume, or a total loadable volume for each of the plurality of space units.

4. The apparatus of claim 1, wherein the communication component is configured to receive the location information indicating a space location for each of at least two units among the plurality of space units which are hierarchical space units.

5. The apparatus of claim 1, wherein the operation component is further configured to transmit the updated information regarding the current space state for each of the plurality of space units to a second storage.

6. The apparatus of claim 1, wherein the communication component is configured to receive the location information and the space information when a state of a space is changed.

7. The apparatus of claim 1, wherein the operation component is configured to update the information on the previous space state with the information on the current space state by accumulating, for the predetermined period of time, the state change amount calculated in response to information on an item or information on a loading space being changed collectively.

8. A method of managing inventory, the method comprising:

receiving location information indicating at least one space location among a plurality of space units organized in a hierarchical structure and space information corresponding to the location information;

calculating a state change amount related to the at least one space location based on at least one of the location information, the space information, or information on a previous space state for each of the plurality of space units; and

updating the information on the previous space state for each of the plurality of space units with information on a current space state based on the state change amount accumulated for a predetermined period of time, wherein

the state change amount indicates a difference value between the previous space state and the current space state of the at least one space location.

9. The method of claim 8, wherein the space information includes at least one of a number of inventories, a number of inventory types, a total inventory volume, or a total loadable volume regarding a space corresponding to the location information.

10. The method of claim 8, wherein the updating comprises:

updating the information on the previous space state with the information on the current space state by calculating the state change amount and updating at least one of a number of inventories, a number of inventory types, a total inventory volume, or a total loadable volume for each of the plurality of space units.

11. The method of claim 8, wherein the receiving comprises receiving the location information indicating a space location for each of at least two units among the plurality of space units which are hierarchical space units.

12. The method of claim 8, further comprising:

transmitting the updated information on the current space state for each of the plurality of space units to a second storage.

13. The method of claim 8, wherein the receiving comprises receiving the location information and the space information when a state of a space is changed.

14. The method of claim 8, wherein the updating of the information on the previous space state further comprises:

updating the information on the previous space state with the information on the current space state by accumulating, for the predetermined period of time, the state change amount calculated in response to information on an item or information on a loading space being changed collectively.

15. A non-transitory computer readable recording medium comprising a computer program for performing the method of any one of claims 8 to 14.