

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.

IPR2022-01563
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 1–14 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 1–14 based on the ground 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 IPR2022-01528, IPR2022-01561, 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

The '435 patent is titled “Method for Self-Checkout with a Mobile Device” and relates to methods, systems, and computer program products for purchasing an item using a mobile device. Ex. 1001, code (54), 1:53–2:31. Figures 2A and 2B are illustrative and reproduced below.

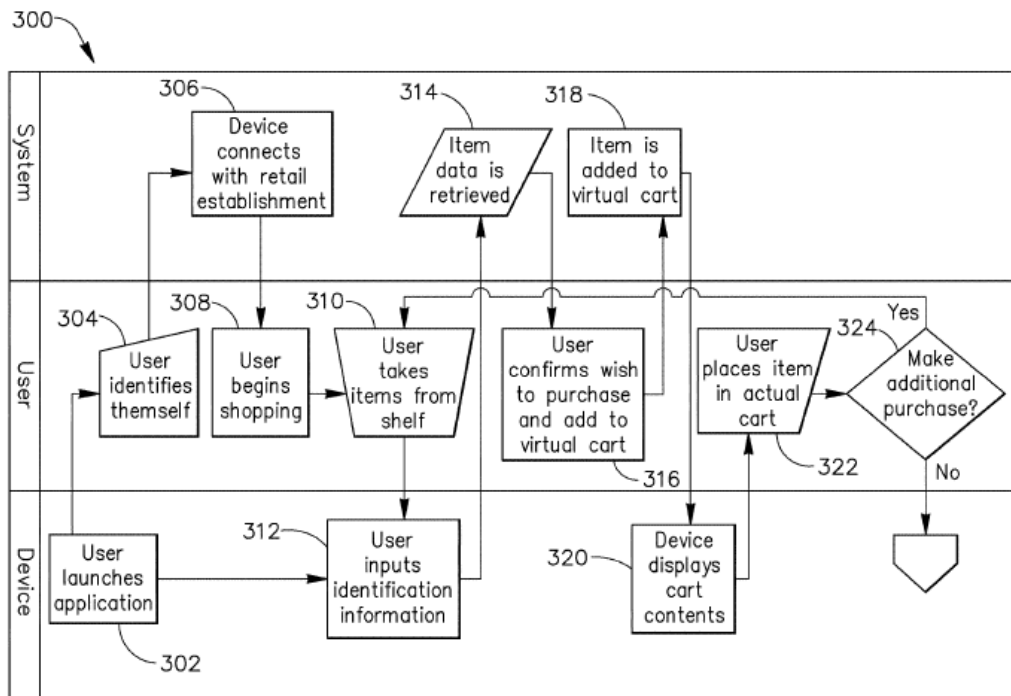


Fig.2A

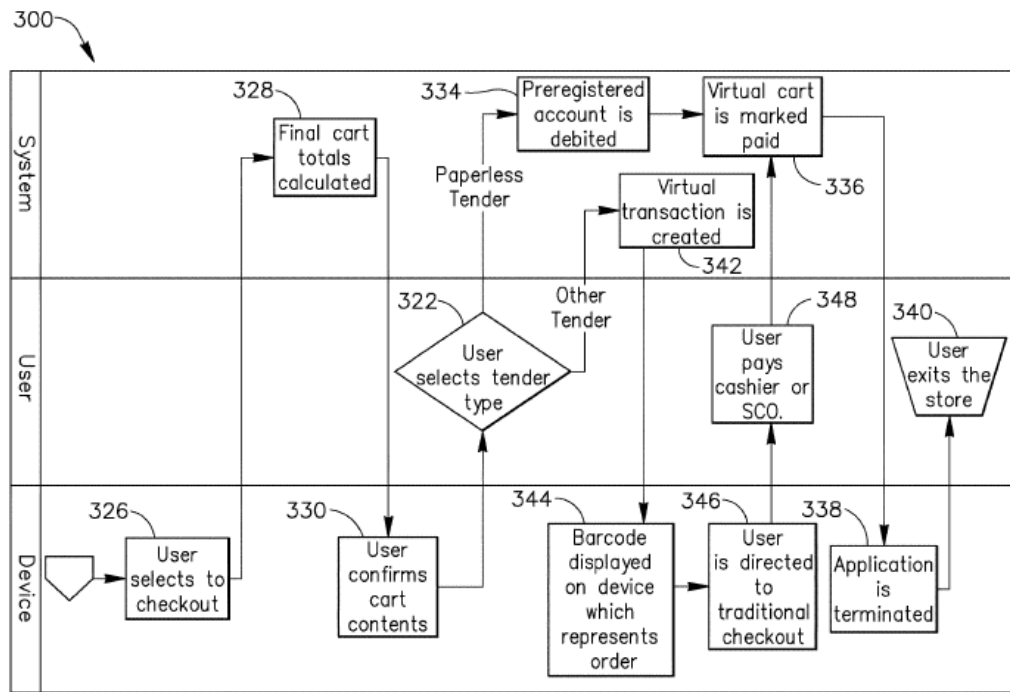


Fig.2B

Figures 2A and 2B of the '435 patent “depict flowchart illustrations of methods, apparatus (systems) and computer program products, in accordance with one embodiment.” *Id.* at 2:52–54, Figs 2A, 2B. As shown, Figures 2A and 2B depict method 300 including a series of steps for self-checkout with mobile device 200 that has been brought into a retail establishment. *Id.* at 5:58–61. For example, at block 302, mobile self-checkout application 400 may be launched within mobile device 200. *Id.* at 5:61–63. After identifying the user (block 304), mobile device 200 may be connected with remote server 240 at the retail establishment via network 226 (block 306). *Id.* at 6:15–18. The user may then begin to shop by walking around the retail establishment and looking for items 220 to purchase (block 308). *Id.* at 6:20–22. Within mobile application 400, home screen 402 may be presented to the user including begin shopping button 406, which, upon

selection, presents the user with shopping screen 418. *Id.* at 6:26–32, Figs. 3–4.

Figures 4 and 5 of the '435 patent are illustrative of shopping screen 418 and scan items screen 420, respectively, and are reproduced below.

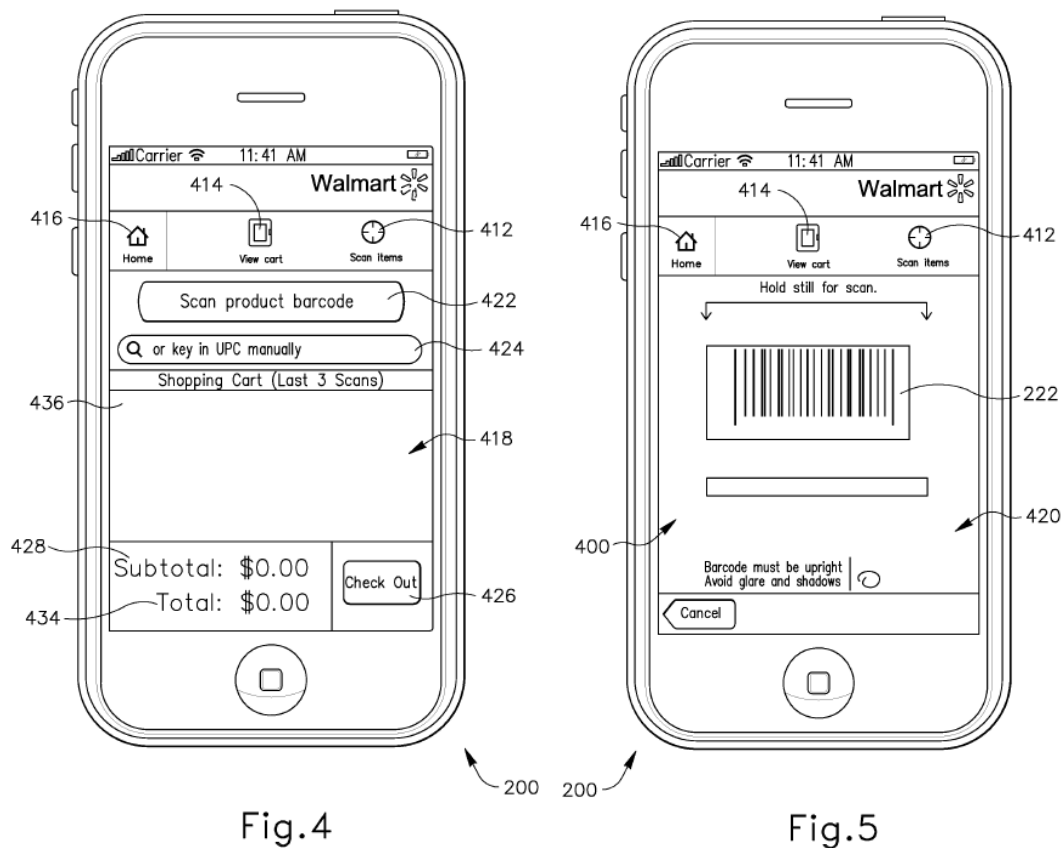


Figure 4 (left) of the '435 patent depicts shopping screen 418 on mobile self-checkout application 400 of mobile device 200, and Figure 5 (right) depicts scan items screen 420. Ex. 1001, 7:17–26. Returning to Figure 2A, upon spotting an item to purchase, the user removes item 220 from a shelf or stand within the retail establishment (block 310) and “inputs identification information 222 into the mobile device 200 which identifies the item 220 for purchase” (block 312). *Id.* at 7:48–53. For example, the user can press the shopping screen’s scan items button 412 or scan product code button 422 shown in Figure 4, either of which activates scanning module 202 and

presents the user with scan items screen 420, as shown in Figure 5. *Id.* at 7:59–64; *see also id.* at 7:23–26. “At scan items screen 420, the user initiates scanning module 202 which then receives identification information 222 from an item 220 and converts the identification information 222 into a format” readable and processable by processor 201, such as a digital image. *Id.* at 7:64–8:2; *see also id.* at 4:61–64. “Upon inputting identification information 222 into the mobile device 200, the identification information 222 is transmitted to the remote server 240 via communications device 208 and received by the remote server 240” (Fig. 2A, block 314), which retrieves item information 432 representing the item 220 using the identification information 222 received from the mobile device 200. Ex. 1001, 8:7–14; *see also id.* at 7:30–35. “[T]he remote server 240 may then transmit the retrieved item information 432 to the mobile device” for presentation to the user on item information screen 440. *Id.* at 8:20–22, Fig. 6. The user may then be prompted to confirm his or her intent to purchase the item 220 identified by item identification information 222, for example, with add to shopping cart button 442. *Id.* at 8:27–30, Figs. 2A (block 316), 6 (button 442).

“If the user confirms his/her intent to purchase item [220], a virtual shopping cart 433 containing item information 432 representing the item 220” may then be generated by mobile device 200 and transmitted to remote server 240 (Fig. 2A, block 318). Ex. 1001, 8:63–9:1. A user can view the contents of virtual shopping cart 433 on shopping cart screen 430 by selecting view cart button 414. *Id.* at 6:58–62, Fig. 8 (button 414, screen 430). A user can check out by selecting check out button 426 on the display screen, in response to which the user is presented with checkout

screen 450 comprising the total contents of virtual shopping cart 433 and an option to confirm the user's intent to purchase those contents. *Id.* at 7:36–40, Figs. 2B (block 326), 4 (button 426), 9 (screen 450); *see also id.* at 10:25–56 (describing alternate check out button 439 and confirm button 454), Figs. 8 (button 439), 9 (button 454).

“Upon selecting the option to checkout, a total amount for all the contents of the virtual shopping cart 433 is calculated and an order 452 is generated for the item 220 identified by the identification information 222, listed in the virtual shopping cart 433.” Ex. 1001, 10:37–41, Fig. 2B, (block 328). “The user . . . has the choice of payment method, either transmitting payment via the mobile device 200 using mobile self-checkout application 400 or providing payment at either a traditional cashier or self-checkout station.” Ex. 1001, 10:67–11:4, Fig. 2B (blocks 322, 334, 342, 346, 348). “If the user decides to provide payment for order 452 using a traditional cashier or self-checkout station, . . . then a virtual transaction is created . . . and an optical machine-readable representation 460 of the order 452 . . . is generated and displayed on the display 206 of the mobile device 200.” *Id.* at 11:5–11, Fig. 2B (blocks 342, 344). According to the '435 patent, optical machine-readable representation 460 “encodes identifying information or a unique identifier 462” and “is encoded in such a manner as to allow an optical scanning machine 500, such as barcode reader, to read” it. *Id.* at 11:24–25, 11:40–43.

Figure 10 of the '435 patent is reproduced below.



Fig.10

Figure 10 of the '435 patent depicts one representation of the mobile device 200 running the mobile self-checkout application 400 during the checkout process. Ex. 1001, 2:55–58, 11:58–61. As shown, “upon generating the optical machine-readable representation 460 of the order 452,” mobile self-checkout application 400 generates machine-readable representation screen 458, which “includes an order number 463 along with the optical machine-readable representation 460 of the order 452, a total payment amount 464 for all the items 220 ordered, and a total amount 466 of items 220 sold.” *Id.* at 11:58–66. The user may present machine readable representation 460 to a cashier to scan, or go to “a self-checkout station and present[] the optical machine-readable representation 460 to an optical

scanning machine 500[,] which reads the optical machine-readable representation 460, and specifically the unique identifier 462.” *Id.* at 11:66–12:3, 12:12–18, Fig. 2B (block 346). The user is then prompted to tender payment by either the traditional cashier or the self-checkout station, whereupon the user can then tender total payment amount 464. *Id.* at 12:24–29, Fig. 2B (block 348).

Lastly, “an acknowledgment that payment has been received,” such as a digital receipt, “is sent to the mobile device 200 from the remote server 240 and displayed to the user.” Ex. 1001, 12:38–49.

D. ILLUSTRATIVE CLAIM

Of the challenged claims, claims 1 and 10 are independent. Each of claims 2–9, and 11–14 depends, directly or indirectly, from one of independent claims 1 and 10. Claim 1 is illustrative and is reproduced below with certain reformatting:¹

1. [1p] A method of converting a mobile phone into a mobile point-of-sale device, the method comprising:
 - [1a] 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;
 - [1b] initiating a session between the mobile phone and a server, the session managed by a session manager;
 - [1c] rendering the user interface on a display of the mobile device by the mobile self-checkout application;

¹ We have added the same labels that Petitioner applies to different portions of claim 1. *See* Pet. 13–26.

- [1d] 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;
- [1e] activating a radio transmitter of the mobile phone to transmit the captured identification information associated with the physical object to the server executing a virtual terminal sales application;
- [1f] receiving, by the mobile phone, item information associated with the physical object from the server;
- [1g] generating, by the mobile phone, a virtual shopping cart to save the item information associated with the physical object;
- [1h] adding the item information of the physical object to the virtual shopping cart to maintain the order;
- [1i] receiving instructions via the user interface of the mobile self-checkout application to check out, receiving, by the server, payment information to complete a transaction for the order in response to selection of a checkout function via the user interface;
- [1j] completing, by the server, the transaction for the order based on the payment information; and
- [1k] transmitting, by the server, receipt information to the mobile phone in response to completion of payment for the order;
- [1l] rendering, by the mobile phone on the display, the receipt information in a machine- readable element; and
- [1m] optically scanning the machine-readable element rendered on the display of the mobile phone, by an optical scanning machine in communication with the server, to confirm completion of payment for the order.

Ex. 1001, 21:19–61.

E. EVIDENCE

Petitioner relies on the following evidence:

(1) Korean Patent Publication No. 10-2007-087811, published Aug. 29, 2007 (Ex. 1009, “Yong,” with translation at Exs. 1010, 1021).

(2) U.S. Patent Application Publication No. 2009/0094100 A1, published Apr. 9, 2009 (Ex. 1011, “Xavier”).

(3) Declaration of Michael I. Shamos, Ph.D. (Ex. 1002).

F. ASSERTED GROUND OF UNPATENTABILITY

Petitioner challenges the patentability of claims 1–14 of the ’435 patent on the following ground (Pet. 13–14):

Claims Challenged	35 U.S.C. §	References
1–14	103	Yong, Xavier

II. ANALYSIS

A. LEVEL OF ORDINARY SKILL

Petitioner contends that a person of ordinary skill in the art “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,” also noting that “[m]ore education can supplement practical experience and vice versa.” Pet. 10 (citing Ex. 1002 ¶ 33). Patent Owner, at this stage of the proceeding, does not dispute Petitioner’s definition of the person of ordinary skill in the art. Prelim. Resp. 18.

For the purposes of this Decision, we apply Petitioner’s proffered level of skill in the art because it appears consistent with the problems addressed in the ’435 patent and the 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. 11–12. 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. ALLEGED OBVIOUSNESS OVER YONG AND XAVIER

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 8–9). 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 8 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.* at 19–20.

According to Patent Owner, Petitioner has not authenticated Yong. *Id.* 20–24. 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. 24–31. 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 24–25. 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.* at 25. 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 30–31. 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. 22, 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. *Overview of Yong’s Disclosure*

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.

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

FIG. 1

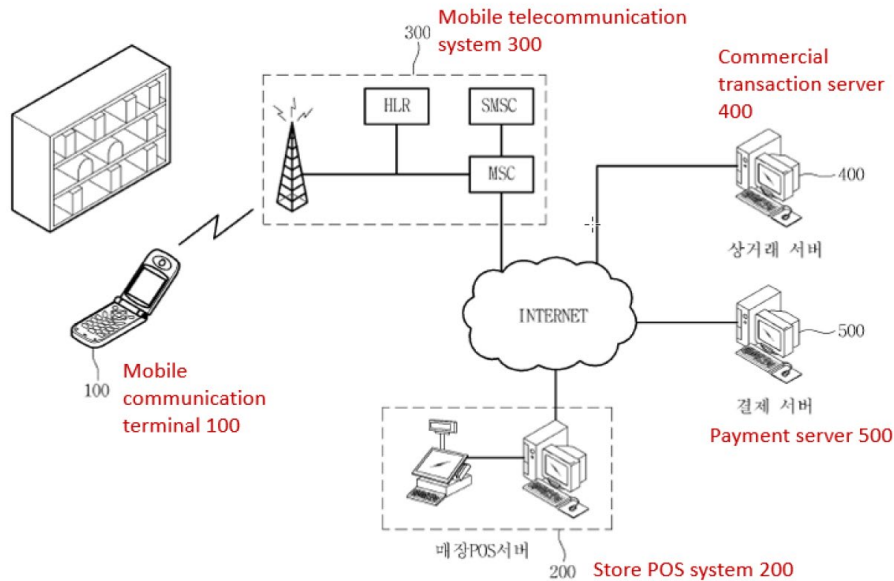


Figure 1 shows a commercial transaction system that includes “a mobile communication terminal 100, a store POS system 200, and a mobile telecommunication system 300.” Ex. 1010, 12; Ex. 1021, Fig. 1. “More preferably, a commercial transaction server 400 and a payment server 500 may be further included.”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

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

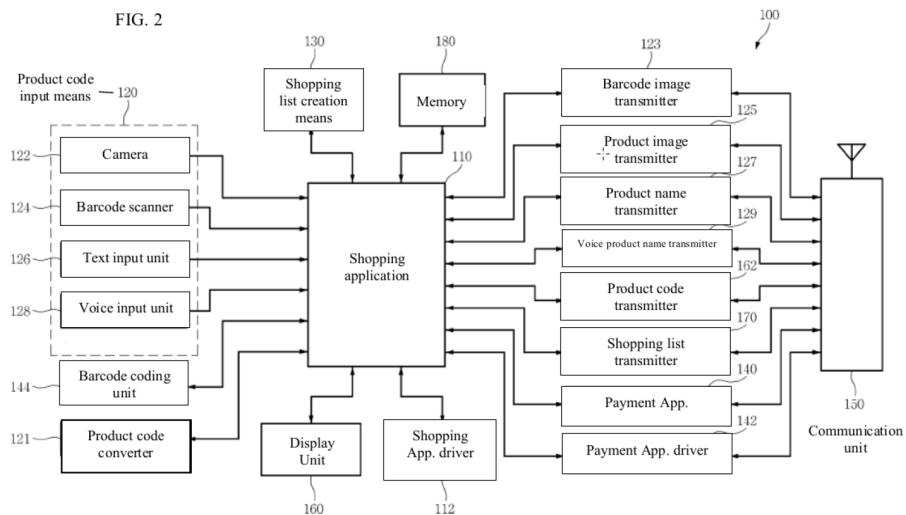


Figure 2 shows mobile communication terminal 100 having “a product code input means 120, a shopping list creation means 130, a shopping list transmitter 170, a shopping application 110, and a payment application 140.” Ex. 1010, 12; Ex. 1021, Fig. 2.

“[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.

3. Discussion

In asserting obviousness of claims 1–14 over Yong and Xavier, Petitioner argues that Yong discloses many of the challenged claims’ limitations. Pet. 13–43. For example, Petitioner relies primarily on Yong as allegedly disclosing claim 1’s limitations. *Id.* at 13–26. Petitioner relies on Xavier as “teach[ing] the use of a session between a mobile phone and se[r]ver in a self-checkout system.” *Id.* at 15. Petitioner argues that “[h]aving reviewed Xavier, a [person of ordinary skill in the art] would have been motivated to add the session handling of Xavier to Yong.” *Id.* According to Petitioner, “[a person of ordinary skill in the art] would have understood that a session manager would have been necessary to manage the communications between the mobile communication terminal 100 and the store POS server 200, the commercial transaction server 400 and the payment server 500.” *Id.* At this stage, aside from the arguments discussed above in Section II.C.1 that we should not consider Yong as prior art, Patent Owner does not dispute the merits of Petitioner’s challenge to claims 1–14. Having reviewed Petitioner’s arguments and evidence, we determine Petitioner has demonstrated a reasonable likelihood of establishing that claims 1–14 would have been obvious over Yong and Xavier. Pet. 1–43.

D. 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, IPR2022-01563, as well as IPR2022-01528, IPR2022-01561, and IPR2022-01564. In this proceeding, IPR2022-01563, and in IPR2022-01561 and IPR2022-01564, Petitioner challenges claims 1–14 of the ’435 patent over various prior art grounds. Pet. 11; Not. 2. In IPR2022-01528, Petitioner challenges claims 15–19 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 “3,” the petition in IPR2022-01528 as “1,” the petition in IPR2022-01561 as “2,” 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 rendering obvious or for showing anticipation of each of the challenged claims of the ’435 Patent,” and “[d]ue to word count limitations, Petitioner

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

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. 3–4.

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.

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 the ground 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 1–14 with respect to the ground 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.

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Patent 10,803,435 B2

For PETITIONER:

Michael V. Messinger
William H. Oldach III
Rex W. Miller, II
VORYS, SATER, SEYMOUR AND PEASE LLP
mvmessinger@vorys.com
wholdach@vorys.com
rwmiller@vorys.com

For PATENT OWNER:

Matthew W. Johnson
Joseph M. Beauchamp
Joshua R. Nightingale
Stephanie M. Mishaga
Hannah E. Mehrl
JONES DAY
mwjohnson@jonesday.com
jbeauchamp@jonesday.com
jrnightingale@jonesday.com
smishaga@jonesday.com
hmehrle@jonesday.com