

CLAIMS

1. A computer-implemented method for order information determination, the method comprising:
 - receiving, by a service management system, first sensor data received from one or more first sensors including at least a camera sensor;
 - determining, by the service management system, pose information that represents a position of a user's hand relative to the user's body based on processing the first sensor data;
 - receiving, by the service management system, second sensor data representing a radio-frequency identification (RFID) signal received from one or more second sensors including at least an RFID reader;
 - determining, by the service management system, an RFID location that represents a location of an RFID label attached to a product based on processing the second sensor data using RFID positioning techniques;
 - determining, by the service management system and based on processing the first or second sensor data, whether the user is in an exit area of a shopping environment; and
 - performing, by the service management system, the following operations to generate an order to be placed by the user in response to determining that the user is in the exit area of the shopping environment:
 - determining, from the pose information that represents the position of the user's hand relative to the user's body, that a pose of the user's hand occupies the RFID location determined from the RFID signal sent by the RFID label attached to the product; and
 - in response to determining that the pose of the user's hand occupies the RFID location determined from the RFID signal sent by the RFID label attached to the product, adding, by the service management system, corresponding information of the product to the order to be placed by the user.
2. The method according to claim 1, wherein the RFID signal comprises product information of the product.

3. The method according to claim 1, wherein
determining whether the user is in the exit area of the shopping environment is based on location information of the user obtained through positioning.
4. The method according to claim 3, further comprising:
obtaining, in an entrance area, facial recognition data of the user, wherein the facial recognition data corresponds to a user identifier of the user; and
obtaining, in the exit area, the facial recognition data to obtain the user identifier corresponding to the facial recognition data in response to determining that the user is in the exit area, wherein the order corresponds to the user identifier.
5. The method according to claim 1, further comprising:
transmitting a message to a user device for providing an output indicating the order.
6. The method according to claim 5, wherein the service management system communicates with the user device by using a near field communication network.
7. The method according to claim 5, further comprising:
receiving, by the service management system and from the user device, a user identifier.
8. The method according to claim 7, further comprising:
determining, by the service management system, a member identifier based on the user identifier; and
in response to determining the member identifier, determining, by the service management system, an account corresponding to the member identifier.
9. An apparatus for order information determination, the apparatus comprising a plurality of modules configured to perform the method of any one of claims 1 to 8.