

CLAIMS

1. A serving apparatus comprising a main receptacle for holding articles for customer selection, a data storage device, a processor, an RFID first detector comprising a first antenna, and an RFID second detector comprising a second antenna; wherein the processor is to operate the RFID first detector to detect and collect product identification information of an RFID tagged article and to store said product identification information in the data storage device when said article is first introduced into said main receptacle as an introduced article or a checked-in article during a serving session, and to continuously detect presence of said introduced article on said main receptacle during the serving session, and; wherein the processor is to operate the RFID second detector to detect radio frequency signals coming from an RFID tagged article which is outside the apparatus and not on the main receptacle, to checkout or de-register an introduced article which is presented to a checkout port of the RFID second detector, and to determine whether an introduced article is moved out of the main receptacle for viewing or for checking out from the serving session.
2. A serving apparatus according to Claim 1, wherein the processor is to collect and store product identification information associated with articles introduced into said main receptacle until receipt of a signal signifying end of said serving session.
3. A serving apparatus according to Claims 1 and 2, wherein the processor is to collect and store customer specific information and to associate said customer specific information with said stored product identification information associated with said articles at the end of said serving session, said customer specific information being specific to a customer of said serving session.
4. A serving apparatus according to Claim 3, wherein said customer specific information includes one or more of the following types of information of a customer: gender, age, demographic data, articles purchased, purposes of or events leading to purchase in said serving session.
5. A serving apparatus according to any of the preceding Claims, wherein the processor is to cause a selected portion of said product identification information associated with an article to be displayed on said apparatus, said product identification information including one or more of the following product identification, product appearance, weight, unit price, available discount.

6. A serving apparatus according to any of the preceding Claims, wherein the first detector comprises a wireless sensor and the product identification information associated is carried on an RFID (radio frequency identification) tag attached to the article.
7. A serving apparatus according to Claim 6, wherein said RFID tag is in the form of a folded sheet.
8. A serving apparatus according to Claims 6 or 7, wherein said RFID tag carries human readable product identification information.
9. A serving apparatus according to any of the preceding Claims, wherein the processor is to continuously track presence of an article on the main receptacle after first introduction of said article onto said main receptacle through continuous detection of RFID signals emitted by a tag associated with said article.
10. A serving apparatus according to any of the preceding Claims, wherein the apparatus comprises a telecommunications frontend to facilitate retrieval of product identification information from a remote source and to upload information collected during a serving session to a remote destination.
11. A serving apparatus according to any preceding Claims, wherein the processor is to treat an introduced article as a floating article which is being viewed by a customer if the introduced article is moved out of the main receptacle and not checked out.
12. A serving apparatus according to Claim 11, wherein the processor is to log and store viewing durations of floating articles for subsequent processing and to form a viewing history of viewed articles subsequently.
13. A serving apparatus according to Claim 12, wherein the viewing history includes the product identification information of the introduced articles, the product identification information of the introduced articles removed for viewing, the number of viewings per introduced article, the total viewing duration of the introduced articles viewed, and/or the introduced articles purchased.
14. A serving apparatus according to Claim 1, wherein the main receptacle has a main surface for holding articles for customer viewing and selection and the first antenna has an effective detection range covering at least the main surface of the main receptacle, and wherein the RFID second detector comprises a checkout port for checking out or deregistering an introduced article from a serving session and the checkout port is outside the effective detection range of the first antenna.

15. A serving apparatus according to Claim 14, wherein the first antenna has planar detection elements defining a first detection plane which is parallel or substantially parallel to the main surface and the second antenna has planar detection elements defining a second detection surface and a second detection plane, and wherein the first detection plane is orthogonal or substantially orthogonal to the second detection plane, and the second detection surface is outward facing and facing away from the main receptacle.
16. A serving apparatus according to Claim 14, wherein the second antenna is for detection of RFID signals from a localized source.
17. A serving apparatus according to Claim 14, wherein radio frequency shielding is provided on a backside of the second antenna.
18. A serving apparatus according to Claim 14, wherein the checkout port is on a lateral side of the apparatus which is distal from the main receptacle.
19. A serving apparatus according to Claim 14, wherein the checkout port and the first antenna has a separation distance of about 10-15 cm.
20. A serving apparatus according to Claim 14, wherein different visual representations are used to distinguish between introduced articles which are present on the main receptacle and introduced articles which are absent from the main receptacle and not checked out.
21. A serving apparatus according to Claim 20, wherein the difference in visual representations includes one or more of different colour schemes, flashing and highlight.