

SUMMARY

While consolidating cargo or items in containers so that total costs is minimized, constraints on both the cargo and the containers need to be respected. LSP may provide the one or more constraints placed on the attributes of the cargo, that limit the number of items that is allowed per container. The process of packing the items into containers honoring all the one or more constraints is also called load planning. In real scenarios, multiple constraints can be placed by the customers and the warehouse managers. For example, customer-specific constraints are that cargo from two different vendors cannot go in the same container or only a limited amount of types can go together - as in apparels cannot go together with shoes and so forth. Further, constraints can be placed for ease of the de-consolidation process, e.g.: items or cargo to different destination ports cannot be packed together in the same container.

There is a need for an electronic device and a method that may address multiple constraints placed on various attributes. Accordingly, there is a need for an electronic device and a method for assigning items into one or more containers, which mitigate, alleviate or address the shortcomings existing and provide, in an efficient manner (e.g. in time, e.g. in computational time), an optimized assignment of items while reducing waste of container space.

In a first aspect, the present disclosure provides a method, performed by an electronic device, for assigning items into one or more containers. The method comprises obtaining a plurality of attributes associated with a corresponding item. The method comprises obtaining a set of container parameters associated with a corresponding container. The method comprises obtaining one or more constraints, wherein the one or more constraints limit assigning items in a same container. The method comprises determining an assignment of the items to the one or more containers, based on the attributes, the set of container parameters and the one or more constraints. The method comprises outputting, based on the assignment, an assignment plan of the items into the one or more containers.

In a second aspect, the present disclosure provides an electronic device comprising a memory circuitry, a processor circuitry, and an interface, wherein the electronic device is configured to perform any of the methods according to the first aspect.

In a third aspect, the present disclosure provides a computer readable storage medium storing one or more programs, the one or more programs comprising

instructions, which when executed by an electronic device with a display and a touch-sensitive surface cause the electronic device to perform any of the methods according to the first aspect.