

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.

IPR2022-01528
Patent 10,803,435 B2

Before PATRICK R. SCANLON, NEIL T. POWELL, and
MITCHELL G. WEATHERLY, *Administrative Patent Judges*.

POWELL, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. BACKGROUND

BJ's Wholesale Club Holdings, Inc. ("Petitioner") filed a Petition for *inter partes* review of claims 15–19 of U.S. Patent No. 10,803,435 B2 (Ex. 1001, "the '435 patent"). Paper 2 ("Pet."). Walmart Apollo, LLC ("Patent Owner") filed a Preliminary Response. Paper 8 ("Prelim. Resp."). Because Petitioner filed multiple other petitions challenging claims of the '435 patent, Petitioner also filed a Notice of Ranking Petitions for *Inter Partes* Review of U.S. Patent No. 10,803,435. Paper 7 ("Not."). With the Board's authorization, Petitioner filed a Reply to Patent Owner Preliminary Response (Paper 9, "Reply to Prelim. Resp."), and Patent Owner filed a Preliminary Sur-reply (Paper 10, "Prelim. Sur-reply").

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2021). To institute an *inter partes* review, we must determine that the information presented in the Petition shows "a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). For the reasons set forth below, we determine that the information presented in the Petition establishes a reasonable likelihood that Petitioner will prevail with respect to at least one challenged claim. We institute an *inter partes* review of claims 15–19 based on the grounds set forth in the Petition.

B. RELATED PROCEEDINGS

The parties note that the '435 patent is involved in *Sam's West, Inc. v. BJ's Wholesale Club Holdings, Inc.*, No. 6:22-cv-00587 (M.D. Fla. Mar. 22, 2022). Pet. 1; Paper 3, 1–2. Additionally, the parties note that claims of the

'435 patent have also been challenged in IPR2022-01561, IPR2022-01563, and IPR2022-01564. Pet. 1; Paper 3, 1. The parties also note that the '435 patent is related to U.S. Patent 10,121,133 B2, the claims of which have been challenged in IPR2022-01471. Pet. 1; Paper 3, 1. The parties also note that the '435 patent is related to pending U.S. Patent Application No. 17/004,819. Pet. 1; Paper 3, 1.

C. THE '435 PATENT

To obviate scanning items at a retailer's traditional cashier or self-checkout station, the '435 patent discloses using a mobile device for self-checkout of a purchased item. Ex. 1001, 1:19–21, 1:41–54. The '435 patent discusses an embodiment in connection with Figure 1B, which is reproduced below.

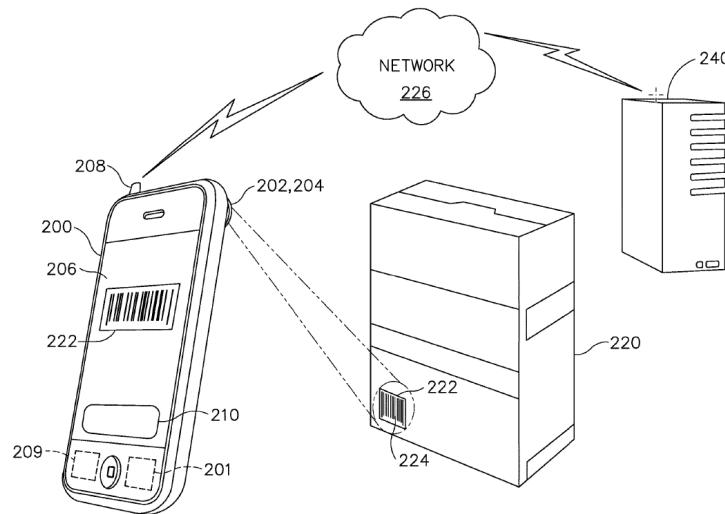


Fig.1B

Figure 1B shows mobile device 200 getting information from item 220 and communicating over network 226 with remote server 240. *Id.* at 2:44–47, 4:39–41, 5:30–33.

Mobile device 200 includes processor 201, scanning module 202, display 206, and communications device 208. *Id.* at 4:41–44, 4:52–53.

Scanning module 202 can receive item 220's identifying information 222 and convert it to a format readable by processor 201. *Id.* at 4:61–64.

Processor 201 is connected with communications device 208, which can communicate with remote server 240 via network 226. *Id.* at 4:54–60, 5:3–5.

In Figures 3–18, the '435 patent shows miscellaneous schematic illustrations of mobile device 200 executing a mobile self-checkout application. *Id.* at 2:55–58. Figure 3 is reproduced below.

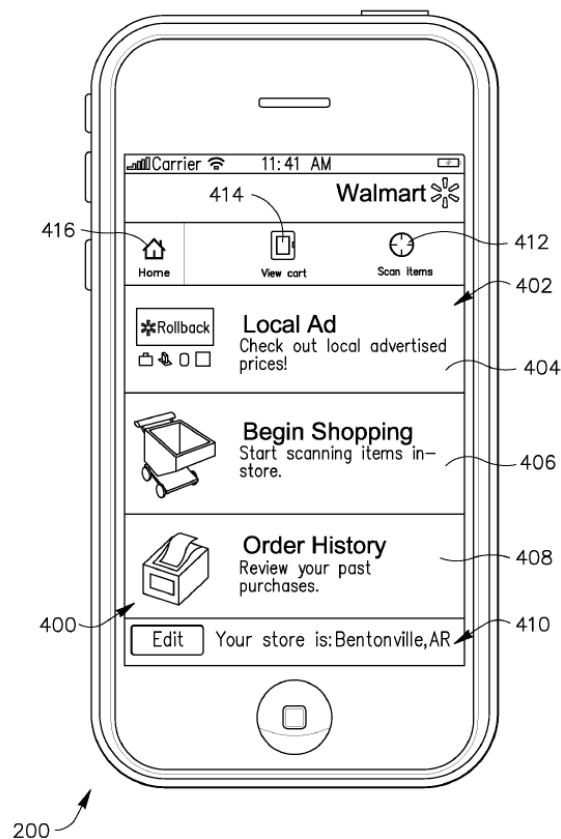


Fig.3

Figure 3 shows mobile device 200 with mobile self-checkout application 400 displaying home screen 402. *Id.* at 6:22–25.

Among other things, home screen 402 includes begin shopping button 406, “which allows the user to communicate his intention to begin

shopping.” *Id.* at 6:26–30. “[W]hen selected, the begin shopping button 406 presents the user with a shopping screen 418,” as shown in Figure 4, which is reproduced below. *Id.* at 7:17–19.

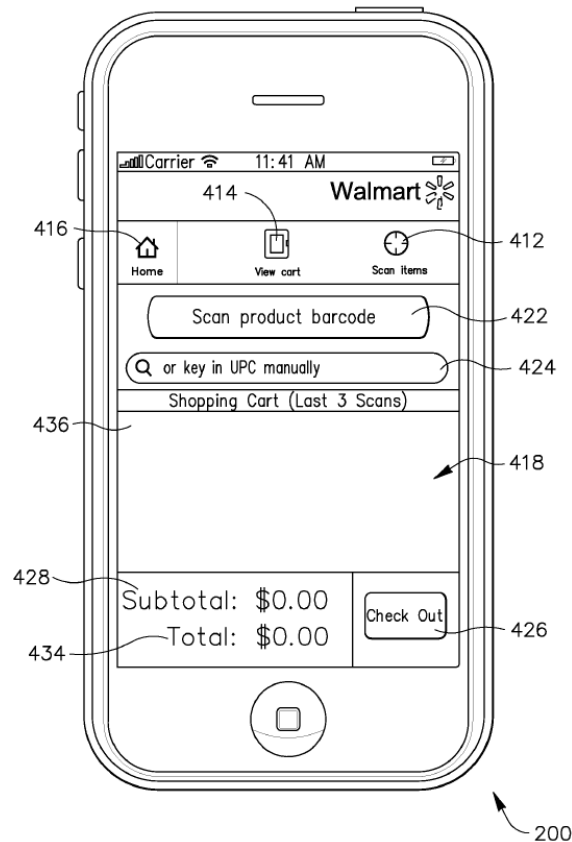


Fig.4

Figure 4 shows mobile device 200 displaying shopping screen 418, which presents various information and buttons. *Id.* at 7:17–23

Shopping screen 418 includes scan items button 412 and scan product barcode button 422. *Id.* at 6:49–53, 7:17–20, Fig. 4. Selecting either of these buttons activates scanning module 202 and displays scan item screen 420, as shown in Figure 5, which is reproduced below. *Id.* at 6:54–58, 7:23–26.

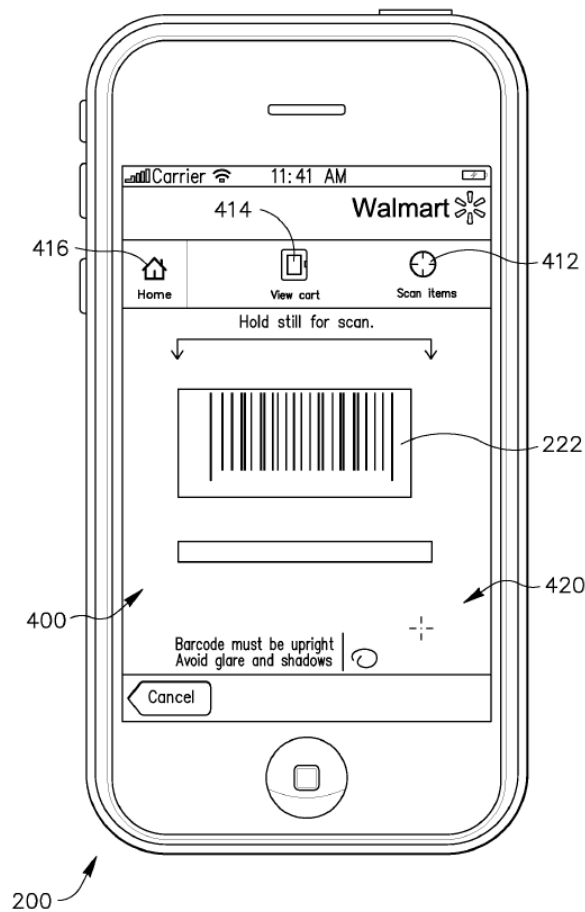


Fig.5

Figure 5 shows mobile device 200 with scan items screen 420 displayed. *Id.* at 6:54–56, 7:23–26.

Scan items screen 420 lets a user capture and enter item 220's identification information 222. *Id.* at 6:54–58. For example, a user can activate scanning module 202, which then receives item 220's identification information 222 and transforms it into a format that processor 201 can read and process. *Id.* at 7:64–8:2. Communications device 208 sends inputted identification information 222 to remote server 240. *Id.* at 8:7–11.

Then, remote server 240 may use identification information 222 to retrieve item information 432 that represents item 220, such as an item name, an item price and other item-related information. *Id.* at 8:11–19.

Remote server 240 may send item information 432 to mobile device 200. *Id.* at 8:20–22. Item information 432 may be displayed on mobile device 200, as shown in Figure 6, which is reproduced below. *Id.* at 8:20–25.

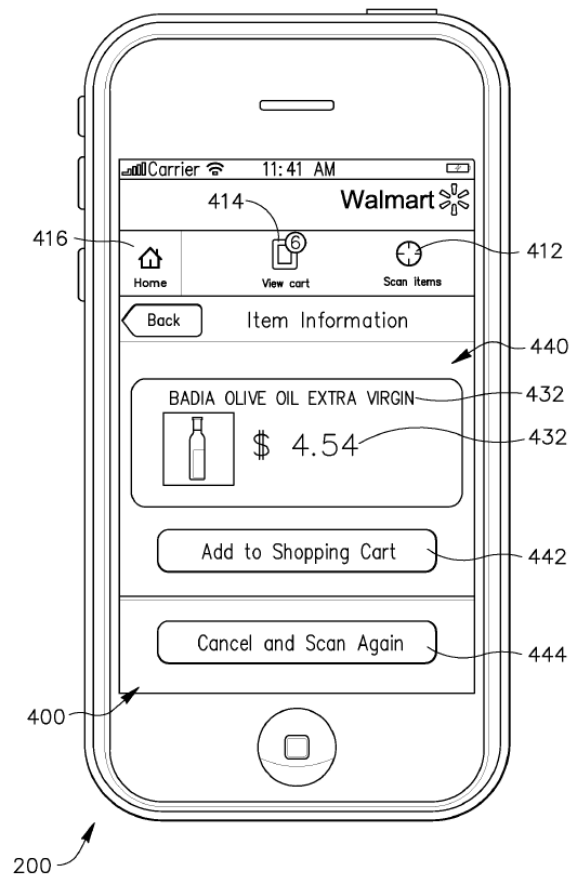


Fig.6

Figure 6 shows mobile device 200 with mobile self-checkout application presenting item information screen 440, which shows item information 432 for item 220. *Id.* at 8:22–25.

Among other options, item information screen presents an add to shopping cart button 442. *Id.* at 8:35–37. If the user verifies he or she wants to purchase item 220, mobile device 200 or remote server 240 may generate virtual shopping cart 433 with item information 432 for item 220. *Id.* at

8:63–9:8. Mobile device 200 may display virtual shopping cart 433, as shown in Figure 8, which is reproduced below. *Id.* at 9:43–50.

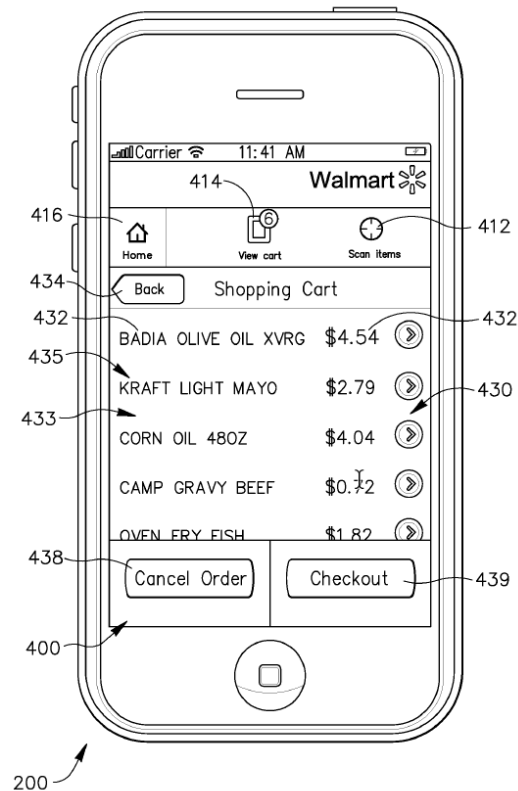


Fig.8

Figure 8 shows mobile device 200 with mobile self-checkout application 400 displaying shopping cart screen 430, which shows virtual shopping cart 433 and its contents 435. *Id.* at 9:40–49.

Shopping cart screen 430 provides a number of options, including the option to purchase, such as by selecting checkout button 439. *Id.* at 9:50–53. When the user elects to check out, “a total amount for all the contents of the virtual shopping cart 433 is calculated and an order 452 is generated” by mobile device 200 or remote server 240. *Id.* at 10:37–47.

After verifying accuracy of order 452 and an intent to buy, the user may choose to tender payment in various ways, including “via the mobile

device 200 using mobile self-checkout application 400 or providing payment at either a traditional cashier or self-checkout station.” *Id.* at 10:52–11:4.

Depending on which of these options the user elects, the cashier, the self-checkout station, mobile device 200, and/or mobile self-checkout application 400 interact with one another and server 240 in the payment process. *Id.* at 11:4–13:9. Once the user has paid, “virtual shopping cart 433 is then marked paid and a receipt is generated by the remote server 240, the traditional cashier, and/or the self-checkout station. The receipt is then provided to the user.” *Id.* at 12:30–37, 13:9–14.

D. ILLUSTRATIVE CLAIM

Of the challenged claims, claim 15 is independent. Each of claims 16–19 depends, directly or indirectly, from independent claim 15. Claim is illustrative and is reproduced below with certain reformatting:¹

15. [15p] A method of converting a mobile phone into a mobile point-of-sale device, the method comprising:

[15a] executing a mobile self-checkout application on the mobile phone, the mobile self-checkout application, allowing a user of the mobile phone to select items in a store and tender payment for the selected items via a user interface rendered by the mobile self-checkout application on a display of the mobile phone;

[15b] rendering the user interface on the mobile device by the mobile self-checkout application;

[15c] in response to selection of a scanning function via the user interface, activating an imaging device of the mobile phone to capture identification information associated with a physical object;

¹ We have added the same labels that Petitioner applies to different portions of claim 15. *See* Pet. 15–26.

- [15d] determining, by the mobile phone, item information associated with the physical object;
- [15e] generating, by the mobile phone, a virtual shopping cart to save the item information associated with the physical object;
- [15f] adding the item information of the physical object to the virtual shopping cart to maintain the order;
- [15g] receiving instructions via the user interface of the mobile self-checkout application to check out,
- [15h] retrieving, by the server, payment information to complete the transaction;
- [15i] completing, by the server, the transaction based on the payment information; and
- [15j] transmitting, by the server, a confirmation receipt to the mobile phone in response to completion of payment for the transaction.

Id. at 23:21–45.

E. EVIDENCE

Petitioner relies on the following evidence:

- (1) U.S. Patent No. 8,751,316 B1, issued June 10, 2014 (Ex. 1008, “Fletchall”).
- (2) Korean Patent Publication No. 10-2007-087811, published Aug. 29, 2007 (Ex. 1009, “Yong,” with translation at Exs. 1010, 1021).
- (3) U.S. Patent Application Publication No. 2009/0094100 A1, published Apr. 9, 2009 (Ex. 1011, “Xavier”).
- (4) U.S. Patent Application Publication No. 2009/0192892 A1, published July 30, 2009 (Ex. 1012, “Cason”).
- (5) U.S. Patent Application Publication No. 2010/0082444 A1, published Apr. 1, 2010 (Ex. 1013, “Lin”).
- (6) Declaration of Michael I. Shamos, Ph.D. (Ex. 1002).

F. ASSERTED GROUNDS OF UNPATENTABILITY

Petitioner challenges the patentability of claims 15–19 of the '435 patent on the following grounds (Pet. 13–14):

Claim(s) Challenged	35 U.S.C. §	Reference(s)
15	102	Fletchall
15	103	Fletchall, Lin
16	103	Fletchall, Lin, Yong
17	103	Fletchall, Lin, Cason
15	102	Yong
15, 16, 18, 19	103	Yong, Xavier
17	103	Yong, Xavier, Cason

II. ANALYSIS

A. LEVEL OF ORDINARY SKILL

Petitioner contends that

[a] person having ordinary skill in the art (“POSITA”) as of the claimed priority date would have had a Bachelor’s degree in computer science, computer engineering, electrical engineering, or a related field or equivalent coursework or experience, and one to two years of experience with mobile device applications and retail POS systems. (Shamos ¶ 34.) More education can supplement practical experience and vice versa. (*Id.*)

Pet. 12. Patent Owner does not dispute Petitioner’s description of a person of ordinary skill in the art. Prelim. Resp. 18. For purposes of deciding whether Petitioner has demonstrated a reasonable likelihood of prevailing, we adopt Petitioner’s definition of a person of ordinary skill in the art, which we find consistent with the '435 patent and the asserted prior art.

B. CLAIM CONSTRUCTION

In an *inter partes* review proceeding, a claim of a patent is construed using the same standard used in federal district court, including construing the claim in accordance with the ordinary and customary meaning of the claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b) (2020). According to the applicable standard, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc) (citations omitted). Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. America Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Asserting that “[i]n the Challenged Claims, only one term requires an express construction,” Petitioner proposes a construction for the claim language “virtual terminal sales application.” Pet. 14–15. Patent Owner argues that we need not construe any claim language expressly to deny the Petition. Prelim. Resp. 17. We do not find express construction of any claim language necessary to resolve whether to institute *inter partes* review.

C. FLETCHALL-BASED GROUNDS

1. *Alleged Anticipation by Fletcher*

a) *Overview of Fletcher*

Fletcher relates to a system and method involving a user employing a mobile device when buying a product in a retail store. Ex. 1008, 1:23–46. In addition to the mobile device, “[t]he system includes a product database

accessible based on a reference of the retail store to store product information of the product indexed by a product identifier of the product and provide the product information based on the product identifier of the product.” *Id.* at 1:33–38. The mobile device has a product scanner operable to acquire a product identifier of the product. *Id.* at 1:38–40. The mobile device also includes a mobile point-of-sale (POS) application configured to interact with the product scanner and the product database to obtain product information based on the retail store’s reference and the product identifier. *Id.* at 1:38–46. Fletchall explains that

[t]he method steps include obtaining a reference of the retail store using a mobile device of the user, accessing a product database for the retail store based on the reference of the retail store, obtaining, in the retail store, a product identifier of the product using the mobile device, retrieving product information from the product database based on the product identifier; and displaying the product information on the mobile device.

Id. at 1:24–31.

Fletchall shows an exemplary system in Figure 1. *Id.* at 1:64–65. Figure 1 is reproduced below.

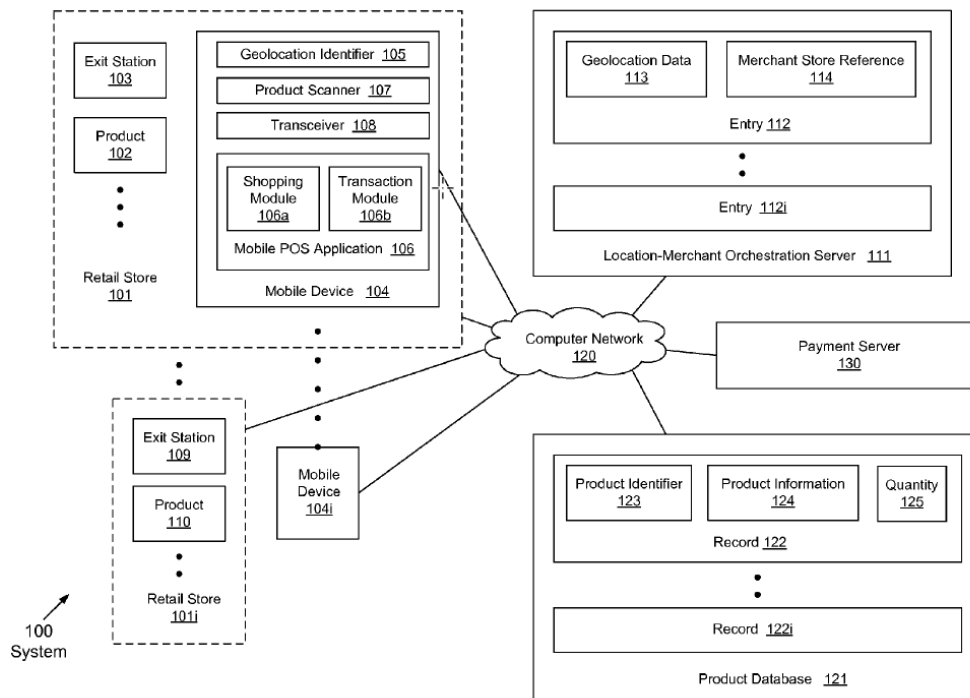


FIG. 1

Figure 1 shows system (100), which “includes one or more retail stores (101, 101*i*), one or more mobile devices (104, 104*i*), a location-merchant orchestration server (111), a product database (121), and a payment server (130).” *Id.* at 2:40–43. Fletchall explains that “[t]he modules shown in FIG. 1 may be omitted, repeated, and/or substituted among different embodiments of the invention. Accordingly, embodiments of the invention should not be considered limited to the specific arrangements of modules shown in [Figure] 1.” *Id.* at 2:35–39.

Computer network (120) may couple the components of system (100), such that system (100)’s components may use known protocols to communicate with one another. *Id.* at 2:43–48. “[C]omputer network (120) may include the Internet, enterprise Intranet, mobile phone service provider network, the public switched telephone network (PSTN), etc.” *Id.* at 2:53–56.

Mobile device (104) “includes a geolocation identifier (105), a product scanner (107), a transceiver (108), and a mobile POS application (106) having a shopping module (106a) and a transaction module (106b).” *Id.* at 5:48–52. Transceiver (108) is adapted to communicate via computer network (120) “with the location-merchant orchestration se[r]ver (111), the product database (121), the payment server (130), and/or other components of the system (100).” *Id.* at 3:59–64.

In one or more embodiments, in response to a user command when entering retail store (101), mobile POS application (106) may trigger geolocation identifier (105) to acquire mobile device (104)’s location, which represents retail store (101)’s location. *Id.* at 6:55–62. Mobile POS application (106) may transmit the geolocation data to location-merchant orchestration server (111) to acquire retail store (101)’s merchant store reference (114). *Id.* at 7:14–18.

When product (102) interests the user, the user may use mobile POS application (106) to activate product scanner (107) and acquire a product ID for product (102). *Id.* at 8:6–21. Using merchant store reference (114) and product (102)’s product ID, mobile POS application (106) may obtain product information (124) from product database (121). *Id.* at 8:39–58. Mobile POS application (106)’s shopping module (106a) may show product information (124) on mobile device (104). *Id.* at 9:1–3. Mobile POS application (106)’s transaction module (106b) may be adapted to

- (i) send payment information of the user to the payment server (130) for executing a payment of the purchase; (ii) provide an electronic receipt (not shown) to the mobile device (104) based on the executed payment; (iii) notify the product database (121) to adjust inventory information reflecting the purchase; and

(iv) interact with the exit station (103) for payment confirmation when exiting the retail store (101).

Id. at 9:17–25.

Fletchall discusses an example shopping experience in connection with Figure 3A, which is reproduced below.

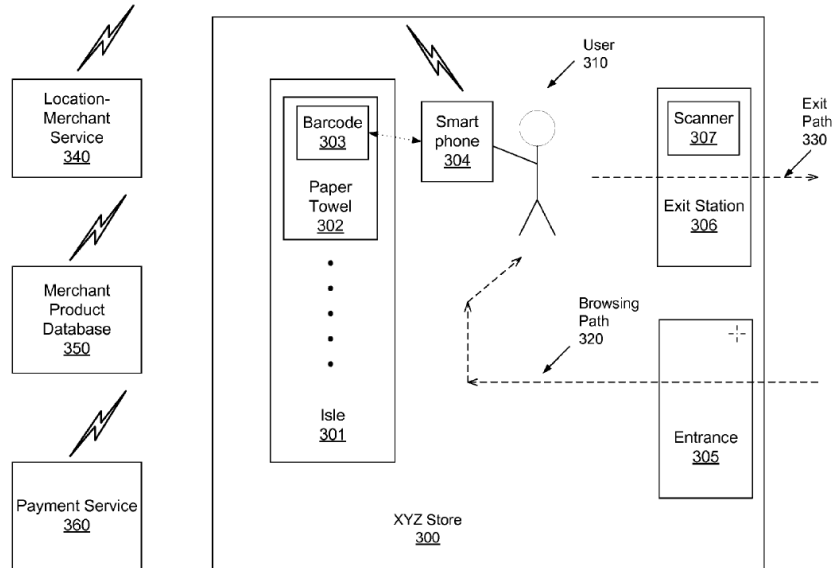


FIG. 3A

Figure 3A shows user (310) with smart phone (304) in XYZ store (300).

Id. at 12:52–58.

When going into XYZ store (300), user (310) starts the mobile POS application, which uses smart phone (304)'s GPS sensor to acquire GPS coordinates. *Id.* at 12:54–58. Employing location-merchant service (340), the mobile POS application matches the smartphone's position to “that of the merchant operating the XYZ store (300).” *Id.* at 12:61–64. “The location-merchant service (340) is a web service hosted on a location-merchant orchestration server (e.g., location-merchant orchestration server (111) described above in reference to FIG. 1).” *Id.* at 12:12–15.

Having matched smart phone (304)'s location to XYZ store (300)'s location, the mobile POS application “connects to that merchant’s product database (350).” *Id.* at 12:61–65. Fletchall explains that

[t]he merchant product database (350) is a database containing product information Such as price and product description. The merchant product database (350) can be updated by the merchant operating the XYZ store (300) allowing customers (e.g., the user (310)) to instantly have the most up-to-date listings of products (e.g., paper towel (302)). The merchant product database (350) may be essentially the same as the product database (121), discussed above in reference to [Figure] 1.

Id. at 12:21–29.

“When the user (310) wishes to checkout, payment information may be entered into the smart phone (304) and submitted to the merchant through the payment service (360).” *Id.* at 13:9–11. When the payment is executed, an electronic receipt may be produced and supplied to smart phone 304. *Id.* at 13:13–16. Fletchall explains that “[t]he payment service (360) may be essentially the same as the payment server (130) discussed above in reference to [Figure] 1.” *Id.* at 12:45–47.

b) Discussion

Petitioner argues that “Fletchall discloses each and every element of Claim 15.” Pet. 15. Petitioner then explains in detail which disclosures of Fletchall allegedly disclose each of claim 15’s limitations. *Id.* at 15–27. Petitioner also cites Dr. Shamos’s testimony, in which Dr. Shamos details which disclosures of Fletchall he believes disclose each of claim 15’s limitations. Pet. 15–27; Ex. 1002 ¶¶ 148–215.

Patent Owner argues that Petitioner does not demonstrate Fletchall anticipates claim 15. Prelim. Resp. 31. According to Patent Owner

“Fletchall’s teachings do not align with Petitioner’s allegation that certain components are ‘the same server.’” *Id.* at 31–32.

As discussed below in Sections II.D and III, we determine Petitioner’s Yong-based grounds demonstrate a reasonable likelihood of establishing unpatentability of claim 15, and we institute *inter partes* review. Whether the combination of limitations presented in claim 15 is anticipated by Fletchall is a fact-intensive question best resolved on a fuller record developed during trial.

2. *Alleged Obviousness Based on Fletchall and Other Prior Art*

Petitioner argues that claim 15 would have been obvious over Fletchall and Lin. Pet. 27–28. In doing so, Petitioner cites Lin for allegedly disclosing “adding items and saving the added items as an order before checkout.” *Id.* at 27 (citing Ex. 1013 ¶ 133, Fig. 9; Ex. 1002 ¶ 221). Petitioner argues that “[i]t would have been obvious to a [person of ordinary skill in the art] to maintain an order of the added item information in a virtual shopping cart of Fletchall as taught by Lin.” *Id.* at 27.

Petitioner also argues that claim 16 would have been obvious over Fletchall, Lin, and Yong. *Id.* at 28–36. In doing so, Petitioner cites Yong for “teach[ing] transferring virtual shopping cart information (a shopping list) from a mobile phone to a remote server at checkout.” *Id.* at 34. Petitioner argues that “[i]t would have been obvious to a [person of ordinary skill in the art] to transfer a shopping list to checkout, as taught by Yong, to the [virtual terminal sales application] on the server disclosed in the Fletchall-Lin combination.” *Id.* at 35.

Additionally, Petitioner argues that claim 17 would have been obvious over Fletchall, Lin, and Cason. *Id.* at 36–40. In doing so, Petitioner argues that “[t]he Fletchall-Lin combination does not expressly teach determining whether an order exists on a [virtual terminal sales application], but Cason teaches determining whether an instance of an order (such as a stored shopping cart) exists.” *Id.* at 37. Petitioner argues that “[f]ollowing the teaching of Cason, it would have been obvious to a [person of ordinary skill in the art] to determine whether an order exists on the [virtual terminal sales application] in the Fletchall-Lin combination.” *Id.* at 38.

Patent Owner takes issue with Petitioner’s understanding of Fletchall. Prelim. Resp. 31–39. Like the question of whether Fletchall discloses the limitations of independent claim 15, the relationship between Fletchall’s disclosures and the limitations of claims 15–19 involves fact-intensive questions best resolved on a fuller record developed during trial.

Patent Owner also argues that “Yong should not be considered as prior art.” *Id.* at 2. For the reasons discussed below in Section II.D.1, Petitioner has supported Yong’s prior art status sufficiently for purposes of institution.

D. YONG-BASED GROUNDS

1. *Whether Yong Should Be Considered as Prior Art*

Identifying Exhibit 1009 as “Korean Patent Pub. No. KR 10-2007-0087811 to Yong” (Pet. vii), Petitioner asserts that “Yong . . . constitutes prior art against the ’435 Patent under 35 U.S.C. § 102(b) (pre-AIA)” (*id.* at 10). The Petition identifies Exhibit 1010 as a “Certified English Translation of Korean Patent Pub. No. KR 10-2007-0087811 to

Yong” and Exhibit 1021 as “Yong English Annotated Drawings Figures 1-11.” *Id.* at vii, viii. The Petition explains that

[c]itations in this Petition to Ex. 1010 in Yong refer to Yong’ s specification in the certified English translation of the application text (Ex. 1010) as supported by the published Korean application (Ex. 1009). Drawing citations to Yong in this Petition refer to the Figures found in the published Korean application (Ex. 1009) with translations of text therein found in Ex. 1010. An annotated of copy of the Yong figures is provided in Ex. 1021 that incorporates the certified text translation of Ex. 1010 into the Yong figures in Ex. 1009.

Id. at 10 n.2. Exhibit 1010 includes a “VERIFICATION OF TRANSLATION,” which is signed by Hyunjoo Kim and states

I, Hyunjoo Kim, a staff of WeThePeople IP & Law Firm, of 6th Floor, Chinyang Bldg., 47 Kyonggidae-ro, Seodaemun-gu, Seoul 03752, REPUBLIC OF KOREA, do hereby declare that I am well acquainted with the English and Korean languages and I hereby certify that, to the best of my knowledge and belief, the attached is a true, correct and accurate translation of Korean Patent Publication No. 10-2007-0087811, that was filed on December 15, 2005, entitled ‘System for Commercial Trading Using Mobile Telecommunication Network and Method Thereof’.

Ex. 1010, 100.

Patent Owner contends that “Yong should not be considered as prior art based on numerous issues that call into question Yong’s origin, authenticity, and translation accuracy.” Prelim. Resp. 2. Patent Owner argues that “the Yong grounds fail to meet the 35 U.S.C. § 314(a) standard for institution,” contending that “[i]t is Petitioner’s burden to prove the prior art status of the references that it relies on in its Petition for institution to be granted.” *Id.* at 19 (citing *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential)

(“*Hulu*”). Patent Owner also argues that Petitioner’s allegedly deficient evidence of Yong’s status raises efficiency concerns warranting discretionary denial of institution. *Id.*

According to Patent Owner, Petitioner has not authenticated Yong. *Id.* 19–23. Arguing that Petitioner “provides no information regarding the origin of [Exhibit] 1009,” Patent Owner asserts that “[Exhibit] 1009 is not a certified copy of Yong obtained from the Korean Intellectual Property Office (KIPO) or other official document that would be self-authenticating.” *Id.* at 20. Patent Owner also impugns Yong’s authenticity by pointing to Exhibit 2001, which Patent Owner calls “KIPO Yong” and contends is “publication number 10-2007-0087811 from the Korean Intellectual Property Office (KIPO).” *Id.* Patent Owner argues that KIPO Yong differs from Yong in many ways, including page count, location of certain content, and differences in the documents’ first page content. *Id.* at 20–23. Patent Owner argues that “[b]ecause the documents differ without explanation, Petitioner has not shown that [Yong] is an authentic copy of the original Korean Patent Publication No. 10-2007-087811.” *Id.* at 20.

Patent Owner also argues that Petitioner improperly relies on Yong without meeting 37 C.F.R. 42.63(b)’s requirement for “a translation of the document into English and an affidavit attesting to the accuracy of the translation.” Prelim. Resp. 23–31. Contrary to Petitioner’s contention, “[Exhibit] 1010 is not a translation of [Yong],” Patent Owner argues. *Id.* at 24. Noting that Exhibit 1010 lacks translated Figures, Patent Owner argues that Petitioner’s submission of translated Figures in Exhibit 1021 does not remedy the problem. *Id.* at 24. Patent Owner argues that Exhibit 1021 “is not subject to the translator verification . . . of [Exhibit]

1010” and “inconsistently deals with the Korean characters that appear in [Yong].” *Id.* Additionally, Patent Owner identifies certain differences between the appearance of Exhibit 1021’s and Yong’s Figures, which purportedly “cast[s] further doubt regarding the correspondence of the [Exhibit] 1010 alleged translation of [Yong].” *Id.* at 25–27. Patent Owner also alleges certain differences between Exhibit 1010 and Yong, including differences in the documents’ first-page content and differences in the location of certain content within the documents. *Id.* at 27–29.

Patent Owner also argues that Petitioner does not meet Rule 42.63(b)’s requirement for “an affidavit attesting to the accuracy of the translation” of Yong. *Id.* at 29–31. Patent Owner explains that Exhibit 1010’s “‘VERIFICATION OF TRANSLATION’ . . . is not an affidavit” in accordance with our Rules. *Id.*

In its Reply, Petitioner avers that Yong “is a true and accurate copy of what was published by the Korean Intellectual Property Office (‘KIPO’) in 2007.” Reply to Prelim. Resp. 1. Petitioner argues it supplied “evidence within the ambit of Federal Rule of Evidence 901 that [Yong] is an authentic copy.” *Id.* at 3. Petitioner explains that Exhibit 1010 “was accompanied by a certification that it is a ‘true, correct and accurate translation of Korean Patent Publication No. 10-2007-087811’ . . . , which bears a KIPO logo on its face page and the publication number 10-1007-087811 in multiple locations.” *Id.* Petitioner also argues that none of the issues Patent Owner alleges rises to a level justifying denial of the Petition. *Id.* at 2. Petitioner offers that, given an opportunity, it can provide additional evidence and explanation addressing Patent Owner’s concerns. *Id.* at 2–3. Petitioner also faults Patent Owner for disputing Petitioner’s evidence based on KIPO Yong

without providing a translation of KIPO Yong. *Id.* at 3–4. Petitioner contends that Patent Owner’s omission of a translation of KIPO Yong fails to comply with Rule 42.63(b). *Id.* at 4.

Patent Owner responds that “Petitioner’s case must be spelled out pre-Institution. The Petition fails to meet the § 314(a) Institution standard, and Petitioner’s hide-the-ball tactics are further cause for a discretionary denial.” Prelim. Sur-reply 2. Patent Owner reiterates the concerns it raised in the Preliminary Response, arguing that Petitioner’s Reply failed to even discuss many of these issues. *Id.* at 2–5. Additionally, Patent Owner argues that “Petitioner’s negligence in presenting its case” prejudices Patent Owner by usurping one of Patent Owner’s only two opportunities to present its case “in (1) the [Preliminary Response] and (2) the Patent Owner Response.” *Id.* at 5.

Weighing the arguments and evidence, we determine that Petitioner has met its burden under 35 U.S.C. § 314 of demonstrating a reasonable likelihood that Yong qualifies as prior art. *Hulu* at 13. As Petitioner asserts, the KIPO logo and the multiple instances of publication number 10-2007-0087811 on Yong’s first page provide some evidence of authenticity. Ex. 1009, 1; Reply to Prelim. Resp. 3.

Additionally, KIPO Yong tends to show that Yong constitutes an authentic version of Korean Publication No. 10-2007-0087811. Yong’s and KIPO Yong’s Figures appear substantially the same. *Compare* Ex. 1009, 42–48, *with* Ex. 2001, 28–33. Additionally, the content starting on page 2 of Yong, where Patent Owner contends “claims appear to be present,” closely resembles the content starting on page 11 of KIPO Yong, which Patent Owner posits “may be claims.” Prelim. Resp. 21, 29; Ex. 1009, 2–30; Ex.

2001, 11–27. Consistent with Patent Owner’s observations, these portions of Yong and KIPO Yong appear to present claims. Specifically, these sections of Yong and KIPO Yong each appear to present exactly 140 claims. Ex. 1009, 2–30; Ex. 2001, 11–27. These sections share a number of other similarities, also. For example, in both Yong and KIPO Yong, in the midst of Korean characters, what appears to be claim 69 recites “POS.” Ex. 1009, 16; Ex. 2001, 19. Similar commonalities appear numerous places within these portions of Yong and KIPO Yong. Ex. 1009, 2–30; Ex. 2001, 11–27.

The similarities between Yong and KIPO Yong tend to show that Yong is an authentic version of Korean Publication No. 10-2007-0087811 and has the same substantive content as KIPO Yong, just formatted and arranged differently. This is not significantly undermined by Patent Owner’s observations about certain differences between the documents, especially in the absence of a translation of KIPO Yong, which would have facilitated comparing the documents’ content. Indeed, considering Patent Owner’s omission of a translation of KIPO Yong, Patent Owner’s complaints of prejudice and “Petitioner’s hide-the-ball tactics” ring hollow. Prelim. Sur-reply 2, 5.

Although we agree with Patent Owner that Petitioner has not yet met the requirements of Rule 42.63(b) for the translation of Yong, we do not find it warranted to deny institution on this basis. Instead, we treat Patent’s Owner’s pre-institution arguments that Petitioner fails to comply with Rule 42.63(b) as evidentiary objections. If Patent Owner wishes to preserve its objections, Patent Owner must formally object to Petitioner’s evidence after institution of *inter partes* review by this Decision.

2. *Alleged Anticipation by Yong*

a) *Overview of Yong*

Yong discloses

a commercial transaction system and a commercial transaction method using a mobile communication network in which a mobile communication terminal that has already been widely distributed to consumers may be linked to a conventional POS system of a retail store.

Ex. 1010, 3.² Yong shows a commercial transaction system in Figure 1.

Id. at 12. Figure 1 is reproduced below.

FIG. 1

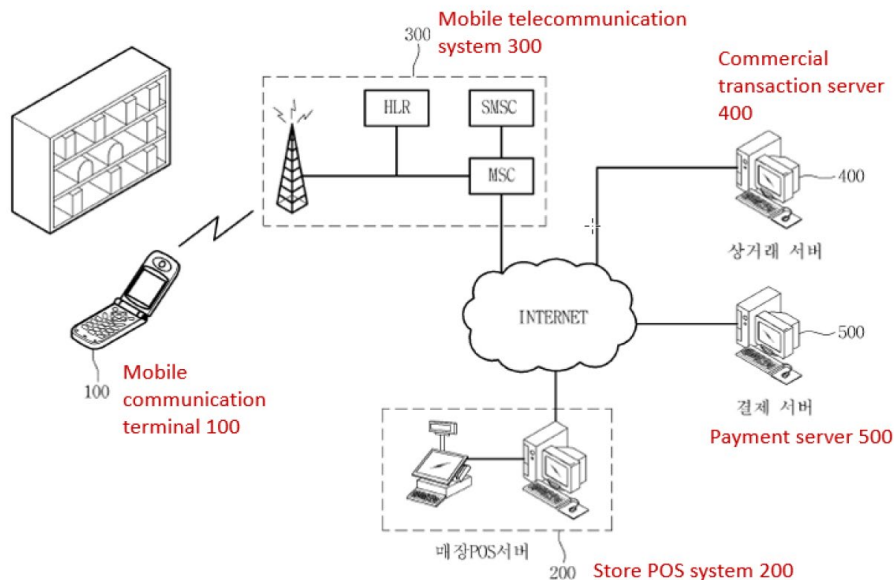


Figure 1 shows a commercial transaction system that includes “a mobile communication terminal 100, a store POS system 200, and a mobile telecommunication system 300.” Ex. 1010, 12; Ex. 1021, Fig. 1. “More preferably, a commercial transaction server 400 and a payment server 500 may be further included.” Ex. 1010, 12; Ex. 1021, Fig. 1.

² When discussing Yong’s disclosure, we cite to the translation in Exhibits 1010 and 1021.

Yong shows one embodiment of mobile communication terminal 100 in Figure 2. Ex. 1010, 12; Ex. 1021, Fig. 2. Figure 2 is reproduced below.

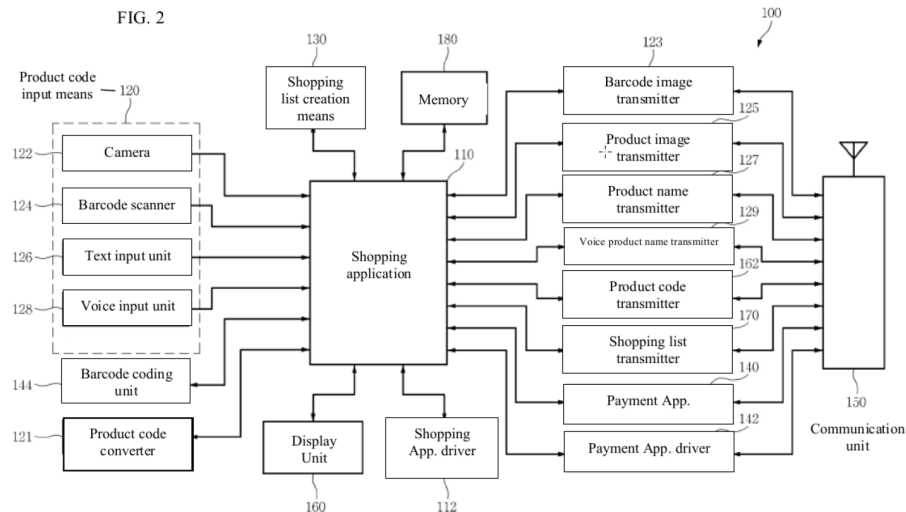


Figure 2 shows mobile communication terminal 100 having “a product code input means 120, a shopping list creation means 130, a shopping list transmitter 170, a shopping application 110, and a payment application 140.” Ex. 1010, 12; Ex. 1021, Fig. 2.

“[P]roduct code input means 120 serves a function of recognizing a product code (mc_code) of a product to be purchased.” Ex. 1010, 12.

Product code input means 120 may use different approaches to extract the product code (mc_code). *Id.* at 13. For example,

in an embodiment where the product code (mc_code) is extracted by photographing a barcode image, the product code input means 120 is configured including the camera 122 for photographing a barcode image (b-code image) and a product code converter 121 for decoding the barcode image (b-code image) into a product code (mc_code).

Id. at 13.

“The shopping list creation means 130 serves a function of creating a shopping list by storing the product code (mc_code) input through the

product code input means 120.” *Id.* at 17–18. “The shopping list is a table” that stores the product codes (mc_code) that have been selected in “a memory or the like.” *Id.* at 18.

Mobile communication terminal 100 preferably also includes display unit 160. Ex. 1010, 18; Ex. 1021, Fig. 2. Display unit 160 may show “a product name (mc_name: 164) corresponding to the product[] code (mc_code) input through the product code input means, and a product code (mc_code) included in the shopping list (shopping_list: 166).” Ex. 1010, 18. Along with the product name (mc_name), display unit 160 may show “a product price (mc_price) and an accumulated product price (mc_price: 168) of the products included in the shopping list (shopping_list).” *Id.* Yong explains that

[i]n order for the mobile communication terminal 100 to display the product name (mc_name) and the product price (mc_price), a product database 240, 440 including product names and product prices of products corresponding to the product codes (mc_code) should be searched. Three embodiments may be possible depending on the implementation location of the product database, for example, the mobile communication terminal 100, the commercial transaction server 400, and the store POS server 200.

Id. at 18–19. For example,

in an embodiment in which the mobile communication terminal 100 retains the product information, the store POS server 200 further includes a product database 240 for storing product codes (mc_code) of products, including products being sold in the retail store, and product names (mc_name) and/or product prices (mc_price) corresponding thereto, and the mobile communication terminal 100 accesses the store POS server 200 through a communication network to receive product data including the product names (mc_name) and/or the product prices (mc_price), stores it in the memory 180, and displays a

product name (mc_name) and/or a product price (mc_price) corresponding to the product code (mc_code) input through the product code input means 120 by retrieving the product name and the product code from the memory 180.

Id. at 19. In another example,

in an embodiment in which the mobile communication terminal 100 retrieves the product information from the commercial transaction server 400, the mobile communication terminal 100 further includes a product code transmitter 162 for transmitting the product code input through the product code input means to the mobile communication network, and the commercial transaction system further includes . . . a commercial transaction server 400 accessible to the mobile communication network 300 and including a product database 440 for storing the product codes (mc_code) of products, including products being sold in the retail store, and the product names (mc_name) and/or the product prices (mc_price) corresponding thereto; and a product retrieval unit 432 for transmitting, to the mobile communication terminal 100, a product name (mc_name) and/or a product price (mc_price) corresponding to the product code (mc_code) received from the mobile communication terminal 100 through the mobile communication network 300.

Id. at 19–20.

Mobile communication terminal 100 may retrieve product information from commercial transaction server 400 or from store POS server 200.

Id. at 20–21. For example, in certain embodiments, in order to retrieve produce information from commercial transaction server 400,

the mobile communication terminal 100 may transmit the store ID (mart_ID) together with the product code when the product code (mc_code) is transmitted, and the product retrieval unit 432 of the commercial transaction server 400 may select the product database (441, 442, 443) corresponding to the transmitted store ID (mart_ID) to retrieve the product name (mc_name) and/or the product price (mc_price).

Id. at 20–21. As another example,

in an embodiment in which the mobile communication terminal 100 retrieves the product information from the store POS server 200, the mobile communication terminal 100 further includes a product code transmitter 162 for transmitting the product code (mc_code) input through the product code input means 120 to the store POS server 200, and the store POS server 200 further includes a product database 240 for storing the product codes (mc_code) of products, including products being sold in the retail store, and the product names (mc_name) and/or the product prices (mc_price) corresponding thereto; and a product retrieval unit 232 for transmitting, to the mobile communication terminal 100, a product name (mc_name) and/or a product price (mc_price) corresponding to the product code (mc_code) received from the mobile communication terminal 100.

Id. at 21.

Mobile communication terminal 100's shopping list transmitter 170 "serves a function of transmitting the shopping list (shopping_list) created by the shopping list creation means 130 to the store POS server 200." *Id.* at 23. "[S]hopping list transmitter 170 may transmit the shopping list (shopping_list) through any one of the mobile communication network 300, WiBro, wireless LAN, Bluetooth, ZigBee, IrDA, and the like, or a data cable." *Id.*

"[P]ayment application 140 serves a function of making a payment according to the shopping list (shopping_list) using the mobile communication network 300." *Id.* at 25. "[P]ayment application 140 accesses a payment server 500 used for normal mobile payment through a communication network to perform payment." *Id.* at 26. When payment has occurred, a payment approval result may be transmitted directly or indirectly from payment server 500 to store POS server 200. *Id.* at 26–27. Payment server 500 may transmit the payment approval result to mobile application

terminal 100. *Id.* at 28. In such a situation, it may be the case that mobile application terminal 100

further includes a barcode coding unit 144 for coding the payment approval result into a predetermined barcode, the display unit 160 displays the payment approval result barcode, and the store POS server 200 further includes a barcode recognizer 270 for recognizing the payment approval result barcode, or that the mobile communication terminal 100 further includes a payment approval result transmitter to transmit the payment approval result to the store POS server 200.

Id.

b) Discussion

Petitioner argues that “Yong teaches each and every element of Claim 15.” Pet. 40. Petitioner then explains in detail which disclosures of Yong allegedly teach each of claim 15’s limitations. *Id.* at 41–51. Petitioner also cites Dr. Shamos’s testimony, in which Dr. Shamos details which disclosures of Yong he believes teach each of claim 15’s limitations. Pet. 41–51; Ex. 1002 ¶¶ 280–345. At this stage, aside from the arguments discussed above in Section II.D.1 that we should not consider Yong as prior art, Patent Owner does not dispute Petitioner’s argument that Yong anticipates independent claim 15. Having reviewed Petitioner’s arguments and evidence, we determine Petitioner has demonstrated a reasonable likelihood of establishing that Yong anticipates independent claim 15.

3. Alleged Obviousness Based on Yong and Other Prior Art

Petitioner argues that claims 15, 16, 18, and 19 would have been obvious over Yong and Xavier. Pet. 51–60. In doing so, Petitioner cites Xavier for certain disclosures related to the use of payment information. *E.g. id.* at 51–52. For example, Petitioner argues that “Xavier describes a checkout process that uses payment information such as customer loyalty,

personal information, debit card and/or credit card information sent by a handheld device for use by a server to complete a checkout process.”

Id. at 51 (citing Ex. 1011 ¶ 27; Ex. 1002 ¶ 349). Petitioner argues that “[i]t would have been obvious to a [person of ordinary skill in the art] to retrieve payment information and complete the transaction by the server in Yong based on Xavier’s teaching of retrieval and use of payment information to complete a transaction.” *Id.* at 52.

Petitioner argues that claim 17 would have been obvious over Yong, Xavier, and Cason. *Id.* at 60–66. In doing so, Petitioner cites Cason as allegedly disclosing “determining whether an order exists on the [virtual terminal sales application].” *Id.* at 62 (citing Ex. 1002 ¶ 414). Petitioner argues that “a [person of ordinary skill in the art] . . . would have been motivated to look to Cason to determine whether an order already exists, to use existing order data, and to avoid creating two orders.” *Id.* at 63 (citing Ex. 1002 ¶ 416).

At this stage, aside from the arguments discussed above in Section II.D.1 that we should not consider Yong as prior art, Patent Owner does not dispute Petitioner’s Yong-based obviousness challenges. Having reviewed Petitioner’s arguments and evidence, we determine Petitioner has demonstrated a reasonable likelihood of establishing that argument that claims 15–19 would have been obvious over Yong in combination with the other cited references.

E. DISCRETIONARY DENIAL OF INSTITUTION UNDER 35 U.S.C. § 314

The Board has discretion not to institute an *inter partes* review. *See* 35 U.S.C. § 314(a) (authorizing institution of an *inter partes* review under particular circumstances, but not requiring institution under any

circumstances); 37 C.F.R. § 42.108(b) (stating “the Board *may* deny all grounds for unpatentability for all of the challenged claims”) (emphasis added); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (explaining that under § 314(a), “the PTO is permitted, but never compelled, to institute an IPR proceeding”).

As discussed above, Petitioner filed four petitions challenging the ’435 patent on the same day, including this proceeding, IPR2022-01528, as well as IPR2022-01561, IPR2022-01563, and IPR2022-01564. In this proceeding, Petitioner challenges claims 15–19 of the ’435 patent over various prior art grounds. Pet. 13; Not. 2. In IPR2022-01561, IPR2022-01563, and IPR2022-01564, Petitioner challenges claims 1–14 of the ’435 patent over various prior art grounds. Not. 2. Pursuant to the Board’s Consolidated Trial Practice Guide (Nov. 2019) (“TPG”),³ Petitioner’s Notice provides a ranking of the four petitions in the order in which Petitioner wishes the Board to consider them on the merits and a succinct explanation of the differences between the Petitions. *See* TPG 59–60; Not. 1–5. Petitioner ranks the instant Petition as “1,” the petition in IPR2022-01561 as “2,” the petition in IPR2022-01563 as “3,” and the petition in IPR2022-01564 as “4.” Not. 2–5.

Petitioner, however, contends that “all four Petitions merit institution” because “[a]ll four Petitions present significant material differences which are not redundant and which demonstrate different substantive bases for

³ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

rendering obvious or for showing anticipation of each of the challenged claims of the '435 Patent,” and “[d]ue to word count limitations, Petitioner was not able to present all these grounds in a single petition.” *Id.* at 1, 3.

Petitioner elaborates that

1) the claims of the '435 Patent comprise over 1,500 words, such that to cover a plurality of grounds in one petition covering all the claims would use at least twenty percent of the 14,000-word petition limit; and 2) Patent Owner has asserted 15 of the 19 claims of the patent in the pending district court litigation (*see* Ex. 1026).

Id. at 2.

Patent Owner argues that “the panel should, at most, address the -01528 petition on the merits, as petitioner requested, and discretionarily deny the other three petitions under § 314(a).” Prelim. Resp. 4. Regarding the '435 patent’s claims’ length, Patent Owner argues that “the '435 Patent claims is indicative of the quality of examination, rather than an excuse for the piling on that Petitioner exhibits in these challenges.” *Id.* at 6.

We do not agree with Patent Owner’s argument that Petitioner’s parallel filing of four petitions warrants denying all four petitions. Prelim. Resp. 7 (“Petitioner’s abuse of process in filing four petitions justifies discretionary denial of all of the petitions.”). Accordingly, given that Petitioner ranks the instant Petition “1,” we decline to deny institution in this proceeding.

Additionally, under the circumstances presented, where Patent Owner does not dispute Petitioner’s observation that the '435 patent has very long claims, we conclude it is not unreasonable for Petitioner to file multiple petitions. In our view, even if it were accurate, Patent Owner’s argument that the claims’ “narrowness” reflects quality examination does not detract

from Petitioner's argument that the length of the claims warrants more than one petition. Prelim. Resp. 6.

III. CONCLUSION

After considering the evidence and arguments of record, we determine that Petitioner has demonstrated a reasonable likelihood of success with respect to at least one of the challenged claims. An *inter partes* review of all of the claims and all of the grounds presented in the Petition is hereby instituted. See *SAS Institute Inc. v. Iancu*, 138 S. Ct. 1348, 1354, 1359–60; *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018); 37 C.F.R. § 42.108(a).

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claims or any underlying factual or legal issues. The final determination will be based on the record as developed during the *inter partes* review.

IV. ORDER

In consideration of the foregoing, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of the '435 patent is instituted with respect to challenged claims 15–19 with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4(b), *inter partes* review of the '435 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2022-01528
Patent 10,803,435 B2

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