

CLAIMS

1. A system for facilitating detection and payment of a product, the product having a radio frequency identification (RFID) tag attached thereon, the system comprising:

two or more RFID scanners attachable to a container for holding the product, wherein each RFID scanner is configured to:

(i) receive tag identification data from the RFID tag when the RFID tag is within communication range of the RFID scanner;

(ii) generate a signal that is associated with the tag identification data and a time of receipt of the tag identification data; and

a computer server communicatively coupled with the two or more RFID scanners, wherein the computer server is configured to:

(i) receive the signals from the two or more RFID scanners; and

(ii) determine an identity of the product and a presence of the product in the container based on the signals, wherein the presence of the identified product is used for facilitating payment of the product.

2. The system as claimed in claim 1, wherein each generated signal further comprises scanner identification data of a corresponding RFID scanner such that the computer server is further configured to determine an identity of the corresponding RFID scanner based on the signal.

3. The system as claimed in claim 1, wherein the system further comprises a database communicatively coupled to the computer server, the database having stored therein product data corresponding to the product, and wherein the computer server is further configured to retrieve the product data of the identified product from the database for facilitating payment of the product.

4. The system as claimed in claim 3, wherein the product data comprises a price of the product.

5. The system as claimed in claim 1, wherein at least one of the two or more RFID scanners is attached proximate to an opening of the container and at least one other of the two or more RFID scanners is attached distant to the opening of the container, wherein presence or absence of the product in the container is determinable based on the respective times of receipt of the signals from the at least one RFID scanner and the at least one other RFID scanner.

6. The system as claimed in claim 5, wherein the at least one RFID scanner that is attached proximate to the opening of the container is tilted upwards towards the opening of the container and the at least one other RFID scanner that is attached distant to the opening of the container is tilted downwards towards a base of the container.
7. The system as claimed in claim 1, wherein the system comprises at least four RFID scanners and the container is defined by a first and a second boundary, and at least two RFID scanners are attached to the first boundary and at least two other RFID scanners are attached to the second boundary such that the at least four RFID scanners receive the tag identification data to determine the presence of the product within the first and second boundaries.
8. The system as claimed in claim 1, wherein the RFID tag and each of the RFID scanners comprise a High Frequency (HF) or an Ultra-High Frequency (UHF) scanner.
9. The system as claimed in claim 1, wherein the system further comprises a relay unit communicatively coupled with each of the RFID scanners and the computer server and configured to receive the generated signals from each of the RFID scanners and to relay the generated signals to the computer server.
10. The system as claimed in claim 4, wherein the system further comprises a Point-of-Sale (POS) terminal communicatively coupled with the computer server and configured to retrieve the price of the identified product data from the database for facilitating payment of the product.
11. The system as claimed in claim 1, wherein the container comprises a basket or cart or trolley.
12. The system as claimed in claim 4, wherein the system further comprises a display device that is communicatively coupled to the computer server and configured to display the price of the identified product data or a total price of all products in the container for facilitating payment of the product.

13. The system as claimed in claim 1, wherein the computer server is configured to calculate the total price of each product in the container based on the presence of the product in the container and displays the calculated total price on the display device.

14. A method for facilitating detection and payment of a product, the product having a radio frequency identification (RFID) tag attached thereon, the method comprising:

receiving, from two or more RFID scanners attachable to a container for holding the product, RFID tag identification data from the RFID tag when the RFID tag is within communication range of the scanner;

generating, at each of the two or more RFID scanners, a signal that is associated with the RFID tag identification data and a time of receipt of the RFID tag identification data;

transmitting, by the two or more RFID scanners, the signals to a computer server communicatively coupled with the RFID scanner; and

determining, at the computer server, an identity of the product and a presence of the product in the container based on the signals, wherein the presence of the identified product is used for facilitating detection and payment of the product.