AUTOMATED ORDER HANDLING AND DELIVERY SYSTEM

TECHNICAL FIELD

[0001] The present subject matter relates, in general, to the field of automated delivery and, in particular, to a system for automated delivery of food items.

BACKGROUND

[0002] Catering and restauranteering are highly demanding fields of operation, where on-demand preparation of hygienic and fresh food items and their timely and reliable delivery are important factors to delight customers. In current times, customers are provided with a variety of cuisines to choose from, and dine-in facilities to treat themselves and their loved ones. As the demand for restaurants and catering facilities increase, high degrees of quality, efficiency, hygiene, and cost effectiveness should be maintained and possibly increased. Fast food or quick service restaurants strive to effectively meet variable customer demand, while at the same time provide hygienic, quality, consistent, and cost effective food and beverage items.

SUMMARY

[0003] This summary is provided to introduce concepts related to order handling and delivery, and the concepts are further described below in the detailed description. This summary is neither intended to identify essential features of the claimed subject matter nor is it intended for use in determining or limiting the scope of the claimed subject matter.

[0004] In ~~one implementation~~the first aspect, the present subject matter relates to a dispenser for storing, preserving, and delivering a plurality of food items. The dispenser may include a) a loading bay for placing the food items in the dispenser; b) a plurality of chambers for storing ~~and dispensing~~ each of the plurality of food items; c) an automated scanning unit for scanning the plurality of food items placed in the chambers to generate a scan map indicative of locations and time tag of preparation of each of the plurality of food items; d) an automated dispensing unit for dispensing ~~an identified~~at least one food item ~~from the chambers; and~~among the plurality of food items, e) a controller for controlling climate conditions within the dispenser for preservation of the plurality of food items, for actuating the scanning unit based on at least one of an order parameter and a completion of the placing the food items in the dispenser, identifying a food item from the plurality of food items based on the scan map, and for operating the dispensing unit to dispense the identified food items.

In the second aspect, the subject matter relates to a delivery control unit (128) for controlling an automated order handling and delivery system (100, 200), the delivery control unit (128) comprising:

a processor (130); and a delivery module (142), coupled to the processor (130), to:

control a delivery apparatus (110, 206) for delivering at least one food item to a delivery station (116, 208);

selectively pass the at least one food item through a heating apparatus (114, 210) based on an order parameter related to the at least one food item; and

trigger an alert notification on at least one display apparatus (118) based on an arrival of the at least one food item at the delivery station (116, 208), wherein a customer is notified by the alert notification to pick up the at least one food item; and

a temperature control module (144) coupled to the processor (130) to actuate the heating apparatus (114, 210) based on the order parameter.

In the third aspect, the subject matter relates to an order handling and delivery system (100, 200) for automated ordering and delivery of at least one food item comprising:

an order handling unit (124) for receiving at least one food item selection, wherein the at least one food item selection includes information relating to the at least one food item and information relating to a temperature preference of the at least one food item, and wherein the order handling unit (124) generates at least one order parameter based on the at least one food item selection;

one or more dispensers (102, 202, 302), for storing, preserving, and dispensing the at least one food item, wherein the dispenser (102, 202, 302) provides for dispensing the at least one food item,

a delivery apparatus (110, 206) for:

automatically conveying the dispensed at least one food item to a delivery station; and

selectively moving the at least one food item through a heating apparatus;

a heating apparatus (114, 210) for heating the at least one food item based on the at least one order parameter; and

a delivery station (116, 208) for receiving delivered food items.