

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BJ'S WHOLESALE CLUB HOLDINGS, INC.,
Petitioner,

v.

WALMART APOLLO, LLC,
Patent Owner.

IPR2022-01509
Patent 10,368,188 B2

Before NEIL T. POWELL, MITCHELL G. WEATHERLY, and
ARTHUR M. PESLAK, *Administrative Patent Judges*.

PESLAK, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 314

I. INTRODUCTION

BJ's Wholesale Club Holdings, Inc. ("Petitioner") filed a Petition requesting an *inter partes* review of claims 1–19 ("the Challenged Claims") of U.S. Patent No. 10,368,188 B2 ("the '188 patent," Ex. 1001). Paper 2 ("Petition," "Pet."). Petitioner filed a Declaration of David H. Williams in support of the Petition. Ex. 1003. Patent Owner filed a Preliminary Response. Paper 6 ("Prelim. Resp."). On April 11, 2023, we instituted this *inter partes* review as to all Challenged Claims and all grounds presented in the Petition. Paper 7.

After institution, Patent Owner filed a Response to the Petition ("PO Resp.") supported by the Declaration of Dr. Darrell Long. Paper 13; Ex. 2004. Petitioner filed a Reply ("Pet. Reply"). Paper 20. Patent Owner filed a Sur-reply ("Sur-reply"). Paper 22. An oral hearing was held on January 10, 2024 and the transcript is entered into the record. Paper 28.

We have jurisdiction under 35 U.S.C. § 6. This is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of the Challenged Claims of the '188 patent. For the reasons discussed below, we determine Petitioner has not established by a preponderance of the evidence that any of the Challenged Claims are unpatentable.

A. *Related Matters*

The parties identify the '188 patent as a subject of *Sam's West, Inc. et al. v. BJ's Wholesale Club Holdings, Inc.*, Case No. 6:22-cv-00587 (M.D. Fla. Mar. 22, 2022). Pet. 1 (citing Ex. 1017); Paper 3, 1.

B. Real Parties in Interest

Petitioner and Patent Owner each identifies itself and no others as a real party in interest. Pet. 1; Paper 3, 1.

C. The '188 Patent

The '188 patent is titled “Systems and Methods for Identifying Location-Based Services.” Ex. 1001, code (54). The '188 patent issued on July 30, 2019, from Application No. 15/834,747, which was filed on December 7, 2017. *Id.* at codes (45), (21), (22). Application No. 15/834,747 claims priority to Provisional Application No. 62/432,267, filed December 9, 2016. *Id.* at code (60).

The '188 patent explains that “[m]obile applications executing on a mobile computing device . . . may . . . use . . . the . . . device’s ability to scan machine-readable elements to obtain information on its environment.” Ex. 1001, 1:15–18. One embodiment of the '188 patent describes “a system for identifying available location-based services” that “includes a mobile application executable on a mobile computing device operated by a user.” *Id.* at 1:25–28, 2:43–48. “The system also includes a machine-readable element [(MRE)] generator configured to generate and display a machine-readable element that identifies types of services available to be performed at a location of the machine-readable element.” *Id.* at 1:30–33, 2:50–54. “The system further includes a server hosting a services management framework communicatively coupled with a database and the mobile application,” where “[t]he database includes one or more services previously ordered by the user”—“referred to as ‘ordered services.’” *Id.* at 3:6–10.

In operation, a user can approach a local POS terminal with a mobile computing device and use a mobile application thereon to scan a machine-readable element generated and displayed at the POS terminal.

Ex. 1001, 2:55–58, 3:47–50, 3:53–55, 3:58–3:59, 5:57–5:58. The mobile application can then decode the identifiers in the machine-readable element and identify therefrom the location of a POS terminal associated with the machine-readable element as well as the types of services available at that location. *Id.* at 2:58–64, 3:50–53, 3:59–61, 4:29–36, 5:58–6:1–6.

According to the '188 patent, “types of services include purchasing goods and services, processing a pharmacy order, financial services such as transferring or receiving money to/from a third party, receiving an e-receipt from a purchase, and returning an item from the e-receipt.” *Id.* at 3:1–5. In turn, “[t]he mobile application transmits the available types of services to [the] services management framework being executed on [the] server,” which “maps the available types of services to the ordered services associated with the user to determine which ordered services for the user are available at the particular location.” *Id.* at 3:61–3:67. Subsequently, “[t]he services management framework communicates the available ordered services to the mobile application.” *Id.* at 4:2–3. Available ordered services may be automatically processed “for example, if pharmacy services are available . . . , an associate may be automatically notified to pick up a previously filled prescription for delivery to the user”—or the user may be asked which available ordered services she wishes to have performed. *Id.* at 4:3–13.

D. Illustrative Claim

Claims 1, 8, and 14 are independent claims. Claim 1 is representative of the claimed subject matter and is reproduced below with Petitioner's limitation identifiers:

1. [a] A system for identifying location-based services, the system comprising:

[b] a mobile application executable on a mobile computing device operated by a user;

[c] a database storing one or more previously ordered services associated with the user, wherein the one or more previously ordered services are pending services that are not yet complete due to the services requiring an interaction of the user with a physical facility;

[d] a machine-readable element generator associated with a local computing device and located within the physical facility, the machine-readable element generator configured to generate and display a machine-readable element that identifies types of services available to be performed at a location of the machine-readable element, wherein the one or more available types of services are location-based services capable of being performed at a location of the local computing device associated with the machine-readable element; and

[e] a server communicatively coupled to the database and the mobile application and hosting a services management framework configured to map the one or more previously ordered services to the one or more available types of services to determine one or more available previously ordered services at the location of the machine-readable element, wherein the one or more available previously ordered services are ordered services capable of being performed at the location of the local computing device associated with the machine-readable element,

[f] wherein the mobile application is configured to:

scan and decode the machine-readable element, the machine-readable element providing the mobile application

with an identity of the local computing device associated with the machine-readable element;

[g] identify the one or more available types of services based on the decoded machine readable element;

[h] transmit, to the services management framework, the identification of the one or more available types of services so that the services management framework determines one or more available previously ordered services at the location of the machine-readable element;

[i] receive, from the services management framework, an indication of the one or more available previously ordered services;

[j] receive a user selection to initiate performance of at least one of the one or more available previously ordered services; and

[k] communicate the selected one or more available previously ordered services, authentication information, and location identification information to the local computing device to initiate performance of the selected one or more available previously ordered services.

Ex. 1001, 9:41–10:29.

E. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–19 would have been unpatentable on the following ground (Pet. 9):

Claim(s) Challenged	35 U.S.C. §	References/Basis
1–19	103	Poole, ¹ Hammad ²

¹ U.S. Patent Application Publication No. US 2015/0356667 A1 (published Dec. 10, 2015) (Ex. 1006, “Poole”).

² U.S. Patent Application Publication No. US 2013/0166332 A1 (published June 27, 2013) (Ex. 1007, “Hammad”).

II. ANALYSIS

A. Overview

Petitioner bears the burden of establishing the unpatentability of the challenged claims by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

A claim is unpatentable under § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, “would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective indicia of non-obviousness (i.e., secondary considerations).³ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

The Supreme Court explained in *KSR International Co. v. Teleflex Inc.* that

[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.

³ No evidence of secondary considerations is in the record.

550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” (alteration in original))).

“Whether an ordinarily skilled artisan would have been motivated to modify the teachings of a reference is a question of fact.” *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1327 (Fed. Cir. 2016) (citations omitted).

“[W]here a party argues a skilled artisan would have been motivated to combine references, it must show the artisan ‘would have had a reasonable expectation of success from doing so.’” *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1360–61 (Fed. Cir. 2017) (quoting *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1068–69 (Fed. Cir. 2012)).

B. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art “as of the priority date would have had a ‘bachelor’s degree in electrical engineering (or equivalent subject) together with one to two years of experience in research, design, development, and/or testing of location-based systems including mobile device applications,” also noting that “[m]ore education can supplement practical experience and vice versa.” Pet. 7 (citing Ex. 1003 ¶ 20). Patent Owner adds that a person of ordinary skill in the art “could also have a bachelor’s degree in computer science, but otherwise agrees with Petitioner’s definition.” PO Resp. 15 (citing Ex. 2004 ¶¶ 54–58).

We apply Petitioner’s proposed level of skill in the art, but, add that the person of ordinary skill in the art could also have a bachelor’s degree in

computer science because that is consistent with the problems addressed in the '188 patent and the prior art. Our Decision, however, would not be affected if we adopted Petitioner's level of skill in the art.

C. Claim Construction

We apply the same claim construction standard used by Article III federal courts and the International Trade Commission, both of which follow *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc) and its progeny. 37 C.F.R. § 42.100(b) (2021). This claim construction standard includes construing claims in accordance with “the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

Neither party proposes a specific construction for any claim term. Pet. 8–9; PO Resp. 17.

Based on our review of the record, we determine it is not necessary to construe expressly any claim term for the purposes of this Decision. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

D. Ground 1: Alleged Obviousness of Claims 1–19 over Poole and Hammad

Petitioner contends claims 1–19 would have been obvious over Poole and Hammad. Pet. 9–41. Petitioner supports its contentions with the Declaration of David H. Williams. Ex. 1003. Patent Owner disputes Petitioner's contentions. PO Resp. 17–40.

We begin with brief summaries of Poole and Hammad and then address the parties' respective contentions.

1. *Poole (Ex. 1006)*

Poole is titled “Systems and Methods for Location Sensing for Purchases.” Ex. 1006, code (54). Poole is directed to “systems and methods . . . for assisting a customer with purchasing merchandise items in a store.”

Id. ¶ 6. Figure 1 of Poole is reproduced below.

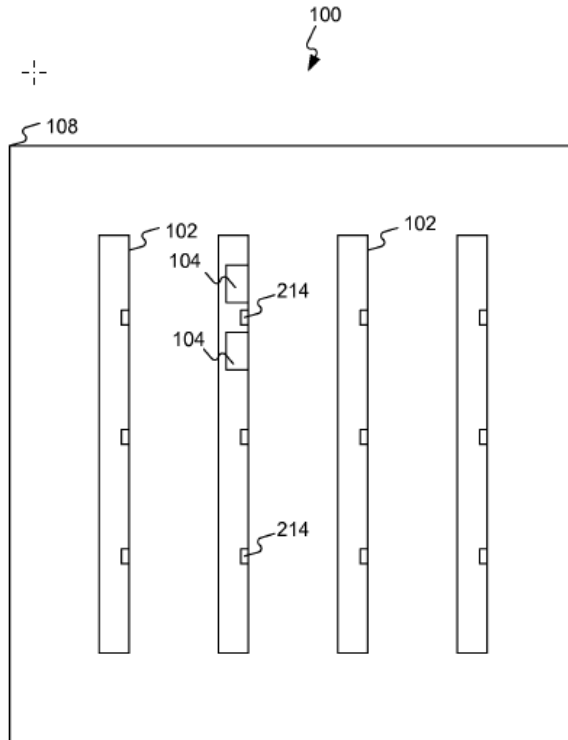


Figure 1 of Poole depicts a block diagram of a store consistent with the disclosed embodiments. Ex. 1006 ¶¶ 15, 25. As shown, store 100 includes aisles 102 each equipped with racks or other equipment for storing merchandise items 104. *Id.* ¶ 25. According to Poole, “[a]isles 102 may also be equipped with one or more sensors 214, which may be configured to detect the position of one or more customer devices being carried by one or more customers, when the customer devices are located near to or adjacent to sensors 214.” *Id.*

Figure 2 of Poole, reproduced below, depicts a system according to one embodiment.

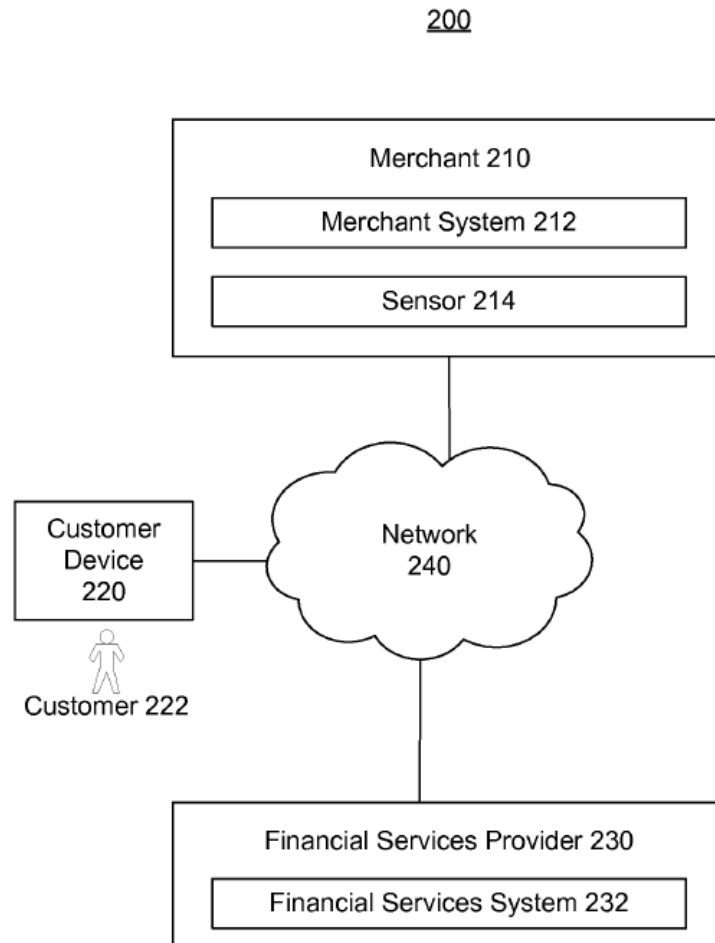


Figure 2 depicts a system according to one embodiment of Poole's invention. Ex. 1006 ¶¶ 26–27. As shown, system 200 includes merchant 210 (including merchant system 212), customer device 220, customer 222, financial services provider 230, and network 240. *Id.* ¶ 27. “Merchant system 212 may include server(s) . . . configured to execute stored software instructions to perform operations associated with merchant 210, including . . . processing purchase transactions, generating transaction data, generating product data (e.g., SKU data) relating to purchase transactions, etc.” *Id.* ¶ 29. Merchant 210 may also include one or more sensors 214 for detecting

the presence of or communicating with a customer 222 in the vicinity. *Id.*

¶ 31. Each sensor 214 may have a sensor identifier associated therewith. *Id.*

¶ 32. “[C]ustomer device 220 may be configured to execute a customer assistance application, which may be configured to assist a customer locate in-store merchandise items 104, communicate with sensor 214, and/or facilitate or perform transactions (e.g., the selection and purchase of one or more merchandise items 104 in store 100).” *Id.* ¶ 33.

For example, “sensor 214 may detect the presence of customer device 220, when customer device 220 is in the vicinity of sensor 214” and “transmit information regarding merchandise items 104 stored near customer device 220” “to customer 222 on a display of customer device 220.”

Ex. 1006 ¶ 34. Customer device 220 may also extract information about sensor 214, such as its position, from the received signals and transmit the extracted information to merchant system 212 through network 214. *Id.*

¶ 48.

Using customer device 220, customer 222 may select one or more of the displayed merchandise items 104 for purchase and communicate with merchant system 212 and financial services system 232 over network 240 to complete the purchase 104 without having to wait in line or take items 104 to the checkout counter. Ex. 1006 ¶ 34. If customer 222 does not want to complete the purchase now, the selected merchandise items 104 may be saved in memory 306, storage medium 308, or database 314, which can store various customer data, sensor data, inventory data, purchase data, and financial data. *Id.* ¶¶ 44, 80. If the customer does want to complete the purchase, however, the system determines whether the customer has a registered profile or needs to complete the purchase as a guest. *Id.* ¶¶ 81–83.

2. *Hammad (Ex. 1007)*

Hammad is titled and directed to “Mobile Wallet Store and Service Injection Platform Apparatuses, Methods and Systems (SEWI)” “for transform[ing] user goal, trigger, trigger monitoring and paperless electronic ticket entry inputs, via SEWI components, into triggered monitoring updates, purchase transaction triggers, and goal resolution outputs.”

Ex. 1007, code (54), ¶¶ 4, 94.

Figure 1 of Hammad is reproduced below.

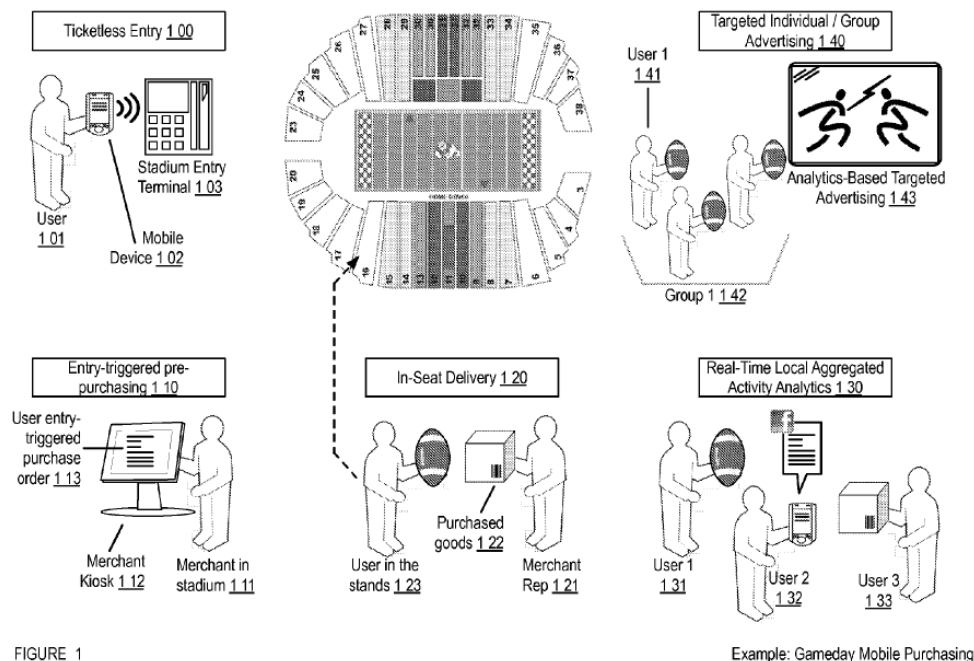


Figure 1 of Hammad depicts various gameday mobile purchasing activities according to some embodiments of the SEWI. *Id.* ¶¶ 7, 95, Fig. 1. Among other things, “the SEWI may provide pre-purchasing of user pre-selected goods for delivery to the user's seating area . . . while the user is still in transit from the stadium entrance to the seating area of the user.” *Id.* ¶ 96. “For example, when a user successfully enters the stadium using the user’s mobile device, the SEWI may lookup a database to determine any pre-purchasing preferences of the user,” and based thereon, “the SEWI may

initiate purchase transactions using funding sources included in an electronic virtual wallet associated with the user's mobile." *Id.* Further, "[u]pon successful authorization of the transactions, the SEWI may notify merchants . . . in the user's pre-purchasing preferences 111," who have "kiosks 112 in the stadium, that they are to deliver the user's ordered goods 113." *Id.*

Figure 1B of Hammad is reproduced below.

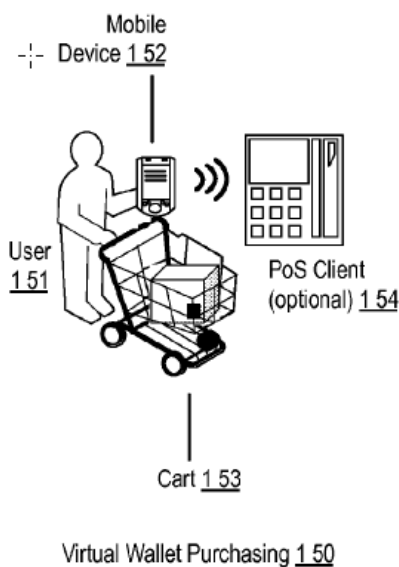


Figure 1B of Hammad depicts a virtual mobile wallet purchasing aspect of the SEWI. Ex. 1007 ¶ 8, Fig. 1B. As shown, the SEWI can make use of “a virtual wallet . . . 150[] for conducting purchase transactions,” in which “a user 151 may utilize a mobile device 152 . . . to conduct a purchase transaction for contents of a cart 153 . . . , optionally at a point-of-sale (PoS) client 154.” Ex. 1007 ¶ 99. “In some embodiments, the SEWI may determine offers, coupons, discounts, and/or the like to provide to individual users and/or groups of users, based on the analytics performed on the real-time localized aggregated activity,” where “the activities aggregated may

include . . . social networking activity, purchasing activity, web browsing activity, media streaming activity, and/or the like.” *Id.* ¶ 98.

Figure 12F of Hammad is reproduced below.

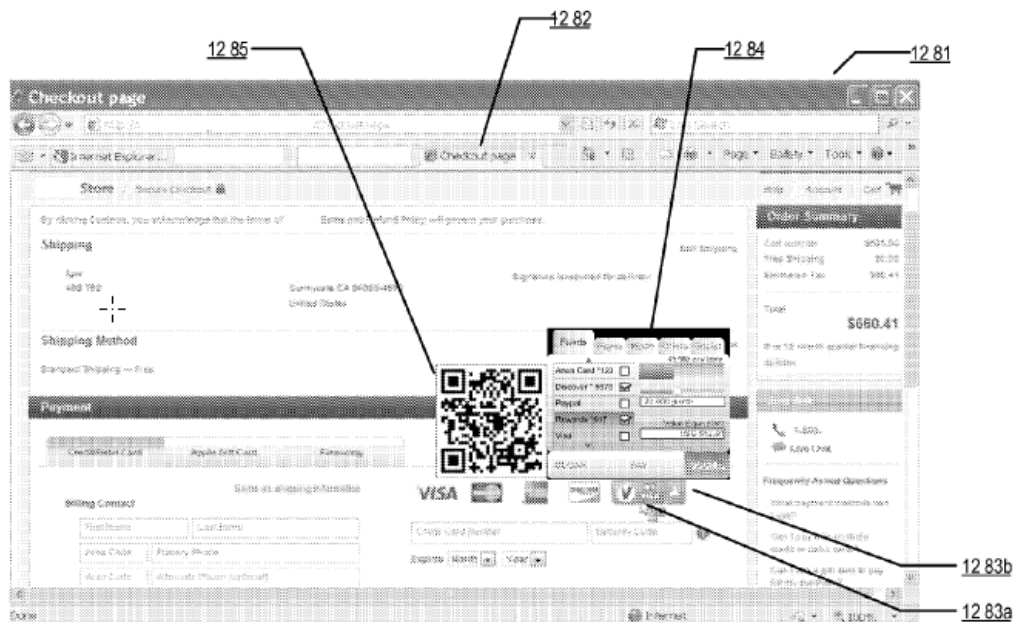


FIGURE 12F

Example: Virtual Wallet Application Embodiment - Snap Mode: Web

Figure 12F of Hammad depicts an aspect of the snap mode in the virtual wallet application of the SEWI. Ex. 1007 ¶ 19, Fig. 12D. As shown, the checkout webpage of an online shopping website 1282, displayed on a client browser 1281, can provide user interface element 1283a-b, whereby the user can indicate the desire to use snap mobile payment. *Id.* ¶ 161. “[I]f the user activates element [1283a], the website may generate a QR code using default settings of the user, and display the QR code . . . 1285[] on the screen of the client for the user to capture using the user’s mobile device . . . to initiate purchase transaction processing.” *Id.*

3. *Claim 1*

Petitioner provides limitation-by-limitation contentions for independent claim 1.⁴ Pet. 9–27. Petitioner also provides contentions concerning motivation to combine Poole and Hammad and reasonable expectation of success. *See id.* at 15–16, 19, 22–23, 26, 27.

Patent Owner contends Petitioner fails to establish limitations 1[d], 1[e], 1[g], 1[h], 1[k] and fails to show either motivation to combine Poole and Hammad or a reasonable expectation of success. PO Resp. 18–40.

We focus our analysis on limitations 1[d] and 1[f] because we find that Petitioner does not satisfy its burden to show that limitation 1[d] is taught by the combination of Poole and Hammad or that limitation 1[f] is taught by Poole alone. For ease of reference, we begin with a recitation of Petitioner’s undisputed contentions for the preamble of claim 1 and limitations 1[b] and 1[c].

1[a] (Preamble): A system for identifying available location-based services, the system comprising:

Petitioner contends that, to the extent the preamble is limiting, Poole discloses a system for identifying available location-based services with its description of “a ‘purchase assistance system’ that identifies available location-based services using ‘a plurality of sensors located in the store.’” Pet. 9–10 (citing Ex. 1003 ¶ 88; Ex. 1006 ¶¶ 10, 88).

1[b]: a mobile application executable on a mobile computing device operated by a user;

Petitioner contends that Poole discloses this feature with its description of “a customer assistance application (‘mobile application’)

⁴ For ease of reference, we refer to Petitioner’s claim limitation identifiers in our analysis.

executable on a customer device 222 (‘mobile computing device’) operated by a user.” Pet. 10 (citing Ex. 1003 ¶¶ 91–92; Ex. 1006 ¶ 33).

1[c]: a database storing one or more previously ordered services associated with the user, wherein the one or more previously ordered services are pending services that are not yet complete due to the services requiring an interaction of the user with a physical facility;

Petitioner contends that Poole discloses this feature with its description “that the database 314 (‘database’) stores a list of merchandise items 104 for purchase, where the list of merchandise items 104 for purchase is ‘a wish list, or a list of merchandise items 104 for future purchase’[] (‘previously ordered services’) of a customer (‘user’),” “includ[ing] a piece of clothing the user wants to try on within a facility before purchasing (‘interaction . . . with a physical facility’).” Pet. 10 (third alternation in original) (citing Ex. 1003 ¶¶ 94–96; Ex. 1006 ¶¶ 44, 80, 88).

1[d]: a machine-readable element generator associated with a local computing device and located within the physical facility, the machine-readable element generator configured to generate and display a machine-readable element that identifies types of services available to be performed at a location of the machine-readable element, wherein the one or more available types of services are location-based services capable of being performed at a location of the local computing device associated with the machine-readable element;

Petitioner contends that the Poole-Hammad combination discloses this limitation. Pet. 11 (citing Ex. 1003 ¶¶ 98–106). In particular, Petitioner asserts that “Poole discloses . . . sensors 214 (‘local computing device’) . . . located at different locations within aisles 102 (‘plurality of locations’) of a store 100 (‘facility’)” and “a barcode (‘a machine-readable element’) configured to provide location information used in initiating performance of one or more available ordered services.” *Id.* at 11–12 (citing Ex. 1003 ¶¶ 98, 99; 1006 ¶¶ 25, 94, Fig. 1). Petitioner further asserts that “Poole discloses

that the sensor 214 communicates information, such as a sensor identifier, to the customer device 220 that can be used by the customer device 220 to identify and/or locate the sensor,” and that “the ‘sensor identifier may be received by scanning a barcode associated with first sensor 214 using, for example, a barcode reader.’” *Id.* at 12 (citing Ex. 1003 ¶ 99; Ex. 1006 ¶¶ 32, 94).

Petitioner also asserts that Poole’s sensors can store and transmit sensor position information, can transmit information to a mobile application about services available to be performed at a barcode’s location, and can transmit information regarding merchandise items 103 near customer device 220, including goods available for pickup or purchase. Pet. 12–13 (citing Ex. 1003 ¶¶ 100, 101; Ex. 1006 ¶¶ 25, 31, 34, 88). Petitioner also argues that Poole discloses additional location-based services including: receiving payment authorization for a merchandise item, determining if merchandise item 104 is available elsewhere, preparing merchandise items for pickup from an aisle 102 or storage location 100, and placing merchandise items 104 at a delivery location in store 100 to allow customer 222 to pick them up. *Id.* at 13 (citing Ex. 1003 ¶ 101; Ex. 1006 ¶¶ 10, 69, 85).

Petitioner next contends that, to the extent Poole does not expressly disclose a machine-readable element generator as recited in this limitation, Hammad does. Pet. 13–15 (citing Ex. 1003 ¶ 102). In particular, Petitioner asserts that “Hammad discloses a machine-readable element generator associated with a point-of-sale terminal (‘local computing device’). . . , the machine-readable element generator . . . configured to generate and display a QR code 1285 (‘machine-readable element’).” *Id.* at 14 (citing Ex. 1003 ¶ 103; Ex. 1007 ¶ 161, Fig. 12F). Petitioner further asserts that “Hammad

discloses that ‘a display device of a point-of-sale terminal may be displaying a checkout screen, such as a web browser executing on a client . . . 1281, displaying a checkout webpage of an online shopping website . . . 1282,” and that “the website may generate a QR code using default settings of the user, and display the QR code . . . 1285[] on the screen of the client.” *Id.* (citing Ex. 1003 ¶ 103; Ex. 1007 ¶ 161).

Petitioner also asserts that “Hammad further discloses that the QR code (‘machine-readable element’) identifies types of services,” including “invoice/bill, coupon, money order, . . . product information, [and] purchase commands, . . . available to be performed at a location of the machine-readable element” or “at a location of the local computing device associated with the machine-readable element.” Pet. 14–15 (citing Ex. 1003 ¶ 104; Ex. 1007 ¶ 161). Petitioner adds that “Hammad discloses that ‘the merchant server may generate a QR code embodying the product information, as well as merchant information required by a payment network to process the purchase transaction,” and that “the QR code could include an invoice/bill, a coupon, a money order[,], . . . a new account information packet, product information, purchase commands, URL navigation instructions, browser automation scripts, combinations thereof, and/or the like.” *Id.* at 15 (alterations in original) (citing Ex. 1003 ¶ 104; Ex. 1007 ¶ 166). Petitioner also points to Hammad’s disclosure that “if the user activates element 1281a, the website may generate a QR code[,], . . . and display the QR code, e.g., 1285, on the screen of the client for the user to capture using the user’s mobile device,” where “the user may capture a snapshot of the QR code to initiate purchase transaction processing.” *Id.* (alterations in original) (citing Ex. 1003 ¶ 104; Ex. 1007 ¶ 161).

Petitioner contends that “a [person of ordinary skill in the art] would have been motivated to combine the machine readable element generator of Hammad with the sensors of Poole in order to provide greater flexibility in presenting location-based services to customers.” Pet. 15–16 (citing Ex. 1003 ¶¶ 77–83, 105). According to Petitioner, “[a] [person of ordinary skill in the art] would have understood that the QR code generated and displayed by Hammad would perform the same function as the barcode taught by Poole but would also allow for programmatic updates to the displayed code to accommodate new features and services,” and “[a] POSITA would have recognized that combining the machine-readable element generator of Hammad with the system of Poole would provide the predictable result of allowing the barcode to be updated to provide additional or different information to the mobile application, to enhance the user experience, and to increase sales.” *Id.* at 16 (citing Ex. 1003 ¶ 105).

1[f]: wherein the mobile application is configured to: scan and decode the machine-readable element, the machine-readable element providing the mobile application with an identity of the local computing device associated with the machine-readable element;

Petitioner contends that Poole discloses this feature with its description “that a customer device 220 may extract information regarding the sensors 214, such as a sensor identifier, by scanning a barcode associated with a sensor 214.” Pet. 20–21 (citing Ex. 1003 ¶ 118; Ex. 1006 ¶¶ 32, 94).

Patent Owner’s Contentions for Limitation 1[d] and Motivation to Combine and Petitioner’s Reply

Patent Owner argues that “for the same reasons as discussed . . . for claim limitation 1[g], Poole does not disclose . . . limitation [1d].” PO Resp. 28. For limitation 1[g], Patent Owner contends that “[i]n Poole, the barcode

provides the sensor identifier in a process of associating merchandise items with a sensor.” *Id.* at 18 (citing Ex. 1006 ¶¶ 93, 94).

For limitation 1[d], Petitioner replies that Patent Owner “ignores nearly six pages in the Petition discussing” discussing how Poole discloses this limitation. Pet. Reply 8. Petitioner also contends that Patent Owner ignores that “the Petition describes how Hammad also discloses this element.” *Id.*

Patent Owner next contends that an ordinarily skilled artisan would not have been motivated to combine Poole and Hammad “because the barcode of each is used fundamentally differently.” PO Resp. 32 (citing Ex. 2004 ¶¶ 179–184). Patent Owner contends that a customer in Poole desiring to purchase items has “already selected and saved [the items] in the customer’s shopping cart on the customer assistance application” and “can check out without scanning a barcode.” *Id.* at 32–33 (citing Ex. 1006 ¶ 78, Fig. 4; Ex. 2004 ¶ 181). According to Patent Owner, “Poole has no need for implementing a QR code or bar code to check out (as Hammad discusses) because it would add additional and unnecessary steps to Poole” and would render Poole “inoperable for its intended purpose to provide customers ‘with a fast and convenient, no hassle process to purchase merchandise at the customer’s favorite store.’” *Id.* at 33 (citing Ex. 2004 ¶¶ 181–184).

Petitioner replies that Poole’s “barcode is an alternative to the wirelessly transmitted code provided by the sensor to the mobile device in the Poole system.” Pet. Reply 15 (citing Pet. 13; Ex. 1003 ¶ 101; Ex. 1006 ¶ 34). Petitioner argues that Hammad’s “QR code similarly serves the purpose of initiating a purchase transaction . . . and adds to the system of Poole.” *Id.* Petitioner argues that “Poole discloses an architecture

(including the option of a barcode that [can] be scanned for one purpose), and Hammad discloses additional features (*e.g.*, a QR code that can be scanned to initiate performance of a service such as completing a purchase transaction).” *Id.* According to Petitioner, an ordinarily skilled artisan would have recognized the additional features of Hammad “as beneficial and feasible additions to the system of Poole.” *Id.* (citing Ex. 1003 ¶ 79).

Petitioner next contends the operation of both Poole and Hammad may be divided into two phases, *i.e.*, “a shopping or selection phase” and “a buying phase.” Pet. Reply 16. Petitioner contends that “[i]t is irrelevant whether the items are on a shopping cart on the mobile device or on the system” because “Hammad teaches that the purpose of scanning the QR code is to initiate performance of the service (*e.g.*, to initiate a purchase transaction) at the location where the user has presented themselves for checkout.” *Id.*

Patent Owner, in turn, contends that modifying Poole’s barcode with Hammad to allow greater functionality “would not be useful in Poole, as the sensor identifier that identifies the sensor in Poole would have no need to change.” Sur-reply 15 (citing PO Resp. 34–35; Ex. 2004 ¶¶ 185–188). Patent Owner further contends that if Petitioner is suggesting “add[ing] a programmable barcode to Poole to help the user check-out, this again does not cure the Petition’s deficiencies.” *Id.* According to Patent Owner, “Hammad contemplates the use of a QR generator that updates when the user’s settings change” while checkout in Poole is performed “solely on the mobile application using registered profile information stored in the mobile application or by creating a guest profile.” *Id.* at 15–16 (citing Ex. 1006 ¶¶ 78–81; Ex. 1007 ¶ 161).

Analysis

Petitioner’s articulated reason for combining the teachings of Poole and Hammad is that an ordinarily skilled artisan “would have understood that the QR code generated and displayed by Hammad would perform the same function as the barcode taught by Poole.” Pet. 15; Pet. Reply 15. Mr. Williams provides testimony to support this contention. Ex. 1003 ¶ 105.

Patent Owner disputes Petitioner’s contention and argues “the barcode of each is used fundamentally differently.” PO Resp. 32 (citing Ex. 2004 ¶¶ 179–184).

For the following reasons, we agree with Patent Owner that Poole’s barcode is used differently than Hammad’s QR code.

Petitioner directs us to paragraphs 32 and 94 of Poole in support of its contentions. Pet. 12, 20. Poole’s paragraph 32 provides:

Each sensor 214 may have a sensor identifier associated with sensor 214. The sensor identifier may be numeric or alphanumeric and may be used by merchant system 212, customer device 220, and/or financial services system 232 to identify and/or locate sensor 214. In some exemplary embodiments, the sensor identifier may be a Bluetooth identifier corresponding to sensor 214. In other exemplary embodiments, sensor identifier may include a Bluetooth profile associated with sensors 214. In yet other exemplary embodiments, sensor identifier may include a coordinate position of sensors 214 in store 100 relative to, for example, corner 108 (see FIG. 1).

Ex. 1006 ¶ 32. This paragraph discloses that Poole’s sensor identifier identifies and/or locates sensor 214, but is silent as to Poole’s barcode. *Id.*

Poole’s paragraph 94 describes, in part, process 900 illustrated in Poole’s Figure 9. Ex. 1006 ¶ 94. Figure 9 “shows an exemplary process of

inventory management in a store consistent with disclosed embodiments.”

Id. ¶ 23. Poole’s paragraph 94 provides:

As further illustrated in FIG. 9, process 900 may include a step 902 of receiving a sensor identifier associated with a first sensor 214. Sensor identifier may be received in many ways. In one exemplary embodiment, sensor identifier may be received by receiving a Bluetooth identifier of sensor 214 using a Bluetooth scanning or reading device. In another exemplary embodiment, sensor identifier may be received by scanning a barcode associated with first sensor 214 using, for example, a barcode reader. In another exemplary embodiment, each sensor 214 may be equipped with a RFID tag. Sensor identifier may be received accessing the RFID tag using, for example, an RFID tag reader to retrieve the sensor identifier stored in the RFID tag. In yet another exemplary embodiment, sensor identifier may be received by entering it using one or more I/O devices 304.

Id. As part of Poole’s inventory management process, Poole teaches receiving a sensor identifier by, *inter alia*, scanning a bar code. *Id.* Paragraph 94 does not teach that customer device 222 scans a bar code to receive a sensor identifier and, in fact, this paragraph fails to mention customer device 222. *See id.* Poole discloses that its store inventory management process may include receiving merchandise identifiers, “when a barcode associated with [a] merchandise item is scanned using, for example, a barcode reader.” *Id.* ¶ 97. Poole’s inventory management process illustrated in Figure 9 stores a “merchandise identifier and inventory information in association with [a] sensor identifier.” *Id.* at Fig. 9. Neither Figure 9 nor its associated description teach that customer device 222 scans a bar code to receive a sensor identifier or for any other reason. *Id.* ¶¶ 93–99, Fig. 9. In short, Poole’s barcode is used in an inventory management process, not by a customer to initiate a purchase transaction.

Poole discloses that “sensor 214 may include a Bluetooth low energy beacon, a radio frequency identification (RFID) tag, a wireless sensor, an electromagnetic wave transmitter and receiver pair, and/or any other type of device configured to detect the presence of a customer device.” Ex. 1006 ¶ 31. Poole further discloses that “sensor(s) 214 . . . may be configured to communicate to and/or through network 240 with other components, such as . . . customer device 220.” *Id.* Likewise, “[c]ustomer 222 may operate device 222 to communicate to and/or through network 240 with other components of system 200, such as sensor 214.” *Id.* ¶ 33. In an embodiment, “sensor 214 may detect the presence of customer device 220, when customer device 220 is in the vicinity of sensor 214” and “may transmit information regarding merchandise items 104 stored near customer device 220” and display merchandise items “to customer 222 on a display of customer device 220.” *Id.* ¶ 34. “Customer device 220 may communicate to and/or through network 240 . . . to complete purchase of the selected merchandise items 104.” *Id.*

Poole’s paragraph 34 does not teach that customer device 222 scans a bar code to “identif[y] types of services available to be performed at the location of the machine-readable element” as Petitioner asserts. *See* Pet. Reply 15. Rather, sensors 214 detect the presence of customer device 222 and transmit information regarding merchandise items to the customer device 222 which in turn communicates through network 240 to purchase selected merchandise items. Ex. 1006 ¶ 34.

Petitioner also argues that “Poole[’s] barcode is an alternative to the wirelessly transmitted code provided by the sensor to the mobile device in the Poole system.” Pet. Reply 15 (citing Ex. 1006 ¶ 34). This argument is

premised on a missing logical connection between two distinct processes in Poole. Paragraphs 32–34 describe the interaction of customer device 222 and sensors 214 to initiate a purchase transaction but make no mention of a barcode. Paragraph 94 of Poole describes an inventory management process but makes no mention of customer device 222 at all let alone customer device 222 scanning a barcode.⁵ Petitioner fails to cite to any disclosure in Poole linking these two processes. Pet. 12–13.

Hammad discloses “the website may generate a QR code using default settings of the user, and display the QR code, e.g., 1285, on the screen of the client.” Ex. 1007 ¶ 161, Fig. 12F. Hammad further discloses that “the user may capture a snapshot of the QR code to initiate purchase transaction processing.” *Id.* ¶ 161.

Based on the disclosure of Poole and Hammad, we find that Petitioner’s argument that an ordinarily skilled artisan “would have understood that the QR code generated and displayed by Hammad would perform the same function as the barcode taught by Poole” (Pet. 16) is not supported by the evidence of record. Poole does not teach that a user can initiate a purchase transaction by scanning Poole’s barcode. Poole discloses that a bar code on sensor 214 can be scanned to identify the sensor and that a

⁵ Petitioner states: “[t]o the extent that Poole does not expressly disclose a ‘machine readable element generator . . .’, Hammad does.” Pet. 13. To the extent that this statement can be construed as an argument that Poole alone satisfies limitation 1[d], Petitioner does not direct us to any disclosure that Poole teaches “a machine-readable element generator.” *See* Pet. 11–13. Petitioner relies on Poole’s disclosure in paragraph 94 of “scanning a bar code.” *Id.* at 12. Poole’s paragraph 94 does not address how the barcode is generated. Ex. 1006 ¶ 94. Consequently, we determine that Petitioner has not met its burden to show that Poole alone teaches “a machine-readable element generator” as recited in limitation 1[d].

bar code on a merchandise item is scanned to identify the merchandise item as part of the store inventory management process. Ex. 1006 ¶¶ 94, 97.

Petitioner, thus, does not persuade us that Hammad’s use of a QR code to initiate a purchase transaction is functionally equivalent to the use of Poole’s barcode.

Mr. Williams provides testimony that cites to the same evidence as the Petition and similarly concludes that Hammad’s QR code performs the same function as the barcode taught by Poole. Ex. 1003 ¶¶ 103–105. Because we find that Poole and Hammad themselves fail to support this conclusion, his testimony is unsupported and thus entitled to little, if any, weight.

Additionally, he testifies that Poole’s mobile application scans the bar code. *Id.* ¶ 118. His testimony that Poole’s mobile application scans the barcode, like the Petition, relies on paragraphs 32 and 94 of Poole. Although Poole describes its customer device 220 wirelessly receiving “a coordinate position” of sensor 214, Poole does not describe its customer device 220 receiving location information by scanning a barcode. Ex. 1006 ¶ 32. When Poole does describe using a barcode to convey sensor identifiers including location information for the sensor, it does so in the context of its description of inventory management, but not in connection with the customer’s use of customer device 220. *Id.* ¶¶ 94, 95. Consequently, Mr. Williams’s testimony on this point is entitled to little, if any, weight because it is not supported by paragraphs 32 and 94 of Poole.

Petitioner’s additional contentions (Pet. 15–16) that an ordinarily skilled artisan “would have been motivated to combine the machine readable element generator of Hammad with the sensors of Poole in order to provide greater flexibility in presenting location-based services to customers” and

that such a combination “would provide the predictable result of allowing the bar code to be updated to provide additional or different information to the mobile application, to enhance the user experience and to increase sales” are not supported by a rational underpinning in light of our finding that Hammad’s QR code does not perform the same function as Poole’s barcode. *KSR*, 550 U.S. at 418 (determining that obviousness requires “an apparent reason to combine the known elements in the fashion claimed by the patent at issue”). Consequently, Petitioner has not shown that the combination of Poole and Hammad teaches limitation 1[d].

Based on our finding, discussed above, that Poole’s Paragraphs 32 and 94 (or any portion of Poole cited by Petitioner) do not teach that customer device 222 scans a bar code to receive a sensor identifier, we find Poole does not teach that customer device 220 is configured to scan and decode a bar code, as Petitioner asserts for limitation 1[f]. Consequently, we determine that Petitioner has not met its burden to show that Poole discloses limitation 1[f].

Because we find Petitioner fails to establish that Poole alone or in combination with Hammad teaches limitations 1[d] and/or 1[f], we determine that Petitioner has not shown by a preponderance of the evidence that claim 1 is unpatentable over Poole and Hammad.

4. *Claims 2–7*

Claims 2–7 depend from claim 1. Ex. 1001, 10:30–53. Petitioner sets forth evidence and argument as to why Poole and Hammad allegedly render these claims unpatentable. Pet. 27–33.

We reviewed Petitioner's evidence and arguments and determine that the additional evidence and argument do not cure the deficiencies discussed above for claim 1.

We, thus, determine that Petitioner has not shown by a preponderance of the evidence that claims 2–7 are unpatentable over Poole and Hammad.

5. *Claims 8–13*

For independent claim 8, Petitioner largely relies on its contentions for various limitations of claim 1, adding that Poole not only discloses a system but also a method to use said system. Pet. 33–36.

Limitation 8[c] is substantially the same as limitation 1[d]. Ex. 1001, 9:50–59, 10:61–11:2. For this limitation, Petitioner relies on its contentions for limitation 1[d]. Pet. 34.

Limitation 8[d] recites, in part, “the machine-readable element decodable via a mobile application.” Ex. 1001, 11:4–5. For limitation 8[d], Petitioner relies on its contentions for limitations 1[d] and 1[f]. Pet. 34.

For the same reasons, discussed above for claim 1, Petitioner has not shown by a preponderance of the evidence that claim 8 is unpatentable over Poole and Hammad.

For dependent claims 9–13, Petitioner sets forth evidence and argument as to why these claims would have been unpatentable over Poole and Hammad. Pet. 36–37.

We reviewed Petitioner's evidence and arguments and determine that the additional evidence and argument do not cure the deficiencies discussed above for claim 8.

We, thus, determine that Petitioner has not shown by a preponderance of the evidence that claims 9–13 are unpatentable over Poole and Hammad.

6. *Claims 14–19*

For independent claim 14, Petitioner largely relies on its contentions for various limitations of claim 1, adding that Poole not only discloses a system and a method to use the system but also a computer readable medium to implement the system or method. Pet. 37–41.

Limitation 14[d] is substantially the same as limitation 1[d]. Ex. 1001, 9:50–59, 12:6–13. Limitation 14[d] also recites, in part, “the machine-readable element decodable via a mobile application.” *Id.* at 12:8–9. For this limitation, Petitioner relies on its contentions for limitation 1[d]. Pet. 38.

For the same reasons, discussed above for claim 1, Petitioner has not shown by a preponderance of the evidence that claim 14 is unpatentable over Poole and Hammad.

For dependent claims 15–19, Petitioner sets forth evidence and argument as to why these claims would have been unpatentable over Poole and Hammad. Pet. 39–41.

We reviewed Petitioner’s evidence and arguments and determine that the additional evidence and argument do not cure the deficiencies discussed above for claim 14.

We, thus, determine that Petitioner has not shown by a preponderance of the evidence that claims 15–19 are unpatentable over Poole and Hammad.

III. CONCLUSION

The outcome for the Challenged Claims in this proceeding is set forth in summary as follows:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/ Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1–19	103(a)	Poole, Hammad		1–19
Overall Outcome				1–19

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–19 of U.S. Patent No. 10,368,188 B2 have not been proven by a preponderance of the evidence to be unpatentable; and

FURTHER ORDERED that, as this is a Final Written Decision, a party seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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Patent 10,368,188 B2

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