CLAIMS

1. A system for securely managing inventory data, the system comprising:

a processor (1305):

a computer readable memory device containing a product information data store (103), wherein the product information data store comprises inventory information for a plurality of products, and wherein each product is associated with one or more secure channels (161a…161n) in which the inventory information for each product includes:

mapping IDs (307) for each channel with which the product is associated,

wherein the mapping IDs associate data elements in the record to data element fields in the data store to enable secure intake of new product data and secure retrieval of data that is associated with a particular channel;

a computer-readable memory device containing a consumer profile data store (102), wherein the consumer profile data store holds consumer-product interaction records (441, 442, 443), each of which comprises consumer-product interaction event information and rating information for one or more of the products, and each of which is associated with one of the channels; and

a computer-readable memory device containing programming instructions that are configured to cause the processor to generate and output, on a display device, a channel manager user interface (601) via which the system will:

receive, from a channel manager user for a first channel, an identifier for a consumer,

access the consumer profile data store and retrieve secure profile data for the consumer, wherein the retrieving accesses only consumer-product interaction records that are associated with a token for the first channel and excludes any consumer-product interaction records that are associated with tokens for any other channel,

access the product information data store to identify products that are in an inventory of the first channel,

use the consumer profile data, including both the secure profile data and profile data that is associated with tokens for one or more other channels, to generate one or more product recommendations for the consumer, wherein the one or more product recommendations are for one or more products in the inventory, and

output the one or more product recommendations (611) on the display device.

2. The system of claim 1, wherein the programming instructions to receive the product information for a plurality of inventoried products and determine whether the inventoried product is in the product information data store comprise instructions to, for at least a first product of the inventoried products:

cause a high definition camera (1320) to capture an image that includes the first product, wherein the capturing includes defining a bounding box around section of the first product that contains product indicia;

apply a recognition model to the image to extract the product of indicia from a section of the image that is within the bounding box; and

use a classifier to determine whether the product information data store includes an inventoried product with identifying information that is a likely match for the product indicia.

3. The system of claim 1, wherein the instructions to access the product information data store to identify products that are in the inventory of the first channel comprise instructions to:

identify a channel ID for the first channel; and

maintain data security by extracting, from the product information data store, product data records that are associated with the channel ID and not any product data records that are associated with any other channel ID.

4. The system of claim 1, wherein the channel manager user interface comprises a channel collection user interface that comprises one or more actuators by which the system will receive, from the channel manager user, for the first channel:

a definition for the first channel, wherein the definition for the first channel comprises a subgroup to which the channel relates; and

a definition for a collection of products that are available from the first channel, wherein the definition for the collection comprises:

product description information received from a product description field, and

one or more access restrictions for the collection.

5. The system of claim 1, wherein the programming instructions to output the secure profile data on the display device comprise instructions to:

display information for a plurality of products that are in the consumer-product interaction records for the consumer;

for each product for which the consumer profile data store holds a rating received from the consumer, display the rating with the information for that product; and

for an unrated product for which the consumer profile data store does not hold a rating received from the consumer, generate a proxy rating for the unrated product and display the proxy rating with the information for the unrated product.

6. The system of claim 5, wherein the instructions to generate the proxy rating comprise instructions to use one or more of the following to generate the proxy rating:

a function of a number of times that the consumer purchased the unrated product; or

a date on which the consumer purchased of the unrated product.

7. The system of claim 5, wherein the instructions to generate the proxy rating comprise instructions to:

access the product information data store and retrieve a plurality of characteristic values for the unrated product; and

determine whether the retrieved characteristic values for the product correspond to one or more indicators of preference in a preference model for the consumer, wherein the preference model represents associations between the consumer's ratings of products and a plurality of product characteristics.

8. The system of claim 5, wherein the instructions to generate the proxy rating comprise instructions to:

receive, from the supplier, indicia of a non-purchase interaction by the consumer with the unrated product; and

upon determining that indicia indicate that the consumer interacted with the unrated product, assign a favorable proxy rating to that product.

9. The system of claim 1, further comprising additional programming instructions that are configured to cause the processor to generate and output, on a display device, a channel creation user interface via which the system will:

receive, from a user, product information for a plurality of inventoried products;

for each inventoried product for which product information is received, determine whether the inventoried product is already in the product information data store;

if the inventoried product is not already in the product information data store, add the product information for the inventoried product to the product information data store;

if the inventoried product is already in the product information data store, present additional product information from the product information data store to the user to accept or modify; and

upon receiving confirmation from the user, update the product information data store to include the product information for the inventoried product and associate the inventoried product with the first channel.

10. The system of claim 9, wherein the programming instructions to update the product information data store to include the product information for the inventoried product and associate the inventoried product with the first channel comprise instructions to add a record for the inventory product to the data store by:

identifying a channel ID for the first channel; and

using a mapping ID for the record to associate data elements in the record to data element fields for the first channel in the product information data store.

11. The system of claim 9, further comprising programming instructions that are configured to cause the processor to associate the inventoried product with an address for a landing page for the inventoried product on a website of the first channel.

12. The system of claim 1, further comprising additional programming instructions that are configured to cause the processor to generate and output a customer selection manager via which the system may:

receive, via the channel manager user interface, a selection of a consumer;

receive, via the channel manager user interface, one or more product screening criteria;

use the consumer profile data, including both the secure profile data and profile data that is associated with tokens for one or more other channels, to generate one or more product recommendations for the consumer, wherein the product recommendations are for products in the inventory that meet the screening criteria;

automatically generate a message that includes the product recommendations; and

transmit the message to the consumer.

13. The system of claim 1, further comprising additional programming instructions that are configured to cause the processor to generate and output a customer selection manager via which the system may:

receive, via the channel manager user interface, a selection of a product;

access the consumer profile data to identify one or more consumers who are associated with the channel;

for each of the identified consumers, generate a predicted rating for the product;

select, from the identified consumers, a group of consumers whose predicted rating exceeds a threshold;

automatically generate a message that includes information about the identified product; and

transmit the message to the group of consumers.

14. The system of claim 1, wherein the programming instructions to generate one or more product recommendations for the consumer comprise instructions to:

determine that the consumer has requested a product of a first product category;

identify a second product category;

use one or more attributes of the requested product and the secure profile data to select, from the inventory, one or more products of the second product category; and

include the selected one or more products in the one or more product recommendations.

15. The system of claim 1, further comprising additional programming instructions that are configured to cause the processor to:

receive, via a data feed from each of a plurality of suppliers, inventory information for a plurality of products;

extract, from each data feed, the inventory information for each of the plurality of suppliers by:

using semantic synonyms to map each of a plurality of data fields in the data feed to a pre-defined field mapping that matches a system field in the data store; and

extracting the data from each of the mapped data fields, and save the extracted data to a matched system field; and

update the product information data store to include the extracted inventory information for each product that is associated with the supplier in the product information data store.