

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

**HOME DEPOT USA, INC. and
HOME DEPOT SOLUTIONS LLC**
Petitioner

v.

INNOVAPORT, LLC
Patent Owner

Inter Partes Review No.: IPR2024-00011

**PETITION FOR INTER PARTES REVIEW
OF U.S. PATENT NO. 9,990,670
UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. §§ 42.1-100, ET SEQ**

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670 PATENT LIST OF CLAIMS IN CONTENTION

Claim	Limitation
1pre	A method of providing product location information within a store, the method comprising the steps of:
1a	providing at least one information storage device including a database, wherein the at least one information storage device is configured to be at least indirectly in communication with at least one other device that includes at least one user interface, and wherein at least one of the at least one information storage device and the at least one other device with respect to which the at least one information storage device is configured to be at least indirectly in communication is or includes a mobile device,
1b	wherein the at least one information storage device includes both product location information and additional product-related information linking a product with another product in a cross-referential manner
1c	receiving a product location inquiry signal regarding the product, the product location inquiry signal being at least indirectly based upon a product location inquiry received by way of the at least one user interface
1d	processing the product location inquiry signal at a signal processing device to determine a processed product location inquiry signal
1e	querying the at least one information storage device to obtain portions of the product location information and additional product-related information in response to the processed product location inquiry signal
1f	providing a product location information signal that is at least indirectly responsive to the processed product location inquiry signal
1g	wherein the product location information signal is configured to enable, at least indirectly, a providing of an output signal at an output device as a response to the product location inquiry that includes location information concerning the product and also provides at least one suggestion related to the other product
2	The method of claim 1, wherein the product location information signal is configured to enable, at least indirectly, the providing of the

	output signal at the least one user interface, which includes the output device in addition to an input device
4	Claim 4. The method of claim 2, wherein the at least one user interface includes a mobile user interface.
6	Claim 6. The method of claim 4, wherein the product location information signal is configured to enable, at least indirectly, the at least one user interface to provide information concerning one or more products that are being specially promoted or that are located close by the at least one user interface.
7	Claim 7. The method of claim 4, wherein the product location information signal is configured to enable, at least indirectly, the providing of the output signal so that the output signal provides at least one further suggestion to a customer in accordance with one or more customer preferences.
8	Claim 8. The method of claim 4, wherein the product location information signal is configured to enable, at least indirectly, the at least one user interface to provide further additional product-related information, and wherein the further additional product-related information includes at least one of: product promotion information; a current stock of the product; a price of the product; a presence or absence of the product within the store; a time at which the product should be available at the store if the product is currently absent from the store; and an alternate way of obtaining the product if the product is currently absent from the store.
9	Claim 9. The method of claim 8, wherein the further additional product-related information relates to either the time at which the product should be available at the store if the product is currently absent from the store, or the alternate way of obtaining the product if the product is currently absent from the store.
10	Claim 10. The method of claim 8, wherein the further additional product-related information relates to either the current stock of the product, or the presence or absence of the product within the store.
12	Claim 12. The method of claim 4, further comprising one or both of: receiving an additional inquiry signal that relates to something other than a product location-type inquiry; or obtaining identification

	information concerning the customer that at least in part allows for the providing of an additional suggestion to the customer.
14	Claim 14. The method of claim 1, wherein either (a) the mobile device is able to provide at least some of the information to the at least one user interface, or (b) at least a first one of the at least one user interface is in wireless communication with either a central hub or at least a second one of the at least one user interface, or (c) one or more words associated with the product location inquiry received by way of the at least one user interface are determined by way of a voice recognition process.

Home Depot USA, Inc. and Home Depot Solutions LLC (“Petitioner”) request Inter Partes Review (“IPR”) under 35 U.S.C. §§ 311–319 and 37 C.F.R. § 42 of claims 1, 2, 4, 6-10, 12, and 14 (“the Challenged Claims”) of U.S. Patent No. 9,990,670 (“the 670 patent”) assigned to Innovaport LLC (“PO”).

I. INTRODUCTION

The 670 patent should not have issued. The 670 patent is generally directed toward an old technology—providing a customer using an electronic device with the location of a product. The challenges in this Petition are based on prior art that discloses this technology and show that the challenged claims of the 670 patent are all unpatentable.

II. STATEMENT OF PRECISE RELIEF REQUESTED

In accordance with 35 U.S.C. § 311, Petitioner requests cancellation of claims 1, 2, 4, 6-10, 12, 14 of the 670 patent in view of the following grounds:

Ground	Claims	Stat. Basis	Prior Art
1	1, 2, 4, 6-10, 12, 14	§ 103	Shanman
2	1, 2, 4, 6-10, 12, 14	§ 103	Ogasawara and Beach
3	9	§ 103	Ogasawara, Beach, and Shanman

III. THE 670 PATENT

A. Overview of the 670 Patent

The 670 Patent is entitled “Apparatus and Method For Providing Product Location Information To Customers In A Store,” and claims priority back to an October 9, 1999 provisional. EX1001, [54], [60]. The 670 relates to providing product location and other information to customers using a server and a client. EX1001, 1:14-16.

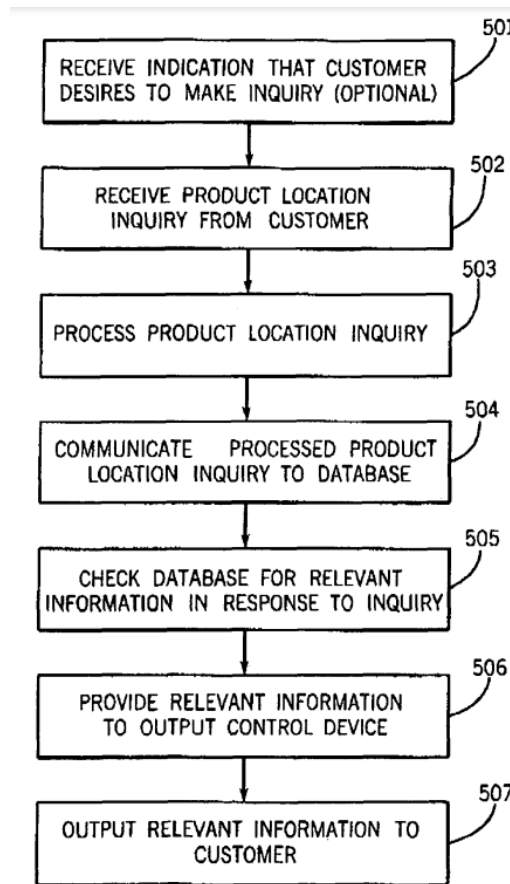


FIG. 5

EX1001, FIG. 5; EX1002, ¶42.

B. Overview of the 670 patent's File History

Nearly two years after prosecuting the 670's parent, U.S. Patent No. 9,489,690, PO filed the exact same preliminary amendment in the 670 that it did in the 690. EX1028, 58-60; EX1003, 59-61. In both instances, PO canceled claims 1-19 and submitted the identical lone method claim 20. EX1028, 59; EX1003, 60. Unsurprisingly, the same examiner issued the identical non-final rejection and further included a statutory double patenting rejection. See IPR2024-00022 III.B for substantive analysis; Compare EX1028, 76-80, with EX1003, 82-87. PO responded by making substantially similar edits to the 670 as it did the 690—only varying in prose and the terms “at least indirectly” and “processed”. Compare EX1028, 84-86, with EX1003, 91-93. Other than the aforementioned claim differences, and a conclusory double patenting remark, PO's Remarks/Arguments are identical. See IPR2024-00022 III.B for substantive analysis; Compare EX1028, 87-96, with EX1003, 94-103. Then, similar to the 690, PO added 17 claims two months after the Notice of Allowance. EX1002, ¶43.

C. Person of Ordinary Skill in the Art

A person of ordinary skill in the art (“POSITA”) at the time of the alleged invention of the 670 patent (October 9, 1999) would have had a bachelor's degree in computer science or information systems, such as software engineering or a similar course of study and at least 2 years of practical experience working in

interactive multimedia information retrieval systems or equivalent qualifications through some combination of education, training, and experience. Additional education/experience in a relevant field may compensate for a deficit in one of the other aspects of the requirements. EX1002, ¶44.

D. Claim Construction Under 37 C.F.R. § 42.104(b)(3)

The Challenged Claims are interpreted using the same claim construction standard that is used to construe the claim in a civil action in federal district court. 37 C.F.R. § 42.100(b). EX1002, ¶¶45-46.

Any claim terms not listed below should be construed according to their plain and ordinary meaning to a POSITA at the time of the 670 patent. EX1002, ¶47.

1. “linking a product with an other product in a cross-referential manner” (claim 1)

This term should be construed according to its plain and ordinary meaning, which is “data linking a product to a different product.” In the *Target* litigation, PO filed a motion for summary judgment asserting that the construction of this term should be “data linking a product to a different *type* of product.” EX1019, 18-19 (emphasis added). EX1002, ¶48.

The intrinsic evidence does not support PO’s inclusion of “type” in the construction. The specification includes an example that “the system, in response to an inquiry regarding the location of product Y, can respond by stating ‘Product

Y is located in aisle 3. Product Z, which is on sale, is also located in aisle 3.”

EX1001, 15:49-55. During prosecution of the 670 and its parent, U.S. Patent No. 9,489,690 (both claim priority to Provisional Patent Application No. 60/158,444 and share a specification), the PO distinguished Berstis stating:

rather than concerning operation in which at least one suggestion is provided regarding another product in response to the receipt of a product location inquiry concerning a specific product from a customer within a store, Berstis instead appears to concern providing product location information in regard to products that ‘match’ products that were previously-determined to be of interest

EX1003, 101, EX1028, 94. PO stated that “the Applicant has not been able to find within Berstis any disclosure or suggestion of providing at least one suggestion regarding any product differing from a product that was previously-determined as being of interest.” *Id.* As shown by the intrinsic evidence, there is no support for limiting this term to require a different type of product. Instead, the plain language and intrinsic evidence support a claim construction that requires “data linking a product to a different product.” EX1002, ¶49.

The below grounds show that the claims are unpatentable under either construction. EX1002, ¶50.

2. “product location inquiry” (claim 1)

This term should be construed according to its plain and ordinary meaning—that is, “an inquiry that results in a response including a product location.” In the Target litigation, PO filed a motion for summary judgment asserting that the

construction of this term should be a “keyword search.” EX1019, 58. Though not an express claim construction, PO argues that a product location inquiry cannot be a preprogrammed list, but instead must be a real-time inquiry. *Id.*, 58-59; EX1002, ¶51-52.

The intrinsic evidence does not support PO’s inclusion of keywords¹ or real-time in the construction. Keywords do not appear as a requirement for a product location inquiry in the specification or the prosecution history. And, though the prosecution history does include discussion by PO regarding real-time responses to inquiries (EX1003, 99-100), there is nothing in the plain language of this limitation that supports requiring inquiries or responses in real-time. Moreover, the statements during prosecution do not rise to the level required for prosecution history disclaimer because the discussion of real time in the prosecution history is not clear and unambiguous. Absent a disclaimer, there is no way to interpret the “product location inquiry” limitation, whether considering the words individually or as a whole, as including a real-time requirement. Even PO’s proposed construction of “keyword search” does not include a real-time requirement. Moreover, there is nothing about “keyword search” that limits the time at which the keywords are picked or entered into the system. EX1002, ¶53.

¹ It is also not clear what is meant by “keywords” in PO’s construction.

Regardless, the below grounds show that the claims are unpatentable under either construction. EX1002, ¶54.

E. Non-Functional Descriptive Material

The Challenged Claims recite many instances of non-functional descriptive material that are not entitled to patentable weight. An example of this is the italicized recitation in [1g], which recites in part “providing of an output signal at an output device as a response to the product location inquiry that *includes location information concerning the product and also provides at least one suggestion related to the other product.*” This recitation is directed toward printed matter because it only claims the content of the information (the “location information concerning the product” and “at least one suggestion related to the product”). MPEP §2111.05. The recitation of printed matter is not entitled to any patentable weight because it bears no functional relationship to the substrate/product on which it appears, *i.e.*, the display. The display merely serves as support for the printed matter, and the recited information is independent of the computer display. MPEP §2111.05(I)(B); *see also Ex Parte Nehls*, Appeal No. 2007-1823, at 14 (BPAI January 28, 2008) (precedential) (sequence ID was non-functional descriptive material because it was not functionally related to computer system). Additional recitations in the challenged claims not entitled to patentable weight for the same reasons are identified below. EX1002, ¶56

IV. OVERVIEW OF THE PRIOR ART REFERENCES

A. EX1004- Shanman

U.S. Patent No. 7,231,357 to Shanman et al. (“Shanman”) is entitled “System and method for the targeted distribution of discount coupons over a network.” EX1004, [10], [54], [76]. Shanman was filed on 5/19/1999, and issued on 6/12/2007. EX1004, [22], [45]. Shanman is prior art under at least 35 U.S.C. §§ 102(e). Shanman does not appear in the file history of the Challenged Patent and thus was not considered by the patent examiner during prosecution. EX1003; EX1002, ¶57.

Shanman relates to a customer selecting items or entering its shopping list items into a mobile device which are transmitted to a server, and in response, the mobile device receives a file from the server containing the locations and promotional information for those items, and targeted promotional information either concerning related products or other items based on customer preferences or history. EX1004, Abstract, FIG. 3, FIG. 5, 6:5-7:65, 8:11-22. EX1002, ¶58.

The Shanman mobile device is called a “client” and “consumer data processing unit,” which is “implement[ed] on any type of handheld devices, wristwatch-type computing devices, cellular or satellite communication devices, computers, televisions, telephones, and the like.” EX1004, 6:5-8, 24:17-21. The server, called the coupon server, receives the request from—and responds to—the

mobile device over a network. EX1004, 6:14-28 (“coupon server is located remotely from the consumer data processing units” and is “responsive to a connection with the consumer data processing unit.”). The disclosed network includes the internet through cellular and wireless local area networks. EX1004, 11:53-58 (“the present invention applies to any type of network, including local and wide area networks, private networks, on-line subscription services, on-line database services, public networks including the internet and the World Wide Web, television networks, satellite networks, and wireless networks”); EX1002, ¶59.

In Shanman, the user makes inquiries via a user interface on the mobile device. EX1004, 8:63-65 (“The consumer may select particular goods by means of predetermined keyboard entries, mouse clicks, voice commands, or the like, made by use of the user input device”). The server processes the requests and has a memory containing the requested information including the location of the products. EX1004, Abstract (“the coupon server transmits a file . . . identifying the aisle location in the selected retail outlet of the goods selected by the consumer”). The server responds to the mobile device with this information so the mobile device can display this location information on the same monitor that the user made the selection. EX1004, 16:9-12 (“the selected goods are submitted to the coupon server by clicking on a ‘submit’ button displayed on the display monitor of the client computer”), FIG. 5; EX1002, ¶60.

SHOPPING LIST FOR YOUR SELECTED SUPERMARKET

	<u>Aisle No.</u>
Flour	4
Yeast	4
Cake Mix	4
Baking Accessories	4
Bottled Tea	5
Bottled Water	5
Soda	5
Bread Crumbs	6
Hamburger Rolls	6
White Bread	6
Bar Soap	3
Body Cream	3
Conditioner	3
Mouthwash	3
Razors	3
Shampoo	3
Apples	2
Bananas	2
Broccoli	1
Cabbage	1
Carrots	1
Cauliflower	1
Chicken	9
Cold Cuts	9
Hot Dogs	9
Lamb Chops	9

FIGURE 5

Shanman's server also responds with targeted advertising and promotional material. EX1004, 4:45-53. This targeted material is based on user preferences and history. EX1004, 5:20-59 ("information concerning consumers' purchasing habits, interests, preferred brands, and other data . . . enables targeted distribution of . . . promotional information and purchase incentives"), 7:47-65, 10:15-46. This additional information can also concern competing goods related to the selections. EX1004, 7:47-65 ("competitive pricing or availability information may also be provided"), 17:35-49, 22:3-8. This promotional information is displayed on the user interface along with the requested information. EX1004, 16:18-22 ("goods which are selected by the user are also highlighted to distinguish from non-selected goods"); EX1002, ¶61.

B. EX1005- Ogasawara

U.S. Patent No. 6,123,259 to Ogasawara (“Ogasawara”) is entitled “Electronic Shopping System Including Customer Relocation Recognition.” EX1005, [54]. [75]. Ogasawara was filed April 30, 1998, and issued on September 26, 2000. EX1005, [22], [45]. It is prior art under at least 35 U.S.C. §§ 102(a), 102(b), and 102(e). Ogasawara does not appear in the file history of the Asserted Patents and thus was not considered by the patent examiner during prosecution. EX1003. EX1002, ¶62.

Ogasawara relates “generally to an electronic information display and customer location recognition,” in particular “to a computer based system for locating a customer’s position within a shopping store and displaying product and location information on a customer operated mobile terminal.” EX1005, 1:6-11. Ogasawara’s mobile terminal includes a user interface. EX1005, 4:61-67 (“Pressure sensitive (touch screen) technology may be incorporated into the display 10 so that a shopper may access the mobile terminal 5 by merely touching certain portions of the screen.”), (“a numeric or alpha-numeric button or keypad arrangement may be provided in combinations with the display 10”), 10:13-24, 14:66-15:28. Ogasawara’s mobile terminal 5 may be either hand-held or mounted on a shopping cart, includes a built-in barcode scanner, and is configured to communicate with a

store central computer 50 by means of an individually addressable RF communication transceiver. EX1005, 2:32-34.

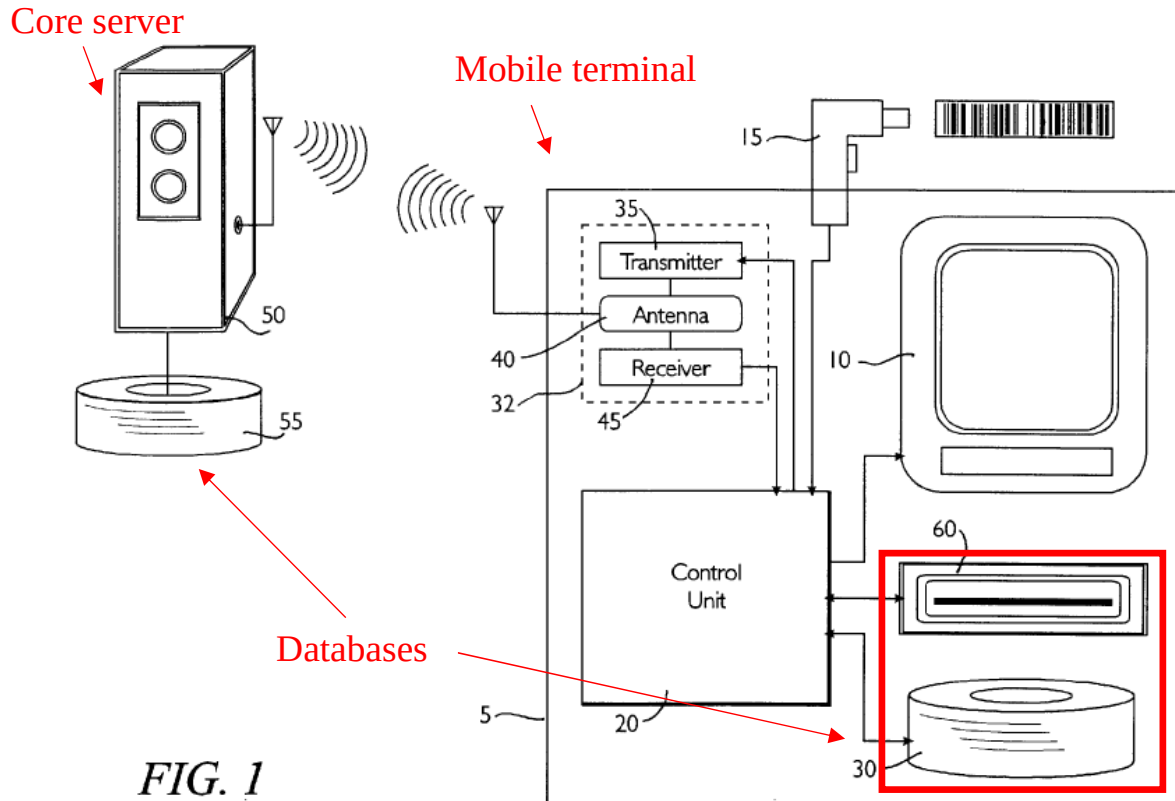


FIG. 1

EX1005, Fig. 1 (annotations added). Ogasawara's system includes a database, which can be stored in a storage device at the store central computer 50, and a copy can also be stored in a storage device in the mobile terminal 5. EX1005, 6:60-7:18. The database includes "[a] merchandise item database, comprising at least a Price Look Up Table is organized into the store central computer's memory and is configured to include identification indicia for each item of merchandise, such as

brand name, generic name, price and the like and also includes location information for each item of store merchandise.” EX1005, 2:41- 45. EX1002, ¶63.

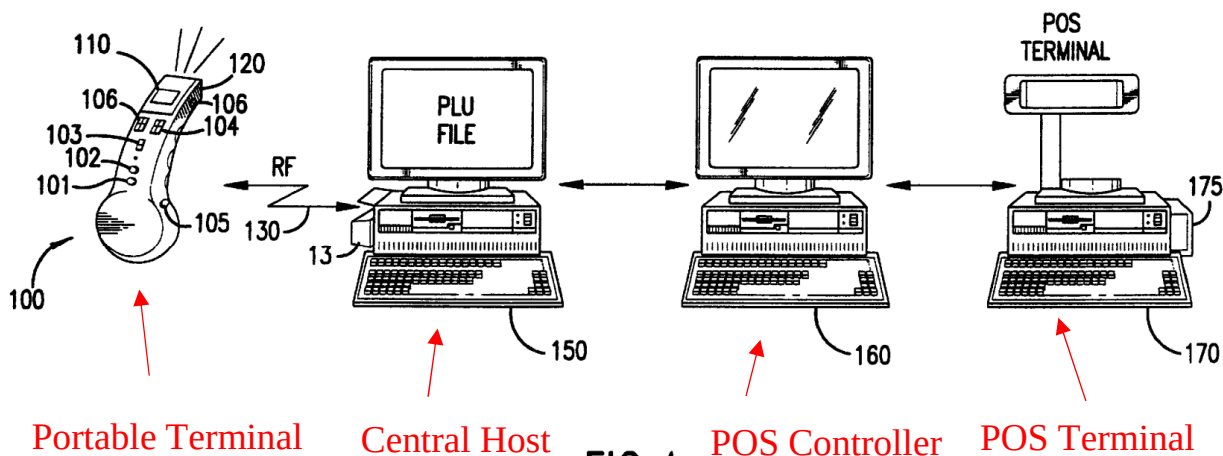
Ogasawara’s system directs a customer along a path through the store to the location of each desired product on a customer’s shopping list, and the customer scans each product when they arrive at its location. “As a customer scans the bar code of a particular item, the store central computer accesses that item’s location and assigns that particular location to be the customer’s current location.” EX1005, 2:46-50. The system processes the contents of the customer’s shopping list and chooses the closest item to the customer’s current location as the desired destination item. The direction and distance information, such as aisle and shelf number, is then displayed on the mobile terminal’s display panel. EX1005, 2:55-60. Customers are allowed to “move[] through a store in a more efficient manner” because they “no longer need to search through the entire store to find a particular item of merchandise, but are instead directed to each next desired merchandise item along the shortest shopping path.” EX1005, 1:52-55. Ogasawara also provides “[r]eplenishment items [and] recommended promotional items” “for a next desired destination item based on the customer’s current location” on the customer’s recommended routing. EX1005, 1:56-58. In addition to providing directions or location to a shopper on the basis of shopping lists, a customer location recognition feature is able to respond to customer prompts to further make inquiries about the

location and direction of any specific item in the store. EX1005, 6:54-59; EX1002, ¶64.

C. EX1006- Beach

U.S. Patent No. 6,084,528 to Beach et al. (“Beach”) is entitled “Intranet scanning terminal system” and issued on July 4, 2000. EX1006, [54], [45]. It is prior art under at least 35 U.S.C. §§ 102(a), 102(b), and 102(e). Beach does not appear in the file history of the Challenged Patent and thus was not considered by the patent examiner during prosecution. EX1003; EX1002, ¶65.

Beach relates “generally to an improved portable data terminal,” in particular “to a system for communicating information over wireless communication network using the portable terminal.” EX1006, 1:12-15. In Beach, “the portable terminal 100 communicates over a wireless communication network 130 . . . a controller 150 which functions as the central host to the portable terminal 100.” EX1006, 6:36-40.



EX1006, Fig. 4 (annotations added). “[T]he central host is provided with a database of available electronic coupons.” EX1006, 13:15-16. “Upon scanning of the code on a selected merchandise item 260, a display 244 on the bar code reader 240 displays product information such as price, product name, quantity and nutritional information.” EX1006, at 8:5-9. “The customer selection of items is made through a graphical use interface which simulates a store layout, i.e., aisles with items in them as they are stacked within the store.” EX1006, 15:4-7. After a consumer has selected several items for purchase, the portable terminal downloads information from the central controller and displays it; thus, providing the consumer confirmation that items have been scanned for purchase. EX1006, 11:12-19. In Beach, the graphical user interface “simulates a store layout, i.e., aisles with items in them as they are stacked within the store.” EX1006, 15:5-9. “This permits the user to find items they know are located in certain aisles of the store.” *Id.* Additionally, Beach discloses “portable terminals could be used to provide information pertaining to recommended accessories which would match a selected item by providing cost, location.” EX1006, 16:52-55; EX1002, ¶66.

V. GROUND 1: SHANMAN RENDERS OBVIOUS CLAIMS 1, 2, 4, 6-10, 12 AND 14

A. Claim 1

As shown below, Shaman in view of the knowledge of a POSITA renders claim 1 obvious. EX1002, ¶71.

1. [1pre] A method of providing product location information within a store, the method comprising the steps of:

The preamble is disclosed or rendered obvious by Shanman. *See* §IV.A; EX1004, Abstract (“In response to the selection of goods, the coupon server transmits to the consumer computer a file . . . identifying the aisle location in the selected retail outlet of the goods selected by the consumer.”), 5:3-19, 16:23-32; EX1002, ¶72.

To the extent that “within a store” means that the recipient of the location information must be within a store when the location information is received, a POSITA would have understood, or found it obvious, that Shanman discloses a server and client device within the same store. This is because, while Shanman discloses some embodiments in which the server and client device are geographically separated, Shanman also discloses other embodiments in which the server and the client device communicate with each other via a local area network (“LAN”). EX1004, Abstract, 7:37-65, 8:11-42, 11:35-65 (“the present invention applies to any type of network, including local . . . area networks”). A POSITA would have understood a LAN to pertain to a network of devices located in close geographical proximity to each other such as in a same building and, because it is unlikely that the server would be located in a customer’s home, a POSITA would have found it obvious to locate the LAN including the server 10 and client 12 in a store (e.g., a grocery store). EX1002, ¶73.

2. **[1a] providing at least one information storage device including a database, wherein the at least one information storage device is configured to be at least indirectly in communication with at least one other device that includes at least one user interface, and wherein at least one of the at least one information storage device and the at least one other device with respect to which the at least one information storage device is configured to be at least indirectly in communication is or includes a mobile device;**

Shanman discloses this limitation. Shanman discloses providing a server 10 that includes at least one information storage device (“the memory of the coupon server”) including a database (“one or more databases are set up on . . . the coupon server”). EX1004, 6:5-57, 11:35-58, 13:62-14:1, 15:22-31, 19:19-21, Figs. 2, 3. Shanman discloses at least one other device (e.g., clients 12). EX1004, 6:5-57, 11:35-58, 12:24-40, 13:4-14:21, 14:26-31, 24:17-21, Figs. 1, 2. Shanman discloses the clients (also referred to in Shanman as “consumer data processing units”) as mobile devices. EX1004, 2:42-57, 11:35-58 (“the teachings of the present invention are equally applicable for use in devices such as . . . cellular and satellite communications devices . . . handheld computers, wristwatch-type computing devices”), 14:26-33, 24:8-21. The clients have at least one user interface (“user input device”), i.e., a client device 21 includes a keyboard 22, a mouse 23, and a display 24. EX1004, 6:5-57, 8:63-65, 13:4-42, 16:66-17:4, 22:9-12, and Fig. 2. The server and client are in communication with one another. EX1004, 6:5-57 (“A coupon server is located remotely from the consumer data processing units and

comprises . . . a processing unit having communication means selectively connectable over communication medium to the at least one consumer data processing unit, and being responsive to a connection with a consumer data processing unit”), 11:35-58, 23:65-24:4, Fig. 1. EX1002, ¶74.

3. [1b] wherein the at least one information storage device includes both product location information and additional product-related information linking a product with another product in a cross-referential manner;

Shanman renders obvious this limitation. *See* [1a]. Shanman’s server’s memory (“information storage device”) contains the physical layout of goods in the selected retail outlet, including aisle information (“product location information”). *See* [1a]; EX1004, Abstract, 7:47-65, 8:11-27, 15:22-31, Fig. 5. Shanman’s server memory also contains additional product-related information linking a product with another product in a cross-referential manner. EX1004, 9:30-36, 10:16-28, 10:39-46, 21:13-30 (“brands, type of goods, category of goods”), 10:39-46 (“consumer interests and purchasing habits”), 10:16-28 (“competing brands”), 22:3-8 (“competitive source”), 5:37-59 (“brand preferences”), 7:47-65 (“a different brand of the same type of goods”), 21:35-42 (“another brand”). EX1002, ¶75.

A POSITA would have understood that the information storage device on the server includes additional product-related information linking a product with another product in a cross-referential manner because it is constructed to be

capable of being “indexed by any one of a multitude of identifiers, such as any element of consumer identifying indicia, or any element of selected information, such as preferred retail outlets, preferred brands, type of goods, [and] category of goods.” EX1004, 21:13-30. This includes linking products by category (i.e., data linking a product to a different product) and location (i.e., data linking a product to a different type of product) within the store. EX1004, 15:19-54, (“Instructional text 104 and targeted advertising text 106 accompany the list of goods”). A POSITA would have understood that the Shanman database includes cross-referential linking between products because Shanman discloses that the products are indexed (i.e., linked and cross-referenced) by brand, type, and category. EX1002, ¶76.

A POSITA would have understood that Shanman discloses additional linking between products in the database in a cross-referential manner. Specifically, a POSITA would have understood that Shanman discloses that the database links products using cross-references to allow for cross-promotional coupons to be sent to the user. EX1004, 10:16-28 (“selections of goods made by the consumer are transmitted to the coupon server . . . [a]dditional promotional information and purchase incentives may also be sent, such as coupons for competing brands of selected goods”), 10:39-56 (“In addition, purchase incentives in addition to selected coupons may be targeted based upon a consumer’s coupon selections”); EX1002, ¶77.

Shanman further discloses that a customer may be provided with, in addition to the location of a desired good, additional information including “a different brand of the same type of goods may be purchased at increased savings.” EX1004, 7:49-65. It would have been obvious to a POSITA that if the memory in Shanman’s server is configured to provide information to a customer about a desired good A that includes information about a different good B of the same type and different brand, then the memory in Shanman’s server would also be configured to provide information about a desired good B that includes information about competing good A. It would further have been obvious to a POSITA to accomplish this functionality by linking good A with good B in a cross-referential manner because linking products in a cross-referential manner was well known to a POSITA at the time of the 670 patent. *See, e.g.*, EX1006, 15:49-50 (“[e]ssential items could also be **linked to** or marked with alternative products” (emphasis added)); EX1002, ¶78.

4. [1c] receiving a product location inquiry signal regarding the product, the product location inquiry signal being at least indirectly based upon a product location inquiry received by way of the at least one user interface;

Shanman discloses this limitation. *See* [1a]. Shanman discloses the server receiving a product location inquiry signal from the client based upon a product location inquiry received by way of the user interface. EX1004, 8:63-65, 22:9-12. Alternatively, there is also a product location inquiry signal created by the user

interface to the client's digital signal processor (43) upon receipt of a user inquiry on the user interface. EX1002, ¶79.

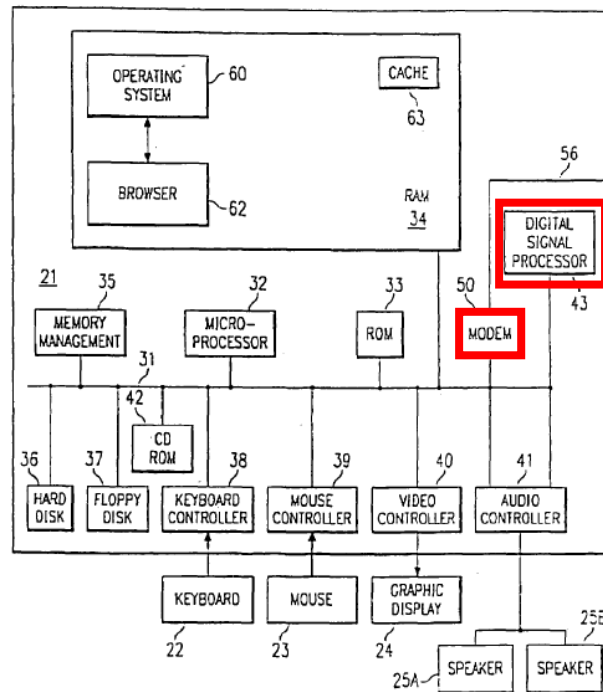
Shanman discloses “receiving a product location inquiry signal regarding the product . . . by way of the at least one user interface” by teaching that the “consumer may select particular goods by means of predetermined keyboard entries, mouse clicks, voice commands, or the like, made by use of the user input device.” EX1004, 8:63-65, 22:9-12. The product location inquiries from the “user interface” occur by the user “selecting goods from an itemized list.” EX1004, 5:3-19. Alternatively, a user may enter their shopping list. EX1004, 15:63-66 (“may instead prompt the user to enter their own shopping list”). The server in Shanman responds to user inquiry signals from the client (shopping list) with a shopping list that includes product location. EX1004, 5:3-19 (“the location of the selected goods within the selected retail outlet together with discount coupons corresponding to the selected goods”), 7:29-37, 6:5-28, 7:21-29, 8:11-22 (“shopping list may optionally include the actual location of the selected goods, in the selected retail outlet, such as their aisle number in the selected retail outlet”), 15:36-54, 16:5-38, 18:36-47. A POSITA would have understood that the user requests are product location inquiries, because Shanman discloses responding to user input with product locations. EX1002, ¶80.

A POSITA would have understood, or found it obvious, that Shanman's disclosure of a system that uses a LAN for communication between the client and server discloses receipt of product location inquiry in real time, while the user is shopping. EX1004, Abstract, 7:37-65, 8:11-42, 11:35-65 ("the present invention applies to any type of network, including local . . . area networks"), 11:46-58 ("the teachings of the present invention are equally applicable for us in devices such as . . . cellular and satellite communications devices . . . handheld computers, wristwatch-type computing devices"). Indeed, portable computers with wireless local area network access were available before the 670 patent. *See, e.g.*, EX1027. EX1002, ¶81.

5. [1d] processing the product location inquiry signal at a signal processing device to determine a processed product location inquiry signal;

Shanman discloses this limitation, and Shanman in view of the knowledge of a POSITA renders this limitation obvious. *See* [1a], [1c]. In Shanman, the client includes a signal processing device (the digital signal processor 43 and/or modem 50) that processes the consumer's inquiry (i.e., packetizes, modulates, or otherwise processes the information for transmission) to create a signal that is sent to the coupon server. *See* [1c]; EX1004, 6:5-28 ("data processing unit having communication means connectable over a communication medium to at least a coupon server").

FIG. 2



EX1004, Fig. 2 (annotation added). Digital signal processor 43 is disclosed in both the server and the client. EX1004, 11:9-13; EX1002, ¶182.

Shanman provides a second disclosure of this limitation in Shanman's disclosure that the signal sent from the consumer data processing unit including the customer's inquiry is processed by the coupon server to determine a product location inquiry signal to be used for accessing the server memory. EX1004, 6:13-28 ("A coupon server . . . comprises . . . a processing unit having communication means . . . to the at least one consumer data processing unit, and being responsive to a connection with a consumer data processing unit"). In this regard, a POSITA would have understood and/or have found obvious that the signal received from the consumer data processing unit could not be used directly to retrieve the desired

product location information from the server memory and that Shanman's server would use digital signal processor 43 to determine a processed product location inquiry signal. EX1002, ¶83.

In both scenarios, Shanman discloses that the consumer's product location information inquiry is processed to determine a product location inquiry signal because product location is returned. EX1004, 8:11-22 ("responsive to the selections of goods made by the consumer to download to the consumer data processing unit a file containing a list of the selected goods . . . shopping list may optionally include the actual location of the selected goods, in the selected retail outlet, such as their aisle number in the selected retail outlet"), 7:29-37, Abstract ("the coupon server transmits to the consumer computer . . . a file containing data identifying the aisle location in the selected retail outlet of the goods selected by the consumer."). A POSITA would have understood that a customer inquiry that includes a request for product location is a product location inquiry signal. EX1002, ¶84.

6. [1e] querying the at least one information storage device to obtain portions of the product location information and additional product-related information in response to the processed product location inquiry signal;

Shanman discloses this limitation. See [1a], [1b], [1d]. Shanman discloses a system that allows users to query a server's database for product location information and additional-product related information. EX1004, Abstract, 7:37-

65, 8:11-42. The coupon server uses the location inquiry signal as processed by both the client and the coupon server to query the database, which responds with product location information and additional product-related information. EX1004, 6:13-28 (“A coupon server . . . comprises . . . a processing unit having communication means . . . to the at least one consumer data processing unit, and being responsive to a connection with a consumer data processing unit”), 8:11-22 (“the data processing unit of the coupon server is responsive to the selections of goods made by the consumer to download to the consumer data processing unit a file containing a list of the selected goods.”), *id.* (“the consumer optionally receives a customized shopping list corresponding to the selected goods together with any applicable coupons.”), 16:23-32 (“downloads a customized shopping list to the consumer data processing unit which may include a list of the selected goods along with their location in the selected retail outlet.”), 23:10-24 (“The database...serves the shopping list program.”). A POSITA would have understood that Shanman discloses querying the database on the information storage device for the product location and additional information. Shanman discloses that this obtained additional product-related information is the information that links the product with another product in a cross-referential manner because Shanman’s server returns information concerning the “an other” product too. *See* [1b]; EX1004, 7:51-65 (“[c]ompetitive pricing or availability information may also be provided”). A

POSITA would have understood that the competitive or targeted item (“an other item”) information is returned as part of the product location inquiry. As discussed above in Section [1b], it would have been obvious to a POSITA to implement this Shanman functionality by including cross-referential links between two products so that each product’s additional product-related information references the other product. EX1002, ¶85.

A POSITA would have understood that the consumer device’s production location inquiry signal is received at the server as a query of the server’s database to obtain and product location information and additional product-related information. EX1002, ¶86.

7. [1f] providing a product location information signal that is at least indirectly responsive to the processed product location inquiry signal;

Shanman discloses this limitation. *See* [1d], [1e]. In response to the signal generated as a result of the consumer’s inquiry, Shanman’s server transmits the requested data back to the consumer device (“product location information signal”). EX1004, Abstract (“the coupon server transmits to the consumer computer . . . a file containing data identifying the aisle location in the selected retail outlet of the goods selected by the consumer.”). A POSITA would have understood that the server’s response to the client is a product location information

signal because the communication includes the requested product location.

EX1002, ¶87.

8. **[1g] wherein the product location information signal is configured to enable, at least indirectly, a providing of an output signal at an output device as a response to the product location inquiry that includes location information concerning the product and also provides at least one suggestion related to the other product.**

Shanman discloses this limitation. *See* [1b], [1f]. Upon receipt of the product location information signal from the server, the client provides an output signal to an output device, namely the display 24 (“outputting in . . . electronic form”).

EX1004, 7:29-37, 7:51-60 (“The consumer’s selection of a retail outlet and one or more items of goods from the displayed list of goods results in the downloading to the consumer data processing unit for viewing . . . of a ‘shopping list’ which includes the identity of the selected goods and optionally shows the location in the selected retail outlet of the selected goods, and optionally other information such as store layout, retail price, itemized discount, total discount, estimated discount, and the existence of available coupons.”). The “includes location information concerning the product and also provides at least one suggestion related to the other product” is non-functional descriptive material that is not entitled to patentable weight because it is directed only to the content of the information and bears no functional relationship to the substrate on which it is recorded. *See* §III.E. Regardless, Shanman discloses the output displaying multiple suggestions related

to a different product. EX1004, 10:15-46 (“display[s] on the consumer processing unit . . . [a]dditional promotional information and purchase incentives. . . for competing brands of selected goods, coupons offered by other national and/or local merchants, ad banners for national or local advertisers, and the like.”), 10:25-28, 10:51-56; 16:5-38; EX1002, ¶88.

B. Claim 2. The method of claim 1, wherein the product location information signal is configured to enable, at least indirectly, the providing of the output signal at the least one user interface, which includes the output device in addition to an input device.

Claim 1, from which this claim depends, is obvious over Shanman. Shanman discloses claim 2’s limitations, so claim 2 is obvious. See §V.A [1a], [1f], [1g], FIG. 5. The display 24 (the output device) of client 10 is included by the user interface of the client 10. EX1004, 6:5-57, 13:25-42, Figs. 2, 5. The consumer data processing units allows selection of the goods by mouse click then displays the shopping list including aisle information *on the same display* the selection was made on. *Id.*; EX1002, ¶89.

C. Claim 4. The method of claim 2, wherein the at least one user interface includes a mobile user interface.

Claim 2, from which this claim depends, is obvious over Shanman. Shanman discloses claim 4’s limitations, so claim 4 is obvious. See §V.B, [1a]. Shanman discloses mobile devices. EX1004, 11:46-52 (“the teachings of the present invention are equally applicable for uses in devices such as . . . telephones, cellular

and satellite communications devices and the like, handheld computers, wristwatch-type computing devices”). The mobile devices have a user interface (“user input device”), i.e., a client device 21 includes a keyboard 22, a mouse 23, and a display 24. EX1004, 6:5-57, 8:63-65, 13:4-42, 16:66-17:4, 22:9-12, and Fig. 2. EX1002, ¶90.

D. Claim 6. The method of claim 4, wherein the product location information signal is configured to enable, at least indirectly, the at least one user interface to provide information concerning one or more products that are being specially promoted or that are located close by the at least one user interface.

This claim recites non-functional descriptive material that is not entitled to patentable weight because it is directed only to the content of the information and bears no functional relationship to the substrate on which it is recorded. *See* §III.E. Regardless, claim 4, from which this claim depends, is obvious over Shanman. Shanman discloses claim 6’s limitations, so claim 6 is obvious. *See* §V.C, §V.B, [1b], [1g]. Shanman’s mobile user interface displays products that are being specially promoted. EX1004, 7:51-65 (“Competitive pricing or availability information may also be provided . . . to inform the consumer that the same goods are available at a lower cost elsewhere, or that a different brand of the same type of goods may be purchased at an increased savings”), 21:13-42 (“targeted promotion information to users, to serve targeted purchase incentives for one brand of product to attract customers of another brand (as identified by the consumer profile)”),

9:30-36. A POSITA would have understood that the product location information signal enables providing the information about products that are being specially promoted on the user interface. EX1002, ¶91.

Shanman discloses displaying information based on actual product location in the store (FIG. 4A), so when the user selects a region or category within the store, an itemized list of those competing goods located nearby will be displayed (FIG. 4B) (“various brands and sizes of American Cheese”) for selection along with targeted advertising text (106). EX1004, 15:34-54. A POSITA would have understood, or found obvious, that Shanman’s teaching of displaying product information based on actual location within the store discloses providing information regarding products that are close by when the user used these features on a mobile device within the store. *See* [1c]. Further, Shanman discloses a “virtual shopping center” where the user can view the goods on the monitor as they are viewed in store. EX1004, 7:66-8:10, 25:4-19. For the same reasons, a POSITA would have understood that this virtual shopping experience and a user simultaneously using the virtual shopping experience while in-store to view cross-promotional information close to the user interface displays the products close by the user interface. EX1002, ¶92.

- E. Claim 7. The method of claim 4, wherein the product location information signal is configured to enable, at least indirectly, the providing of the output signal so that the output signal provides at least one further suggestion to a customer in accordance with one or more customer preferences.**

Claim 4, from which this claim depends, is obvious over Shanman. Shanman discloses claim 7's limitations, so claim 7 is obvious. *See* §V.C, §VI.A, [1g]. The "further suggestion to a customer in accordance with one or more customer preferences" is non-functional descriptive material that is not entitled to patentable weight because it is directed only to the content of the information and bears no functional relationship to the substrate on which it is recorded. *See* §III.E. Regardless, each of "additional promotional information" (EX1004, 5:20-36, 10:15-46), "purchase incentives" (*id.* at 10:15-46), and "coupons offered by other national and/or local merchants" (*id.*) is a suggestion as required by limitation [1g] or a further suggestion as required by this claim. Shanman discloses that the signal output to the display can provide two or more of these suggestions, and that these suggestions can be based on a customer's historical profile and/or "consumer interests." EX1004, 10:15-46. EX1002, ¶93.

- F. Claim 8. The method of claim 4, wherein the product location information signal is configured to enable, at least indirectly, the at least one user interface to provide further additional product-related information, and wherein the further additional product-related information includes at least one of: product promotion information; a current stock of the product; a price of the product; a presence or absence of the product within the store; a time at which the product should be available at the store if the product is currently absent from the store; and an alternate way of obtaining the product if the product is currently absent from the store.**

This claim recites non-functional descriptive material that is not entitled to patentable weight because it is directed only to the content of the information and bears no functional relationship to the substrate on which it is recorded. *See* §III.E. Regardless, claim 4, from which this claim depends, is obvious over Shanman. Shanman discloses claim 8’s limitations, so claim 8 is obvious. *See* §V.C, §V.B, [1b], [1g]. The product location information signal enables the client 10 to provide product-related information. *See* §V.B. The product location information signal contains further additional product-related information that includes:

- **“product promotion information”**: EX1004, Abstract (“the coupon server transmits to the consumer computer a file containing electronic coupons corresponding to one or more of the selected goods and a file containing data identifying the aisle location in the selected retail outlet”), EX1004, 7:47-65 (“different brand of the same type of goods may be purchased at an increased savings,”);

- **“a current stock of the product”**: EX1004, 6:33-54 (“name and inventory of goods”); 13:62-14:1 (“including inventory data”);
- **“a price of the product”**: EX1004, 7:51-60 (“retail price”);
- **“a presence or absence of the product within the store”**: EX1004, 6:44-54 (“list of goods actually sold at the selected retail outlet”), 15:19-24 (“list of the goods offered for sale by that retail outlet”), 25:4-9 (“physical layout and inventory of goods at the selected retail outlet are displayed on the consumer data processing unit”);
- **“a time at which the product should be available at the store if the product is currently absent from the store”**: Conditional limitations are not entitled to patentable weight in a method claim. *Ex parte Schulhauser*, No. 2013-007847 at 10 (P.T.A.B. April 28, 2016) (precedential); *see also Marvell Semiconductor, Inc. v. Uniloc 2017 LLC*, IPR2019-01350, Paper 24, 37 (PTAB Feb. 1, 2021) (applying *Schulhauser* under *Phillips* construction). Regardless, it was well-known to a POSITA to have this information available in a database. See, e.g., EX1031, 3:1-6, claims 11, 39; EX1032, 73 (taking official notice of same in file history of a parent application). A POSITA would have found it obvious to modify Shanman’s database to include this information. A POSITA would have been motivated to make this combination because

the information would aid a customer in obtaining the items on the shopping list. EX1032, 74;

- **“an alternate way of obtaining the product if the product is currently absent from the store”**: Conditional limitations are not entitled to patentable weight in a method claim. *See above*. Regardless, a POSITA would have found Shanman’s disclosure of maintaining inventory for a plurality of retail outlets and providing the ability to select the other stores renders obvious an alternate method of obtaining an absent product. EX1004, 7:47-8:10 (“the same goods are available at a lower cost elsewhere”), 17:40-54 (“select various choices from a list of alternatives”), 13:59-14:1 (“a plurality of participating retail outlets, including inventory data”).

EX1002, ¶94.

- G. Claim 9. The method of claim 8, wherein the further additional product-related information relates to either the time at which the product should be available at the store if the product is currently absent from the store, or the alternate way of obtaining the product if the product is currently absent from the store.**

This claim recites non-functional descriptive material that is not entitled to patentable weight because it is directed only to the content of the information and bears no functional relationship to the substrate on which it is recorded. *See §III.E*. Conditional limitations are not entitled to patentable weight in a method claim, and

this is a conditional limitation due to the recitation of “if the product is currently absent from the store.” *See* §V.D. Regardless, claim 9 is obvious. *See* §V.F (last two bullet points); EX1002, ¶95.

H. Claim 10. The method of claim 8, wherein the further additional product-related information relates to either the current stock of the product, or the presence or absence of the product within the store.

This claim recites non-functional descriptive material that is not entitled to patentable weight. *See* §III.E. Regardless, claim 8, from which this claim depends, is obvious over Shanman. Shanman discloses claim 10’s limitations, so claim 10 is obvious. *See* §V.F (second and fourth bullet points); EX1002, ¶96.

I. Claim 12. The method of claim 4, further comprising one or both of: receiving an additional inquiry signal that relates to something other than a product location-type inquiry; or obtaining identification information concerning the customer that at least in part allows for the providing of an additional suggestion to the customer.

Claim 4, from which this claim depends, is obvious over Shanman. Shanman discloses claim 12’s limitations, so claim 12 is obvious. *See* §V.C. The “that relates to something other than a product location-type inquiry” and “that at least in part allows for the providing of an additional suggestion to the customer” are non-functional descriptive material that is not entitled to patentable weight. *See* §III.E. Regardless, Shanman discloses an additional non-location inquiry signal for the server to obtain identification information concerning the customer—a user request

for registration forms is an additional inquiry that relates to something other than a product location-type inquiry; it is for the user to provide—and the system to obtain—customer identification information. EX1004, 9:40-10:15 (“consumer data processing unit to pass a request for the HTML documents”). Shanman discloses creating a user profile through “fill-in forms” and “fill-in form tags,” which is an inquiry from the user for forms to provide registration information and discloses obtaining identification information concerning the customer. EX1004, 8:28-65, 17:40-18:3, 23:52-64 (“For example, one such technique for creating a consumer profile is through the use of HTML ‘fill-in’ form tags.”), 9:30-10:15 (“Information may be acquired from the user by means of any known process, such as by HTML fill-in forms”). A POSITA would have understood that the user requesting forms to provide registration information and the consumer data processing unit sending a request for the registration form is an inquiry that is different than a product location inquiry. EX1002, ¶97.

Shanman also discloses obtaining identification information concerning the customer through “personal identification number (‘PIN’), Network IDs (known as ‘IP address’), and client IDs (known as ‘cookies’)” EX1004, 5:20-6:4, 9:30-36, 14:26-47. Shanman assigns this identification information to a user’s profile. EX1004, 5:37-49 (“creating a database of user profiles”); 9:30-36 (“information acquired from the consumer data processing unit is preferably stored on the coupon

server and used to build historical profiles of individual consumers, to serve out highly targeted purchase incentives and other promotional information based on consumer profiles.”). A user’s “interests and purchasing habits” and “preferences” are included in this profile. *See* [1b], §V.C. Shanman’s user profile enables providing an additional suggestion to the customer. EX1004, 17:40-18:3 (“When a user who has made such choices contacts the same server at a later date, the server assembles information for downloading to the user in accordance with the previously-selected choices.”), 8:28-65, 21:31-22:8, 23:52-64 (“Based on the consumer profile, the server can serve out information targeted to the consumers interest, as revealed by the fill-in form.”); EX1002, ¶98.

- J. Claim 14. The method of claim 1, wherein either (a) the mobile device is able to provide at least some of the information to the at least one user interface, or (b) at least a first one of the at least one user interface is in wireless communication with either a central hub or at least a second one of the at least one user interface, or (c) one or more words associated with the product location inquiry received by way of the at least one user interface are determined by way of a voice recognition process.**

Claim 1, from which this claim depends, is obvious over Shanman. Shanman discloses claim 14’s limitations, so claim 14 is obvious. With respect to (a), to the extent “provides” means output, Shanman discloses its consumer data processing unit user interface has a monitor that displays at least some of the information. *See* §V.A, §V.B, EX1002, ¶99.

To the extent “provides” means processes the data, Shanman discloses its consumer data processing unit contains an executable program, HTML formatted fill-in forms, and web browsers. EX1004, 17:4-8; 18:20-54; 22:9-29; 24:22-36. A POSITA would have understood that the consumer data processing unit therefore processes some of the information at its user interface. EX1002, ¶100.

To the extent “provides” means offers some information from its own storage, Shanman discloses its consumer data processing unit storing an executable program with goods sold at select retail outlets but can access the server for additional information such as coupons. EX1004, 17:4-18:19 (“the program may then be executed by the consumer on the consumer data processing unit to make selections . . . and then connected to the coupon server over the network to obtain the pertinent coupons”). A POSITA would have understood that the consumer data processing unit is able to provide at least some of the information to its display (user interface). EX1002, ¶101.

With respect to (b), Shanman’s client is a user interface in wireless communication with a server. *See* [1a]. A POSITA would have understood that the server of Shanman is disclosure of a central hub. EX1002, ¶102.

With respect to (c), Shanman discloses receiving product location inquiries by voice command. *See* [1c]; EX1004, 8:63-65. 22:9-12; EX1002, ¶103.

VI. GROUND 2: OGASAWARA AND BEACH RENDER OBVIOUS CLAIMS 1, 2, 4, 6-10, 12 AND 14

A. Claim 1

As shown below, Ogasawara in view of Beach renders claim 1 obvious.

EX1002, ¶104.

1. [1pre]

Ogasawara discloses the preamble under any reasonable construction of “within a store.” *See* §IV.B; EX1005, 1:8-10 (“a computer based system for locating a customer’s position within a shopping store and displaying product and location information”), Abstract, 2:8-13, Fig. 8; EX1002, ¶105.

2. [1a]

Ogasawara discloses this limitation, and Ogasawara in view of Beach renders this limitation obvious. Ogasawara discloses providing an information storage device (“store central computer’s memory”) including a database (“merchandise item database 55”) and another device (“mobile terminal”) that includes a user interface (“touch screen”). EX1005, Abstract, 2:27-46 (“electronic personal shopping systems that includes a mobile terminal which may be either hand-held or mounted on a shopping cart”), 4:36-67, 5:19-6:10, Figs. 1, 6. The information storage device (“store central computer’s memory”) is configured to be in communication with the mobile terminal through the server (as shown by the antennas):

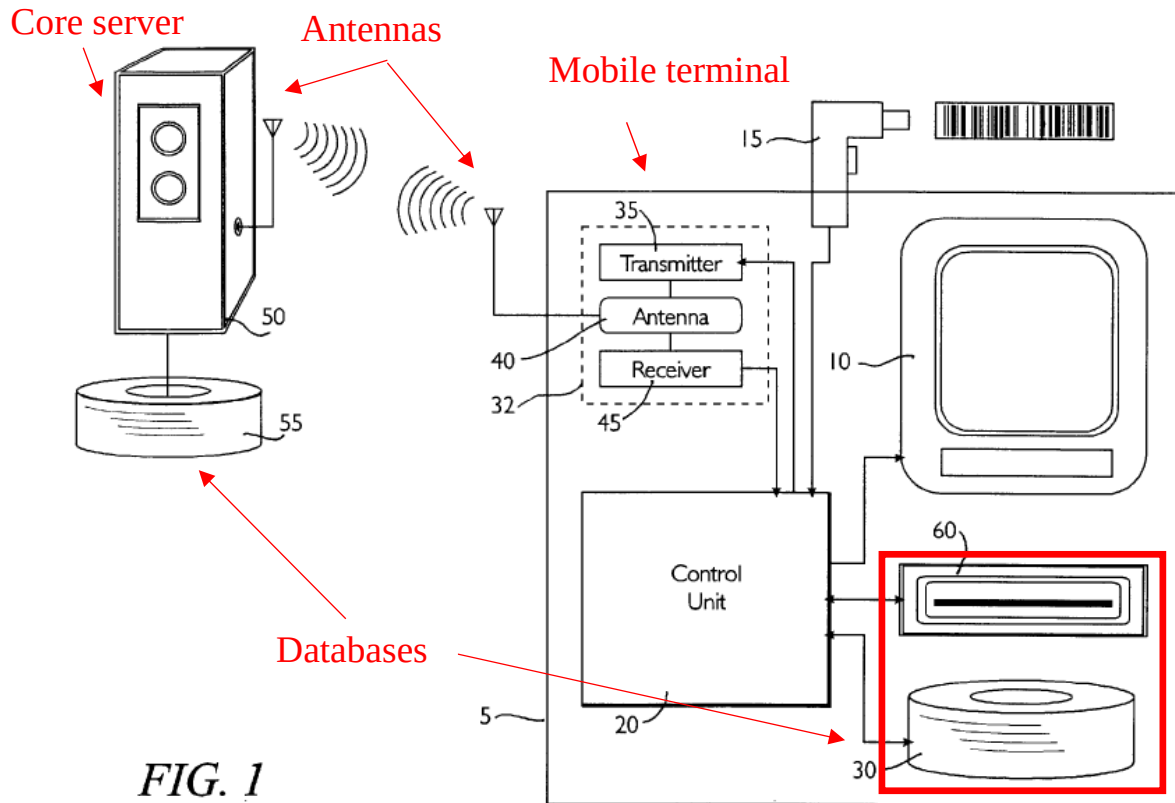


FIG. 1

EX1005, Fig. 1 (annotations added), 2:32-36 (“mobile terminal is further configured to communicate with a store central computer by means of an individually addressable RF communication transceiver”), 3:58-63, 5:19-6:11 (“the mobile personal shopping terminal 5 communicates . . . with a retail store’s core server 50 for purposes of accessing the retail facility’s database 55”). The customer is able to use Ogasawara’s disclosure in real-time in the store. EX1005, 6:41-44 (“a customer location recognition feature of the personal shopping system which is able to recognize a customer’s **current location in a retail facility**” (emphasis added)), 5:62-65 (“a plurality of RF transceivers may be located at periodic

intervals *throughout the retail facility* and connected to the core server 50 through a local-area-network (LAN)” (emphasis added)); EX1002, ¶106.

Ogasawara further discloses that the mobile device includes a user interface. EX1005, 4:61-67 (“Pressure sensitive (touch screen) technology may be incorporated into the display 10 so that a shopper may access the mobile terminal 5 by merely touching certain portions of the screen.”), (“a numeric or alpha-numeric button or keypad arrangement may be provided in combinations with the display 10”), 5:1-4 (“Obtaining information relating to various purchased items is performed by a universal product code (UPC) bar code scanner 15, connected to input UPC bar codes to the mobile terminal 5”); 10:13-24, 14:66-15:28; EX1002, ¶107.

Ogasawara further discloses that the information storage device (store central computer’s memory) includes a merchandise item database, including a Price Lookup Table. EX1005, 2:41-46, 6:60-7:1, 8:1-34, 19:25-27 (“the item database is resident in a memory location of the store computer”), Figs. 1, 6, 7. A POSITA would have understood that database 55 and core server 50 are discussed in Ogasawara as the “store central computer,” which is a device. To the extent PO argues that store central computer is not a “device” that includes both database 55 and core server 50, it would have been obvious to a POSITA to integrate the database and the server into a single device. EX1002, ¶108.

3. [1b]

Ogasawara discloses this limitation, and Ogasawara in view Beach renders this limitation obvious. *See* [1a]. Ogasawara discloses that the information storage device (“store central computer’s memory”) includes a merchandise item database, comprising at least a Price Lookup Table that includes product location information and additional product information (e.g., brand name, generic name) that links products in a cross-referential manner. EX1005, Abstract, 2:41-46, 3:42-48, 6:60-7:67, 8:1-34 (“A specific product location would be associated with the generic term ‘spice’ the item information field 312 provides a means of linking the location information field 314 of the location table 350 to any particular one of the items listed in the product table 300A in order that any item’s location information may be accessed and displayed”), Fig. 6, 7. A POSITA would have understood Ogasawara’s disclosure of links between “generic” and “specific” entries in the database discloses cross-referential links between products. EX1002, ¶109.

Ogasawara further discloses linking or associating a product in the customer’s profile in the database with a recommended item in a cross-referential manner. EX1005, 3:45-48 (“A closest promotional item to the customer’s calculated current location is then identified as the desired destination item and the mobile terminal displays those directions to the customer.”), Abstract

(“recommended replenishment item”), 3:38-48 (“recommended promotional items”). It would have been obvious to a POSITA to implement the identification of the closest promotional item disclosed in Ogasawara by including cross-referential links between two products so that each product’s additional product-related information references the other product. EX1002, ¶110.

Ogasawara’s database disclosures² disclose, or render obvious, “additional product-related information linking a product with an other product in a cross-referential manner” because a POSITA would have understood, or found obvious, that database functionality provides functionality to link products together based on the information within (“additional product-related information”). EX1002, ¶111.

In the event PO argues that Ogasawara does not disclose linking a product with another product in a cross-referential manner, a POSITA would have found it obvious to modify Ogasawara to include that feature based on Beach. *See* §IV.C.; EX1002, ¶112.

It was well-known in the art and customary for a product database to include links between products in a cross-referential manner. For example, Beach discloses links between products in a cross-referential manner to offer product-specific

² *See, e.g.*, Abstract (“store database”), 1:26-27 (“database includes a list of items of merchandise in the store”), 2:41 (“merchandise item database”).

alternatives. EX1006, 15:49-50 (“[e]ssential items could also be **linked to** or marked with alternative products” (emphasis added)). A POSITA would have understood that it would be obvious to modify Ogasawara to include product-specific “alternatives” using a cross-reference link in the database as taught by Beach. EX1002, ¶113.

In addition, Beach discloses that it was known that products are regularly associated with different types of products. EX1006, 14:24-27 (“In addition, if the customer’s prior purchase record indicates that the customer usually buys charcoal with hot dogs or hamburgers, the terminal may also ask the customer if he needs ‘Charcoal.’”). A POSITA would have understood that it would be obvious to modify Ogasawara to cross-link a product with other types of products that are regularly bought together using a cross-reference link in the database as taught by Beach. EX1002, ¶114.

Beach, Ogasawara, and the 670 patent are analogous art, as they all relate to interactive multimedia information retrieval systems. EX1001, 9:2-5; EX1005, 4:61-67; EX1006, 9:5-8. A POSITA would have understood that it would be obvious to modify Ogasawara to include product-specific “alternatives” and/or other types of products using a cross-reference link in the database as taught by Beach. EX1002, ¶115.

In light of Ogasawara's disclosure of including "a shopping list or a recommended replenishment item list" (EX1005, Abstract), a POSITA would have been motivated to combine Ogasawara with Beach in order to improve the offering of Ogasawara by also providing product-specific alternatives and/or other types of products to the customer for those lists that are related to the desired product. Moreover, the feature of linking two products as product-specific alternatives and/or related/associated products to each other in a cross-referential manner enables the customer to navigate through products in the store more efficiently and find alternative products quickly. A POSITA would have had a reasonable expectation of success in so doing because linking two items in a database was well-known to a POSITA at the time of the 670 patent and involved no more than routine skill. EX1002, ¶116.

4. [1c]

Ogasawara discloses this limitation, and Ogasawara in view Beach renders this limitation obvious. See [1a]. For example, the mobile terminal enables a customer to make inquiries regarding the location of a product using the touchscreen and the mobile terminal as well as the server 50 receiving those inquiries made by the customer. EX1005, 6:54-59 ("the customer location recognition feature is able to respond to customer prompts, by which a *customer may further make inquiries about the location* and direction *of any specific item*

in the retail facility.” (emphasis added)), 8:55-9:7. A POSITA would have understood, or found obvious, Ogasawara’s keypad (“user interface”) discloses receiving a product location inquiry by keyword search. EX1005, 4:65-67 (“keypad arrangement may be provided in combination with the display 10 in order to define an input device”); EX1002, ¶117.

A POSITA would have found obvious for the Ogasawara system to display location along with additional product information in response to scanning a UPC bar code on the product. As such, scanning the UPC bar code would be a product location inquiry. It would have been obvious to use this functionality developed for in-store customers to help employees stock or return products to the correct locations in the store. EX1005, 8:57-60 (“the customer scans an item’s UPC bar code, provided either on the product itself or in a convenient location on the display shelf proximate the item”); EX1002, ¶118.

A POSITA would have understood, or found it obvious, that Ogasawara discloses a system that receives the product location inquiry in real-time, while the user is shopping, because Ogasawara expressly states that “a customer may further make inquiries about the location” after scanning the UPC on a product. EX1005, 6:54-59; EX1002, ¶119.

5. [1d]

Ogasawara discloses this limitation. *See* [1c]. The mobile terminal is a signal processing device that receives the inquiry from the user and creates a signal (i.e., processes for RF transmission) that it sends to the store central computer/core server 50 that is a product location inquiry signal. EX1005, 5:1-60 (“wireless communication transceiver 32 provides the mobile terminal’s control unit 20 with means for communicating with the retail facility core server 50 through an RF signal link”), (“the mobile personal shopping terminal 5 communicates, via RF energy, with a retail store’s core server 50 for purposes of accessing the retail facility’s database 55”), 6:54-59, 8:61-66; EX1002, ¶120.

Ogasawara provides a second disclosure of this limitation where the signal, including the user’s inquiry sent to the server by the mobile terminal, is processed by the server to determine a product location inquire signal to be used for accessing the memory of the store central computer/core server 50. In this regard, a POSITA would have understood and/or have found obvious that the signal received from the mobile terminal could not be used directly to retrieve the desired product location information from the memory of the store central computer/core server 50, and that the store central computer/core server 50 would need to determine how to generate the necessary signal for doing so. EX1002, ¶121.

6. [1e]

Ogasawara discloses this limitation, and Ogasawara in view Beach renders this limitation obvious. *See* [1a], [1d]. Ogasawara discloses querying the store central computer's memory in response to a product location inquiry signal to obtain location and other product-related information. EX1005, 2:41-46, 6:54-59 (“a customer may further make inquiries about the location and direction of any specific item in the retail facility”), 8:1-9:7 (“the item information field 312 provides a means of linking the location information field 314 of the location table 350 to any particular one of the items listed in the product table 300A in order that any item's location information may be accessed and displayed by a shopper's operation of the mobile personal shopping terminal”), 9:3-15 (“once a match is made between a scanned item's SKU code and an SKU field of an item entry, the core server 50 accesses the item entry and transmits the information contained therein to the mobile terminal. At the same time, the store's core server accesses the item's product location information from its associated product location information file entry”), 5:42-46 (“the mobile personal shopping terminal 5 communicates, via RF energy, with a retail store's core server 50 for purposes of accessing the retail facility's database 55”). Products are linked in the database with a recommended promotional item in a cross-referential manner. EX1005, 3:45-48 (“A closest promotional item to the customer's calculated current location

is then identified as the desired destination item and the mobile terminal displays those directions to the customer.”), Abstract (“recommended replenishment item”), 3:38-48 (“recommended promotional items”). A POSITA would understand that the recommended promotional item information is obtained when a product location inquiry occurs. As discussed above in Section [1b], it would have been obvious to a POSITA to implement the identification of the closest promotional item disclosed in Ogasawara by including cross-referential links between two products so that each product’s additional product-related information references the other product. EX1002, ¶122.

Moreover, a POSITA would have found it obvious to modify Ogasawara to include that feature in the query based on Beach. *See* [1b]; EX1006, 14:24-27 (“In addition, if the customer’s prior purchase record indicates that the customer usually buys charcoal with hot dogs or hamburgers, the terminal may also ask the customer if he needs ‘Charcoal.’”). A POSITA would have understood that it would be obvious to modify Ogasawara to provide information about other types of products that are regularly bought together when a query is made. EX1002, ¶123.

7. [1f]

Ogasawara discloses this limitation. *See* [1d], [1e]. Ogasawara’s server responds to the processed product location inquiry signal with an information signal that contains product location information. EX1005, 5:1-46 (“the mobile

personal shopping terminal 5 communicates, via RF energy, with a retail store's core server 50 for purposes of accessing the retail facility's database 55"), 2:41-46, 6:54-59, 8:1-9:7, 9:8-44 ("the customer's source location (location-a) is processed with respect to a desired item's destination location (location-b) by . . . the core server which calculates direction and distance of the targeted desired item relative to the customer's current source location."); EX1002, ¶124.

8. [1g]

Ogasawara discloses this limitation, and Ogasawara in view Beach renders this limitation obvious. See [1f]. Ogasawara discloses that the mobile terminal provides an output signal to an output device (e.g., "LCD display panel"). EX1005, 2:59-60 ("[d]irection and distance information, i.e. aisle and shelf number, is displayed on the mobile terminal display's panel"). A POSITA would have understood, or at least found it obvious, that the display of information on the display of the mobile device requires the output of a signal to the display. EX1002, ¶125.

The "includes location information concerning the product and also provides at least one suggestion related to the other product" is non-functional descriptive material that is not entitled to patentable weight. See §III.E. Regardless, Ogasawara's display includes both product location information and a suggestion related to another product (recommended promotional items). EX1005, 3:55-58

(“Replenishment items, recommended promotional items and items contained on a general shopping list are all candidates for a next desired destination item based on the customer’s current location.”), 3:45-48 (“A closest promotional item to the customer’s calculated current location is then identified as the desired destination item and the mobile terminal displays those directions to the customer.”).

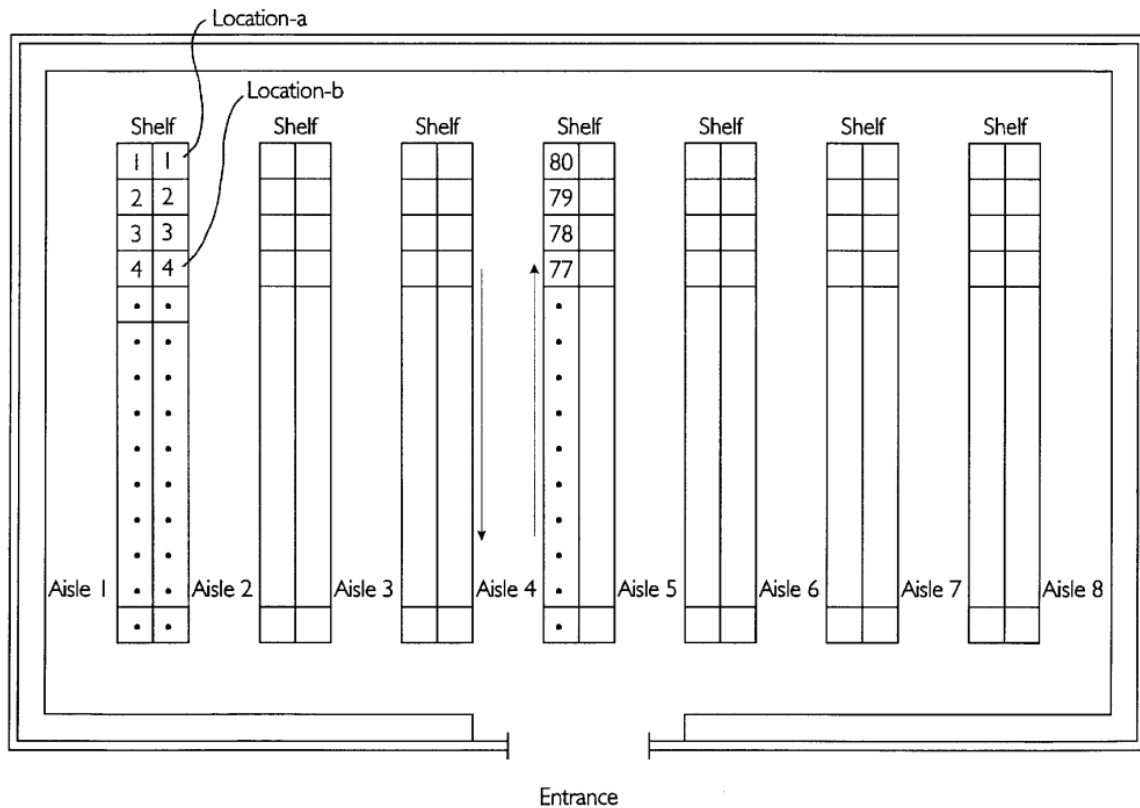


FIG. 8

Id., Fig. 8 (showing product locations); EX1002, ¶126.

As discussed above, a POSITA would have been motivated to combine Ogasawara with Beach to include cross-referential links between products in the Ogasawara database to enable offering products that are alternatives to the one in

the consumer inquiry. *See* [1b]. In the proposed combination, querying the database for an item includes a response with the product location and suggestions on product alternatives and promotions for other products, based on the cross-referential information stored in the database. EX1002, ¶127.

B. Claim 2.

Claim 1, from which this claim depends, is obvious over Ogasawara/Beach. Ogasawara discloses claim 2's limitations, so claim 2 is obvious. *See* §VI.A, [1a], [1g]. Ogasawara's product location information signal is configured to enable the providing of the output signal at the mobile terminal's user interface. Ogasawara's mobile terminal includes an output device (e.g., "LCD display panel") that includes a user interface. EX1005, 4:62-64 ("touch screen"), ("incorporated into the display"); EX1002, ¶128.

C. Claim 4.

Claim 2, from which this claim depends, is obvious over Ogasawara/Beach. Ogasawara discloses claim 4's limitations, so claim 4 is obvious. *See* §VI.B. Ogasawara's user interface ("touch screen") includes a mobile user interface. EX1005, 4:61-67 ("Pressure sensitive (touch screen) technology may be incorporated into the display 10 so that a shopper may access the mobile terminal 5 by merely touching certain portions of the screen."), ("a numeric or alpha-numeric

button or keypad arrangement may be provided in combinations with the display 10”), 10:13-24, 14:66-15:28; EX1002, ¶129.

D. Claim 6.

This claim recites non-functional descriptive material that is not entitled to patentable weight. *See* §III.E. Regardless, claim 4, from which this claim depends, is obvious over Ogasawara/Beach. Ogasawara discloses claim 6’s limitations, so claim 6 is obvious. *See* §VI.C, §VI.A, [1f]. Ogasawara’s product location information signal (*see* [1f]) is configured to enable, at least indirectly, the at least one user interface (“touch screen”) on the mobile terminal to provide information concerning one or more products that are specially promoted or that are located close by the at least one user interface. EX1005, 6:44-47 (“on the basis of a customer’s current location, provide suitable directions or location indicia to promotional items which are located on store shelves most proximate to the customer’s current location”), 3:45-48 (“A closest promotional item to the customer’s calculated current location is then identified as the desired destination item and the mobile terminal displays those directions to the customer”); EX1002, ¶130.

E. Claim 7.

Claim 4, from which this claim depends, is obvious over Ogasawara/Beach. Ogasawara discloses claim 7’s limitations, so claim 7 is obvious. *See* §VI.C,

§VI.A, [1g]. The “further suggestion to a customer in accordance with one or more customer preferences” is non-functional descriptive material that is not entitled to patentable weight. *See* §III.E. Regardless, in the proposed combination, querying the database of an item includes a response with the product location, suggestions on product alternatives, and promotions for other products, based on the cross-referential information stored in the database. Each product alternative or promotion (EX1006, 14:49-50) for other products is a suggestion (EX1005, 3:42-48, 3:55-58) as required by limitation [1g] or a further suggestion as required by this claim. Ogasawara discloses that the signal output to the display can provide these suggestions, and that these suggestions can be based on a customer’s historical profile and/or “consumer interests.” 10:15-56 (“space is allocated [for] a customer’s food preferences, drink preferences”), 16:7-11 (“advertisement about a sale product that the customer would be interested in purchasing, the recommendation of such products on the customer’s display unit ensures that the customer will not miss out on the saving offered by the store.”). A POSITA would have understood Ogasawara’s disclosure of storing the customer’s food and drink preferences and disclosure of advertising to the customer based on what the customer is “interested in purchasing” is disclosure the Ogasawara’s output includes a further suggestion to a customer in accordance with their customer preferences. EX1002, ¶131.

F. Claim 8.

This claim recites non-functional descriptive material that is not entitled to patentable weight. *See* §III.E. Regardless, claim 4, from which this claim depends, is obvious over Ogasawara/Beach. Ogasawara discloses claim 8's limitations, so claim 8 is obvious. *See* §VI.C, [1a], [1e]. Ogasawara's mobile terminal further displays additional product information including:

- **“sale or promotion information regarding a sale or promotion relating to the product”**: EX1005, 16:6-11 (“even if a customer fails to notice a sign or an advertisement about a sale product that the customer would be interested in purchasing, the recommendation of such products on the customer's display unit ensures that the customer will not miss out on the savings offered by the store.”), 3:55-58 (“Replenishment items, recommended promotional items and items contained on a general shopping list are all candidates for a next desired destination item based on the customer's current location.”), 3:45-48 (“A closest promotional item to the customer's calculated current location is then identified as the desired destination item and the mobile terminal displays those directions to the customer.”);

- **“a current stock of the product”**: EX1005, 5:43-56 (“status of current store inventory the quantity of that item may be decremented in the database so that a current running total inventory may be maintained”);
- **“a price of the product”**: EX1005, 7:34-35 (“each item entry includes a price field 306”); 5:43-56 (“Up-to-date pricing information”);
- **“a presence or absence of the product within the store”**: EX1005, 5:43-56 (“status of current store inventory”);
- **“a time at which the product should be available at the store if the product is currently absent from the store”**: Conditional limitations are not entitled to patentable weight in a method claim. *See* V.F. Regardless, it was well-known to a POSITA to have this information available in a database. *See, e.g.,* EX1031, 3:1-6, claims 11, 39; EX1032, 73 (taking official notice of same in file history of a parent application). A POSITA would have found obvious to provide the customer with a time at which the product should be available at the store if the product is currently absent from the store based on Ogasawara’s teaching of reducing opportunity loss. EX1005, 16:24-26 (“Opportunity loss is a serious problem for retail stores since it suggests that another store is successfully competing for business in certain areas.”). A POSITA would have understood and found obvious that informing the customer of the time when the product would be

available would help reduce the chances that a customer would go to a competing store.

- **“an alternate way of obtaining the product if the product is currently absent from the store”**: Conditional limitations are not entitled to patentable weight in a method claim. *See* V.F. Regardless, a POSITA would have found obvious to provide the customer an alternate way of obtaining the product such as allowing the customer to order the product for delivery (see, e.g., EX1030, abstract) based on Ogasawara’s teaching of reducing opportunity loss. Additionally, Ogasawara discloses using a customer’s “home personal computer” and the system storing a customer’s “home address.” EX1005, 10:13-18, 10:52-53. A POSITA would have understood, or found obvious, that these disclosures provide an alternate way of obtaining the product such as allowing the customer to order the product for delivery.

EX1002, ¶132.

G. Claim 9

This claim recites non-functional descriptive material that is not entitled to patentable weight. *See* §III.E. Conditional limitations are not entitled to patentable weight in a method claim. Regardless, claim 8, from which this claim depends, is

obvious over Ogasawara/Beach. *See* §VI.F. Ogasawara discloses claim 9’s limitations, so claim 9 is obvious. *See* §VI.F (last two bullets). EX1002, ¶133.

H. Claim 10.

This claim recites non-functional descriptive material that is not entitled to patentable weight. *See* §III.E. Regardless, claim 8, from which this claim depends, is obvious over Ogasawara/Beach. Ogasawara discloses claim 10’s limitations, so claim 10 is obvious. *See* §VI.F (second and fourth bullet points); EX1002, ¶134.

I. Claim 12.

Claim 4, from which this claim depends, is obvious over Ogasawara/Beach. Ogasawara discloses claim 12’s limitations, so claim 12 is obvious. *See* §VI.C. The “that relates to something other than a product location-type inquiry” and “that at least in part allows for the providing of an additional suggestion to the customer” are non-functional descriptive material that is not entitled to patentable weight. *See* §III.E. Ogasawara allows receiving an inquiry signal that relates to something other than the product location-type inquiry, such as inquiring about a recommendation. EX1005, 13:38-39 (“allowing the customer to request recommendation of a particular item”). Ogasawara also discloses non-location inquiries. EX1004, 14:55-57 (“an inquiry is made as to whether or not there are any remaining items in the replenishment item table left to examine”), 14:58-59

(“inquiry is made as to whether or not the maximum purchase interval has been exceeded”); EX1002, ¶135.

Additionally, Ogasawara’s customer is identified by a unique terminal or a unique customer ID. EX1005, 10:30-31 (“each terminal is assigned a unique terminal ID”), 10:33-34 (“each customer is issued a unique customer ID which may be used by the mobile terminal as unique identification flag.”). The customer ID allows Ogasawara to provide additional suggestions/recommendations to the customer based on stored information about the customer. EX1005, 15:56-59 (“once the mobile personal shopping terminal makes initial contact with the retail facility’s core server and transmits the customer ID and profile information”); 15:54-56 (“recommendations are based on information contained in the customer’s profile . . . obtained from the customer’s IC card”); EX1002, ¶136.

J. Claim 14.

Claim 1, from which this claim depends, is obvious over Ogasawara/Beach. Ogasawara discloses claim 14’s limitations, so claim 14 is obvious. *See* §VI.A, [1a]. With respect to (a), Ogasawara’s mobile device is able to provide some of the information at the user interface using its local copy of the PLU table. EX1005, 7:1-18 (“PLU Table, as hosted by the mobile terminal’s local storage unit (30 of FIG. 1), is a mirror image of a virtual PLU Table hosted by the store’s core server”). To the extent that “able to provide” means display, Ogasawara’s mobile

device displays some of the information to the user interface. EX1005, 4:61-67 (“Pressure sensitive (touch screen) technology may be incorporated into the display 10 so that a shopper may access the mobile terminal 5 by merely touching certain portions of the screen.”). To the extent “able to provide” requires the mobile device to process the data, Ogasawara discloses the mobile device processes some of the information displayed on the user interface. EX1005, 2:50-54 (“the mobile device is then able to calculate a direction and distance to a desired destination item based on the customer’s current location and the location information assigned to the destination item in the merchandise item database.”). The mobile device is also “able to offer suggestions on promotional item.” EX1005, 2:24; EX1002, ¶137.

With respect to (b), Ogasawara further discloses that the user interface is in wireless communication with a central hub. EX1005, 5:19-21 (“Communication between the mobile personal shopping terminal 5 and the external information source terminal is implemented by a wireless communication”), 2:65-3:1 (“The mobile terminal may then transmit the shopping list to the store central computer using the RF communication transceiver.”). A POSITA would have understood that the store central computer of Ogasawara is disclosure of a central hub. EX1002, ¶138.

VII. GROUND 3: OGASAWARA, BEACH, AND SHANMAN RENDER OBVIOUS CLAIM 9

A. Claim 9.

This claim recites non-functional descriptive material that is not entitled to patentable weight. *See* §III.E. Also, conditional limitations are not entitled to patentable weight in a method claim. Regardless, Claim 8, from which this claim depends, is obvious over Ogasawara/Beach. *See* §VI.F. Ogasawara in view of Beach in further view of Shanman renders this claim obvious. Shanman discloses an alternate way of obtaining the product if the product is currently absent from the store. *See* §V.G; EX1002, ¶139.

Shanman, Beach, Ogasawara, and the 670 patent are analogous art, as they all relate to interactive multimedia information retrieval systems. §IV.A; EX1001, 9:2-5; EX1005, 4:61-67; EX1006, 9:5-8. A POSITA would have been motivated to further combine Ogasawara/Beach with Shanman in order to improve the offering of Ogasawara by not limiting Ogasawara's additional product-related information to products found only in a single store, but allowing customers to optimize their shopping by getting product information from multiple competitive stores. *See*, e.g., EX1004, 7:47-8:10 ("the same goods are available at a lower cost elsewhere"), 17:40-54 ("select choices from a list of alternatives"), 13:59-14:1 ("a plurality of participating retail outlets, including inventory data"). A POSITA would have had a reasonable expectation of success in so doing because adding

such information to the database at the time of the '670 patent involved no more than routine skill. EX1002, ¶140.

A POSITA would have found obvious “the alternate way of obtaining the product if the product is currently absent from the store” based on the combination of Ogasawara and Beach in view of Shanman’s disclosure of maintaining inventory for a plurality of retail outlets and providing the ability to select the other stores renders obvious an alternate method of obtaining an absent product. EX1004, 7:47-8:10, (“the same goods are available at a lower cost elsewhere”), 17:40-54 (“select choices from a list of alternatives”), 13:59-14:1 (“a plurality of participating retail outlets, including inventory data”). EX1002, ¶141.

VIII. DISCRETIONARY DENIAL IS NOT WARRANTED

A. 35 U.S.C. § 314(a) *Fintiv* Analysis

1. Stay

No stay has been sought by any party. Thus, this factor is neutral.

2. Trial Date

Under the Interim Guidance, Factor 2 favors institution because the expected Final Written Decision (“FWD”) date here, around June 2025, is about three months before the anticipated district court trial date as computed in accordance with the Interim Guidance, *i.e.*, September 2025 (29.1 months from 4/11/2023). *See* EX1007 at 53 (median time-to-trial of 29.1 months); EX1008 (Complaint filed on 4/11/2023).

The district court's currently-scheduled trial date for the parties' WDWI litigation is 6/2/2025, *see* EX1009, 9—about the same time as the anticipated statutory deadline for a Final Written Decision in this proceeding. Thus, this factor should favor institution even using the currently scheduled trial date. Moreover, as the Director has recently observed, scheduled trial dates “are unreliable and often change” and a court’s scheduled trial date is therefore “not by itself a good indicator of whether the district court trial will occur before the statutory deadline” for a FWD. EX1018, 8.

The three earlier-filed district court cases, none of which involve Petitioner, should not change the analysis because Petitioner is unrelated to any of the defendants in those cases, those other defendants have no involvement in this IPR, and different technology is at issue in those earlier-filed cases. *TCT Indus. Holdings Co., Ltd. v. ParkerVision, Inc.*, IPR2021-00990, Paper 9 at 28-29 (PTAB Nov. 22, 2021).

3. Investment in Parallel Proceeding

The WDWI litigation³ between the parties is in its very early stages. Fact discovery has barely even started—with Petitioner having only recently responded

³ The state of the three earlier-filed district court cases asserting the 670 patent is not relevant to this analysis. *See TCT Indus. Holdings Co.*, IPR2021-00990, Paper 9 at 29-31 (considering only investment in parallel litigation concerning petitioner despite patent owner’s assertion regarding effort in litigation concerning unrelated third party).

to an initial sets of document requests and interrogatories. Even more fundamentally, neither the district court nor the parties have invested substantially in the merits of the invalidity grounds in this IPR, nor will they have done so by the projected date for an institution decision. Even assuming the district court's existing scheduling order holds: PO's preliminary disclosure of infringement contentions is not due until 1/4/2024; Petitioner's preliminary disclosure of invalidity contentions is not due until 3/21/2024; and the parties' exchange of claim terms and proposed constructions, and their responses thereto, are not due until 4/11/2024 and 4/25/2024, respectively. In contrast, much work will remain to be done after the institution decision for this IPR: The parties' opening and rebuttal expert reports are due on 5/31/2024 and 6/28/2024, respectively; and their dispositive motions and any motions seeking judicial construction of claim terms are not due until 12/6/2024. Thus, the district court in the parties' WDWI litigation will not issue any claim construction order or take any substantive action on any invalidity position until long after the institution decision here.

In *Sand Revolution II*, the parties had already “exchanged infringement and invalidity contentions, and the district court ha[d] conducted a *Markman* hearing and entered a related Order.” *Sand Revolution II* at 10. Despite these facts, the Board found that the third *Fintiv* factor “weighs only marginally, if at all, in favor of exercising discretion to deny institution.” *Id.* at 10-11 (“recogniz[ing] that much

work remains in the district court case as it relates to invalidity: fact discovery is still ongoing, expert reports are not yet due, and substantive motion practice is yet to come.”). Here, substantially more work remains to be done as to invalidity. That the district court will not have either held a Markman hearing or issued a claim construction order underscores that no significant investment of resources would be wasted upon the Board’s institution. This factor therefore weighs strongly against exercising discretion.

Moreover, this Petition is being filed *before* PO’s service of infringement contentions and almost six months prior to the one-year statutory deadline. EX1017 (acceptance of service on 5/5/2023). This diligence further indicates that this factor weighs against exercising discretion to deny this Petition.

4. Issue Overlap

This Petition focuses on three distinct grounds of invalidity that have not been raised in any of the earlier-filed cases.⁴ Nevertheless, to eliminate any potential overlap of issues, Petitioner stipulates that if the Board institutes IPR, Petitioner will not assert invalidity of the Challenged Claims in the parties’ WDWI litigation using the any of the primary references used in the grounds asserted in

⁴ Although Target asserted obviousness of claims 1, 2, 4, 6-8, 10, 12 and 14 in view of Ogasawara, obviousness of claims 1, 2, 4, 6, 7, 10, 12 and 14 in view of Asthana, and obviousness of claim 9 in view of Asthana, combined with Ogasawara, Rowley, and Smith, this is different from the challenges here.

this Petition. This stipulation is broader than a *Sand Revolution* stipulation and less restrictive than a *Sotera* stipulation. Thus, this factor weighs against discretionary denial. *Sophos Ltd. v. Open Text Inc.*, IPR2023-00699, Paper 17 at 10 (PTAB October 11, 2023).

5. Same Party

Home Depot's status as both Petitioner here and as Defendant in the WDWI litigation weighs against exercising discretion to deny institution because, based on the expected dates for a FWD on this Petition and trial in the district court, Home Depot will be subject to the estoppel provisions of 35 U.S.C. § 315(e)(2). *CrowdStrike, Inc. v. Open Text Inc.*, IPR2023-00289, Paper 7 at 16 (PTAB July 21, 2023). At worst, this factor should be considered neutral. *Snap, Inc. v. SRK Tech. LLC*, IPR2020-00820, Paper 15 at 16 (PTAB Oct. 21, 2020) (precedential in relevant part); *see also Samsung Elecs. Co., Ltd. v. DoDots Licensing Solutions LLC*, IPR2023-00621, Paper 9 at 15 (PTAB Oct. 11, 2023).

If the Board considers PO's earlier-filed cases involving the 670 patent, this factor still weighs in favor of institution because the Petitioner is unrelated to the defendants in those other cases. *Fintiv*, IPR2020-00019, Paper 11 at 13-14 ("If a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact against exercising discretion to deny institution ...").

6. Other Considerations

Other considerations weigh very strongly against a discretionary denial.

There is compelling evidence to institute inter partes review of the 670 patent because the Petition presents compelling evidence of unpatentability in light of (a) Shanman, (b) the combination of Ogasawara and Beach, and (c) the combination of Ogasawara, Beach and Shanman, such that, if unrebutted in trial, would lead to a conclusion that the Challenged Claims are unpatentable by a preponderance of the evidence (EX1018, 4-5) and therefore invalid.

B. 35 U.S.C. § 325(b) Analysis

Applying the two-part framework discussed in *Advanced Bionics*, the Board should not exercise its § 325(d) discretion to deny institution. None of the challenges raised in this Petition are substantially the same as those considered during prosecution because none of Ogasawara, Beach, or Shanman were considered during prosecution of the 670 patent.

In the event that the challenges herein are found to be based on prior art that is the same as or cumulative to prior art considered during prosecution, the examiner has made a clear error in allowing the claims over such prior art at least because the challenges in this Petition satisfy the compelling merits standard.

IX. COMPLIANCE WITH FORMAL REQUIREMENTS

A. Mandatory Notices Under 37 C.F.R. §§ 42.8(b)(1)-(4)

1. Real Party-In-Interest

Home Depot USA, Inc. and Home Depot Solutions LLC (“Petitioner”) are the real party-in-interest.

Petitioner identifies The Home Depot, Inc. as a potential RPI solely because it was a named defendant in the WDWI Litigation.

2. Related Matters

The 670 patent is subject to the following actions:

- *Innovaport LLC v. IKEA North America Services, LLC et al.*, No. 2:21-cv-00789 (E.D. Wis. filed June 25, 2021)
- *Innovaport LLC v. Target Corporation*, No. 3:22-cv-00425 (W.D. Wis. filed Aug. 4, 2022)
- *Innovaport LLC v. Best Buy Co., Inc.*, No. 3:23-cv-00016 (W.D. Wis. filed Jan. 6, 2023)
- *Innovaport LLC v. Home Depot U.S.A., Inc., et al.*, No. 3:23-cv-00225 (W.D. Wis. filed Apr. 11, 2023)
- *Innovaport LLC v. Walmart Inc.*, No. 3:23-cv-00498 (W.D. Wis. filed July 21, 2023)

3. Lead and Backup Counsel

Lead Counsel	Backup Counsel
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4. Service Information

Service information for lead and backup counsel is provided in the designation of lead and backup counsel above. Petitioner consents to electronic service by email to:

HomeDepot-Innovaport-IPR@us.dlapiper.com

B. Proof of Service on the Patent Owner

As identified in the attached Certificate of Service, a copy of this Petition in its entirety is being served electronically on PO's attorney by agreement of the parties and pursuant to 37 C.F.R. §§ 42.6 & 42.105(b).

C. Power of Attorney

Powers of attorney are being filed with designation of counsel in accordance with 37 C.F.R. § 41.10(b).

D. Standing

In accordance with 37 C.F.R. § 42.104(a), Petitioner certifies that the 670 patent is available for *inter partes* review and that Petitioner is not barred or estopped from requesting an *inter partes* review challenging the patent claims on the grounds identified in this Petition.

E. Fees

The undersigned authorizes the Director to charge the fee specified by 37 C.F.R. § 42.15(a) and any additional fees that might be due in connection with this Petition to Deposit Account No. 503266.

X. CONCLUSION

All claims of the 670 patent should be found unpatentable for the reasons discussed in this Petition.

Respectfully submitted,

/s/ Jennifer Librach Nall

Jennifer Librach Nall

Reg. No. 57,053

Attorney for Petitioner

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), Petitioner certifies that this petition includes 13,958 words, as measured by Microsoft Word, exclusive of the table of contents, mandatory notices under § 42.8, certificates of service, word count, claim listing, and exhibits.

CERTIFICATE OF SERVICE

The undersigned certifies pursuant to 37 C.F.R. §§ 42.6(e) and 42.105 that on November 27, 2023, a true and correct copy of the Petition for *Inter Partes* Review of U.S. Patent No. 9,990,670 challenging Claims 1, 2, 4, 6-10, 12, 14 and all Exhibits was served by emailing a copy of same (by agreement) to the following attorneys of record for the Patent Owner:

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Respectfully submitted,

/s/ Jennifer Librach Nall

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