

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CSC SERVICEWORKS, INC.,
Petitioner,

v.

PAYRANGE INC.,
Patent Owner.

IPR2023-01449
Patent 11,481,772 B2

Before KEN B. BARRETT, MEREDITH C. PETRAVICK, and
GEORGE R. HOSKINS, *Administrative Patent Judges*.

PETRAVICK, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. *Background and Summary*

CSC ServiceWorks, Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–6 and 8–20 of U.S. Patent No. 11,481,772 B2 (Ex. 1001, “the ’772 patent”). Paper 1 (“Pet.”). PayRange Inc. (“Patent Owner”) filed a Preliminary Response (Paper 7 (“Prelim. Resp.”)) and disclaimed claims 1–6, 8–10, and 12–20 (Ex. 2017). Only claim 11, thus, remains challenged in this proceeding.

With our authorization (Ex. 3001), Petitioner filed a Preliminary Reply (Paper 10 (“Prelim. Reply”)) and Patent Owner filed a Preliminary Sur-reply (Paper 11 (“Prelim. Sur-Reply”)).

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the petition “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

After considering the Petition, the Preliminary Response, the Preliminary Reply, the Preliminary Sur-reply, and the evidence of record, we determine the information presented in the Petition shows a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of the challenged claim of the ’772 patent.

Accordingly, we institute an *inter partes* review of claim 11 of the ’772 patent on the ground asserted in the Petition.

B. *Disclaimer of Claims 1–6, 8–10, and 12–20*

A “patent owner may file a statutory disclaimer under 35 U.S.C. 253(a) in compliance with § 1.321(a) of this chapter, disclaiming one or more claims in the patent. No *inter partes* review will be instituted based on

disclaimed claims.” 37 C.F.R. § 42.107(e). A disclaimer under 35 U.S.C. § 253(a) is “considered as part of the original patent” as of the date on which it is “recorded” in the U.S. Patent and Trademark Office. 35 U.S.C. § 253(a). For a disclaimer to be “recorded” in the Office, the document filed by the patent owner must:

(1) Be signed by the patentee, or an attorney or agent of record;

(2) Identify the patent and complete claim or claims, or term being disclaimed. A disclaimer which is not a disclaimer of a complete claim or claims, or term will be refused recordation;

(3) State the present extent of patentee’s ownership interest in the patent; and

(4) Be accompanied by the fee set forth in [37 C.F.R.] § 1.20(d).

37 C.F.R. § 1.321(a); *see also Vectra Fitness, Inc. v. TNWK Corp.*, 162 F.3d 1379, 1382 (Fed. Cir. 1998) (holding that a § 253 disclaimer is “recorded” on the date that the Office receives a disclaimer meeting the requirements of 37 C.F.R. § 1.321(a), and that no further action is required in the Office).

Here, Patent Owner filed a statutory disclaimer of claims 1–6, 8–10, and 12–20 of the ’772 patent. Ex. 2017; *see* Prelim. Resp. 1. Based on our review of Exhibit 2017, we determine that a disclaimer of claims 1–6, 8–10, and 12–20 of the ’772 patent under 35 U.S.C. § 253(a) has been filed with the Office as of November 22, 2023. Based on the information in the Office’s public record concerning the ’772 patent, we find that the disclaimer complies with the above-listed requirements of 37 C.F.R. § 1.321(a). Because claims 1–6, 8–10, and 12–20 have been disclaimed under 35 U.S.C. § 253(a), in compliance with 37 C.F.R. § 1.321(a), we do not

reach Petitioner’s challenges to claims 1–6, 8–10, and 12–20. As a result, the sole remaining challenged claim is claim 11.

C. Real Parties-In-Interest

Petitioner identifies itself, CSC ServiceWorks, Inc., as the real party-in-interest. Pet. 93. Patent Owner identifies itself, PayRange Inc., as the real party-in-interest. Paper 9, 2.

Patent Owner argues that the Petition should be denied because the Petition fails to identify KioSoft Technologies, LLC (“KioSoft”) as a real-party-in-interest, as required by 35 U.S.C. § 312 (*see also* 37 C.F.R. § 42.8(a)(1), (b)(1)).¹ Prelim. Resp. 4–11; Prelim. Sur-reply 1–7.

The Board’s precedential decision *SharkNinja Operating LLC v. iRobot Corp.*, IPR2020-00734, Paper 11 (PTAB Oct. 6, 2020) (“*SharkNinja*”) held that it best serves the Office’s interests in cost and efficiency to not resolve an RPI issue when “it would not create a time bar or estoppel under 35 U.S.C. § 315” in that proceeding. *SharkNinja*, Paper 11; *see also Unified Patents, LLC v. MemoryWeb, LLC*, IPR2021-01413, Paper 76 at (USPTO Director May 22, 2023) (non-precedential). We do not address whether KioSoft is an unnamed real-party-in-interest because, even if it was, it would not create a time bar or estoppel under 35 U.S.C. § 315.

¹ Patent Owner additionally requests that we impose the sanction of dismissal of the Petition under 37 C.F.R. § 42.12. Prelim. Resp. 10–11; Prelim. Sur-reply 6–7. Under 37 C.F.R. § 42.11(d)(2), a motion for sanctions must be made separately and a party must seek authorization from the Board prior to filing a motion for sanctions, as required by 37 C.F.R. § 42.20. We, thus, do not reach Patent Owner’s request for sanctions.

D. Related Matters

Petitioner and Patent Owner identify the following related court proceeding:

PayRange Inc. v. CSC ServiceWorks, Inc., Case No. 1:23-cv-00278 (D. Del.)

Pet. 93; Paper 9, 2.

Patent Owner additionally identifies the following related court proceedings:

PayRange Inc. v. Kiosoft Techs., LLC, Case No. 1-20-cv-20970 (S.D. Fla.) (terminated)

PayRange Inc. v. KioSoft Techs., LLC, Case No. 1-20-cv-24342 (S.D. Fla.) (terminated)

PayRange Inc. v. CSC ServiceWorks, Inc., Case No. 1:22-cv-00502 (D. Del.)

Paper 9, 2–4.

Petitioner and Patent Owner identify the following related Board proceeding:

KioSoft Techs., LLC v. PayRange Inc., Case No. PGR2023-00042 (U.S. Patent No. 11,481,772) (terminated)

Pet. 93; Paper 9, 3–4.

Patent Owner additionally identifies the following related Board proceedings:

KioSoft Techs., LLC v. PayRange Inc., Case No. CBM2020-00026 (U.S. Patent No. 9,659,296)

KioSoft Techs., LLC v. PayRange Inc., Case No. IPR2021-00086 (U.S. Patent No. 9,659,296)

CSC ServiceWorks, Inc. v. PayRange Inc., Case No. IPR2023-01186 (U.S. Patent No. 8,856,045)

CSC ServiceWorks, Inc. v. PayRange Inc., Case No. IPR2023-01187 (U.S. Patent No. 10,438,208)

CSC ServiceWorks, Inc. v. PayRange Inc., Case No. IPR2023-01188
(U.S. Patent No. 10,891,608)

Kiosoft Techs., LLC v. PayRange Inc., Case No. PGR2021-00077
(U.S. Patent No. 10,719,833)

Kiosoft Techs., LLC v. PayRange Inc., Case No. PGR2021-00084
(U.S. Patent No. 10,891,608)

Kiosoft Techs., LLC v. PayRange Inc., Case No. PGR2021-00093
(U.S. Patent No. 10,891,614)

Kiosoft Techs., LLC v. PayRange Inc., Case No. PGR2022-00035
(U.S. Patent No. 11,074,580)

KioSoft Techs., LLC v. PayRange Inc., Case No. PGR2023-00045
(U.S. Patent No. 11,488,174) (terminated)

KioSoft Techs., LLC v. PayRange Inc., Case No. PGR2023-00050
(U.S. Patent No. 11,501,296) (terminated)

Paper 9, 2–4.

E. The '772 Patent (Ex. 1001)

The '772 patent, titled “Method and System for Presenting Representations of Payment Accepting Unit Events,” describes “a mobile-device-to-machine payment processing system for processing transactions over a non-persistent network connection.” Ex. 1001, code (54), 5:62–65. The mobile-device-to-machine payment processing system may be a “payment accepting unit” (i.e., “equipment that requires payment for the dispensing of products and/or services,” such as a vending machine, a parking meter, a toll booth, a laundromat washer and dryer, an arcade game, a kiosk, a photo booth, or a transit ticket dispensing machine). *Id.* at 1:54–65.

The '772 patent explains that some payment accepting units are capable of accepting cashless payments, such as “credit cards, debit cards, and alternative mobile device payment methods using, for example, smart

phones.” *Id.* at 6:42–50. However, “traditional payment accepting units that accept cashless payments . . . require a persistent connection to a network (wired or wireless) to facilitate the cashless payments.” *Id.* Thus, “[i]f the network connection to a traditional machine is temporarily interrupted, cashless payments will be temporarily unavailable. If the machine is located in a location where no network connection is available, cashless payment[] is not possible.” *Id.* at 6:56–60.

The ’772 patent purports to solve this network connectivity problem by having a user’s mobile device serve as an intermediary between the payment accepting unit and the network. *Id.* at 6:1–6, 6:60–62. The described system in the ’772 patent purportedly also minimizes or even eliminates user interaction with the mobile device. *Id.* at 6:60–66. For example, one feature that the payment accepting unit may possess is a “manual (swipe to pay) mode.” *Id.* at 6:10–11. When a user’s mobile device is brought within range of a payment accepting unit running this manual mode, a pre-installed mobile application on the mobile device automatically connects to the payment accepting unit. *Id.* at 7:15–18. The mobile device then connects to a server, which maintains a balance of the user’s funds and authorizes the use of these funds. *Id.* at 10:17–22, 11:28–40. From there, the mobile application may display the balance on the mobile device’s touchscreen, which the user then “swipes” to transfer payment to the payment accepting unit, “just as if cash was inserted in the machine 120 with the user inputting his selection on the payment accepting unit 120 and the payment accepting unit 120 dispensing the product or service.” *Id.* at 7:18–29 (reference numbers omitted).

F. Illustrative Claims

Petitioner challenges claim 11 of the '772 patent. Claim 11 depends from claim 1. Claims 1 and 11 are reproduced below, with the elements labeled in brackets.

[1(pre)]1. A method of presenting representations of payment accepting unit events, comprising:

[1(a)] at a mobile device with one or more processors, memory, one or more output devices including a display, and one or more radio transceivers:

[1(b)] identifying one or more payment accepting units in proximity to the mobile device that are available to accept payment from a mobile payment application executing on the mobile device, the identifying based at least in part on an identifier corresponding to the one or more payment accepting units, wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services;

[1(c)] displaying a user interface of the mobile payment application on the display of the mobile device, the user interface being configured to display a visual indication of the one or more payment accepting units and accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units and (ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units;

[1(d)] establishing via the one or more radio transceivers a wireless communication path including the mobile device and the available payment accepting unit of the one or more payment accepting units;

[1(e)] after establishing the wireless communication path, enabling user interaction with the user interface of the

mobile payment application to complete the transaction;

[1(f)] exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the transaction; and

[1(g)] after exchanging the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.

[11(a)] 11. The method of claim 1, wherein the user interface of the mobile payment application, after establishing the wireless communication path, includes:

[11(b)] a visual representation of the available payment accepting unit;

[11(c)] an indication of a prepared balance; and

[11(d)] an affordance that when slid, indicates the initiation of the transaction;

[11(e)] wherein the affordance is slid in response to receiving a user input of swipe on the affordance displayed on the display of the mobile device.

Ex. 1001, 47:2–41, 48:21–31.

G. Evidence

Name	Reference	Date	Exhibit
Zhou	U.S. Patent No. 7,458,510 B1	Issued Dec. 2, 2008	1004
Athwal	U.S. Patent App. Pub. No. 2003/0130902 A1	Published Jul. 10, 2003	1005
Low	U.S. Patent No. 10,210,501 B2	Issued Feb. 19, 2019	1006
Arora	U.S. Patent No. 9,898,884 B1	Issued Feb. 20, 2018	1007
Casey	U.S. Patent No. 8,255,323 B1	Issued Aug. 28, 2012	1008
Freeny	U.S. Patent No. 8,958,846 B2	Issued Feb. 17, 2015	1009

Petitioner also relies on the Declaration of B. Clifford Neuman, Ph.D. (Ex. 1003).

H. Asserted Ground

Petitioner asserts that claim 11 would have been unpatentable on the following ground:

Ground	Claim(s) Challenged	35 U.S.C. §	Basis
4	11	103	Zhou, Athwal, Low, Arora, Casey, Freeny

II. ANALYSIS

A. Request for Discretionary Denial

Patent Owner requests that we exercise discretion to deny the Petition under 35 U.S.C. § 314 because the '772 patent was also challenged in proceeding PGR2023-00042. Prelim. Resp. 11–16 (citing *General Plastic Indus. Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19, 15–16 (precedential as to § II.B.4.i)).

After Patent Owner filed the Preliminary Response, the proceeding PGR2023-00042 was terminated prior to entry of an institution decision. *See* Paper 9, 4; PGR2023-00042, Paper 9. In light of the termination of PGR2023-00042, we authorized the parties to file additional arguments in a Preliminary Reply and Sur-reply. Ex. 3001. Patent Owner did not provide any additional argument concerning this issue in its Preliminary Sur-reply. Paper 11.

“Where the first-filed petition under [*General Plastic*] factor 1 was discretionarily denied or otherwise was not evaluated on the merits, factors 1–3 only weigh in favor of discretionary denial when there are ‘road-mapping’ concerns.” *Code200, UAB v. Bright Data, Ltd.*, IPR2022-00861, Paper 18 at 5 (PTAB Aug. 23, 2022) (precedential). Here, there are no road-mapping concerns because Petitioner filed the Petition here prior to Patent Owner filing any preliminary response in PGR2023-00042. Prelim. Reply 7.

Petitioner argues that *General Plastics* factors 4–7 are obviated because there are no longer multiple petitions pending against the ’772 patent. *Id.* Under the circumstances here, we agree. “[T]he Patent Owner’s concerns of fairness are outweighed by the benefits to the patent system of improving patent quality by reviewing the merits of the challenges raised in the petitions, which have not been addressed to date.” *Code200*, Paper 18 at 6.

Patent Owner’s request that we discretionarily deny the Petition under 35 U.S.C. § 314 because the ’772 patent was also challenged in proceeding PGR2023-00042 is denied.

B. Legal Standards

“In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)); *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review). Although we may indicate in this Decision that certain Patent Owner arguments are not persuasive, in doing so we do not shift the ultimate burden from Petitioner.

A claim is unpatentable under § 103(a) 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). “[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR*, 550 U.S. at 416 (citing *U.S. v. Adams*, 383 U.S. 39, 50–51 (1966)). 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). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Here, the present record contains no evidence of objective indicia of non-obviousness.

C. Level of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art “would have had a bachelor’s degree in electrical engineering, computer engineering, computer science, or equivalent training, and approximately three years of experience with electronic payment systems, vending machine technologies, or distributed network systems,” and that “[a]dditional education can substitute for less work experience, and vice versa.” Pet. 12 (citing Ex. 1003 ¶¶ 18–20).

Patent Owner does not provide a description of the level of ordinary skill in the art. *See generally* Prelim. Resp.

For purposes of this Decision, we adopt Petitioner’s assessment of the level of ordinary skill in the art as it is consistent with the ’772 patent and the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

D. Claim Construction

In this *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

Neither party provides an explicit construction of any claim terms. Petitioner asserts that “the terms of the challenged claims should be given their plain and ordinary meaning, and no terms require specific construction.” Pet. 13. Patent Owner asserts that “[n]o constructions are

necessary to deny institution because denial is warranted for numerous reasons that do not depend on claim construction.” Prelim. Resp. 3.

Except to the extent as discussed in our patentability analysis below, we do not need to construe any terms explicitly to reach our 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))).

E. Ground 4: Obviousness over Zhou, Athwal, Low, Arora, Casey, and Freeny

1. Overview of Prior Art

a) Zhou (Ex. 1004)

Zhou is titled “Authentication of Automated Vending Machines by Wireless Communications Devices” and relates to conducting transactions between a wireless communications device and an automated vending machine and authenticating the vending machine prior to consummation of the transaction. Ex. 1004, code (54), 1:7–11, 2:15–18. Figure 1 of Zhou, reproduced below, is a schematic view of a wireless communications device used to conduct a transaction with a vending machine, a radio access network, and a vending machine authentication server which authenticates the vending machine for the wireless communications device. *Id.* at 3:43–47.

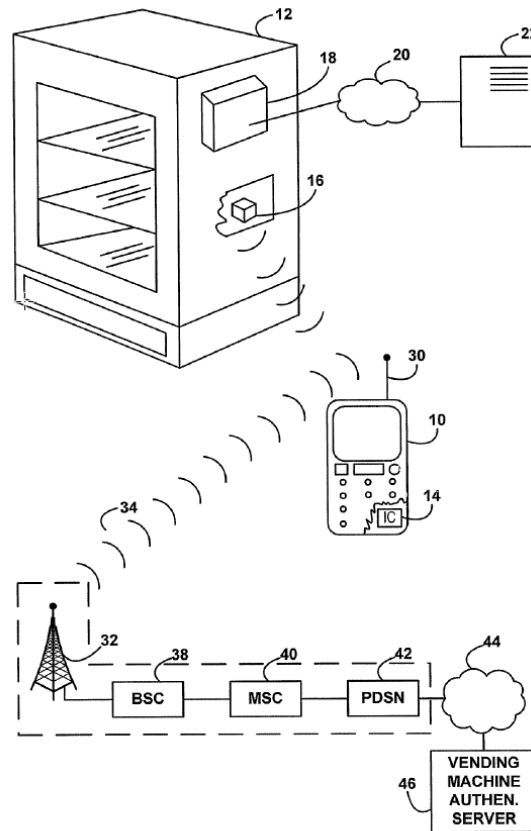


Fig. 1

Figure 1 of Zhou shows wireless communications device 10 that is used to conduct a transaction with vending machine 12. *Id.* at 3:61–63. Wireless communications device 10 includes first contactless communications means 14 (e.g., a contactless IC card, RFID transponder, WiFi, Bluetooth, or 802.11 transmitter/receiver, etc.) for communication with corresponding second contactless communications means 16 (e.g., contactless IC scanner/reader, RFID transponder, etc.) in vending machine 12. *Id.* at 3:67–4:9.

As described by Zhou, a user of wireless communications device 10 comes into close proximity with vending machine 12 and launches a vending machine application on wireless communications device 10. *Id.* at 5:29–31. The vending machine application presents various screen displays to the user

and prompts to facilitate a transaction with vending machine 12. *Id.* at 5:32–34. Vending machine scanner/reader 16 performs an authentication of IC card 14, and IC card 14 authenticates vending machine 12 to ensure that vending machine 12 is not a rogue machine used to steal personal identification or credit card information. *Id.* at 5:42–59, 1:59–61. Specifically, wireless device 10 obtains credential information (e.g., private key signature and digital certificate) from vending machine 12 in response to a challenge message and provides that information (signature, challenge, and certificate) to vending machine authentication server 46 for authentication. *Id.* at 5:66–6:5. Server 46 compares the credential information with information of authorized vending machines stored in a database or performs some other authorization routine, and provides an authentication response back to wireless device 10. *Id.* at 6:5–10. If the authentication is positive, then IC card 14 provides a prompt to the vending machine application indicating that vending machine 12 is approved and that completion of the transaction and transfer of sensitive payment information from wireless device 10 to vending machine 12 may safely proceed. *Id.* at 6:12–20; 7:8–10. Conversely, if authentication is negative, IC card 14 provides a prompt to the vending machine application indicating that vending machine 12 is not authorized or approved, in which case the user of wireless device 10 can abort the transaction without any transfer of sensitive payment information. *Id.* at 6:20–26, 7:3–8.

b) Athwal (Ex. 1005)

Athwal is titled “Short Range Wireless System” and relates to a mobile communication device (MCD), e.g., a mobile phone, operable to initiate and complete an electronic transaction with an electronic retail

system (ERS), e.g., a vending machine. Ex. 1005, code (54), ¶¶ 6, 8–10, 14. Athwal discloses that a customer initiates an electronic transaction by first performing a search for all available ERS in their vicinity from their MCD, which sends a wireless electronic signal (WES) inquiry to all ERS. *Id.* ¶ 17. All ERS respond with WES that convey detailed information such as their name, available products, and prices. *Id.* The MCD displays this information to the customer, who selects the desired product or service from the appropriate ERS. *Id.* The MCD then sends a WES to the appropriate ERS indicating a customer request to perform a transaction. *Id.* The ERS confirms availability of the desired product/service, calculates the cost, and sends an electronic bill to the MCD for the amount of the purchase via a WES. *Id.* The customer is prompted by the MCD to verify the purchase and to select the customer's account (e.g., credit, debit, etc.) that should be used to make the purchase. *Id.* The MCD then transmits payment account information and an authorization key (i.e., SIM chip ID or personal identification number) to the ERS via a WES. *Id.* The ERS performs the transaction and delivers the good/service to the customer. *Id.*

c) Low (Ex. 1006)

Low is titled “Electronic Payments to Non-Internet Connected Devices Systems and Methods” and relates to “wireless electronic payments to non-Internet connected machines through user devices.” Ex. 1006, code (54), 1:17–20. Low discloses a system that permits a user to select, purchase, and dispense products for sale at a vending machine, while using a user device such as a smart phone for electronic payment. *Id.* at 2:11–16, 5:19–22. Low discloses that multiple machines may send their unique

machine identifiers to the user device, such that the user is able to select one or more machines to purchase from. *Id.* at 2:25–28.

d) Arora (Ex. 1007)

Arora is titled “Method and System of Personal Vending” and discloses a “system and method for vending products to a customer that encompasses a group of vending machines managed by a vending company . . . and the use of a personal electronic device by the customer.” Ex. 1007, codes (54), (57). Arora describes using the customer’s personal electronic device and wireless communication to “direct the customer to the nearest qualified vending machine.” *Id.* at 2:58–59, 3:64–4:7. “Embodiments include the customer selecting either products or vending machines from a list of options provided via the user interface of the personal electronic device, wherein the list of options depends on the actual available inventory on vending machines co-located with customer, and the customer purchase history.” *Id.* at code (57).

e) Casey (Ex. 1008)

Casey is titled “Motion Based Payment Confirmation.” Ex. 1008, code (54). Casey discloses an electronic device having a graphical user interface with “one or more graphical elements that may be moved by a user to confirm or decline a payment transaction.” *Id.* at code (57).

f) Freeny (Ex. 1009)

Freeny is titled “Communication and Proximity Authorization Systems” and relates to a “pico pay phone system” that “allow[s] multiple wireless devices to access a single pay phone or other public kiosk communication unit designed to detect and recognize multiple wireless service providers’ signals and protocols at the same time.” Ex. 1009,

code (54), 1:24–29. Freeny discloses that a vending machine system can be activated either automatically or manually by a proximity authorization unit when a person is within a predetermined proximity distance of the vending machine system. *Id.* at 32:49–55. Freeny further discloses that the proximity authorization unit “can operate just like a smart card with the approved credit amount stored in the proximity authorization unit,” and that “the amount [of remaining approved cash] can be checked at any time by the user of the proximity authorization unit.” *Id.* at 37:60–63, 38:3–5.

2. *Analysis*

Petitioner contends that claim 11 is unpatentable over Zhou, Athwal, Low, Arora, Casey, and Freeny. Pet. 82–91. Because claim 11 depends from claim 1, we also consider Petitioner’s contention that claim 1 is unpatentable over Zhou, Athwal, and Low. *Id.* at 28–55.

After considering the Petition, the Preliminary Response, and all of the cited evidence of record, we determine that Petitioner sufficiently shows for the purposes of institution that all of limitations of claims 1 and 11 are taught by the combination of Zhou, Athwal, Low, Arora, Casey, and Freeny.

Patent Owner argues that certain limitations are not taught by the prior art. Prelim. Resp. 17–32. We address Patent Owner’s arguments in turn below.

a) Limitation 1(c)

Limitation 1(c) recites:

displaying a user interface of the mobile payment application on the display of the mobile device, the user interface being configured to . . . (ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the

available payment accepting unit of the one or more payment accepting units.

Ex. 1001, 47:17–26.

Patent Owner argues that Petitioner fails to show that Zhou or Zhou combined with Athwal teaches this limitation. Prelim. Resp. 17–22. Taking into account Patent Owner’s argument, on this record, we determine that Petitioner has sufficiently shown that the prior art teaches this limitation. Pet. 28–31, 47–48.

Zhou discloses that if a VENDING MACHINE APPROVED message is displayed on a vending machine application on a user’s device, then the user can complete the transaction. Ex. 1004, 7:8–10. “The vending machine application presents to the user via the device 10 display various screen displays and prompts to facilitate a transaction with the vending machine.” *Id.* at 5:32–34; *see also id.* at 4:52–58 (“graphical user interface module 72 for presentation of information on the display of the device 10 and receiving user input via the screen display . . .”), 6:12–20 (“provide a prompt to the vending machine application indicating that the vending machine is approved and that completion of the transaction and transfer of sensitive payment information . . . may safely proceed.”).

Based on Zhou’s disclosures, Dr. Neuman testifies²,

A POSITA would have understood that by completing a transaction, including transferring “sensitive payment

² Patent Owner argues that we should give Dr. Neuman’s testimony little weight because Dr. Neuman’s testimony merely repeats attorney argument in the Petition without providing corroboration of supporting technical analysis. Prelim. Resp. 18–20. At this stage of the proceeding, we determine that Dr. Neuman’s testimony is sufficient to show what one of ordinary skill in the art would have understood from the prior art and is

information,” the vending machine application (*i.e., mobile payment application*) of Zhou receives user input that “*trigger[s] payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit.*”

Ex. 1003 ¶ 89.

Given Zhou’s disclosures and Dr. Neuman’s testimony, we determine that Petitioner sufficiently shows that Zhou alone discloses this limitation. *See* Pet. 47–48.

Additionally, Athwal discloses that after a consumer selects a product to buy, the consumer is presented with a bill to verify the purchase and to select an account to use to make the purchase. Ex. 1005 ¶ 17. After verification, payment information and an authorization key are transmitted to a vending machine. *Id.* Based on Athwal’s disclosures, Dr. Neuman testifies:

A POSITA would have understood a user selecting to transmit payment account information and an authorization to constitute receiving user input ‘*trigger[ing] payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit.*’

Ex. 1003 ¶ 90. Petitioner contends, relying on the testimony of Dr. Neuman that, “[i]mplementing the features of Athwal would have improved the security and efficiency, and reduced the cost, of Zhou’s method for conducting transactions with automated vending machines.” Pet. 28–31 (citing Ex. 1003 ¶¶ 50–51).

On this record, we are persuaded that Petitioner sufficiently shows that it would have been obvious to one of ordinary skill in the art to combine

sufficiently supported by the cited prior art itself. During trial, Patent Owner will have the opportunity to cross-examine Dr. Neuman.

Athwal's teaching of prompting a user to verify a purchase and select a payment account to trigger a payment with Zhou's teaching of presenting prompts on a screen display to facilitate a transaction. *See* Pet. 28–31 (citing Ex. 1003 ¶¶ 50–54).

b) Limitation 1(e)

Limitation 1(e) recites: “after establishing the wireless communication path, enabling user interaction with the user interface of the mobile payment application to complete the transaction.” Ex. 1001, 47:32–35.

Patent Owner argues that Petitioner fails to show that Zhou teaches this limitation. Prelim. Resp. 22–24. Taking into account Patent Owner's argument, on this record, we determine that Petitioner has sufficiently shown that the prior art teaches this limitation. Pet. 51–52.

Zhou teaches that when a user is near a vending machine, “[t]he vending machine application presents to the user via the device 10 display various screen displays and prompts to facilitate a transaction with the vending machine.” Ex. 1004, 5:32–34. After establishing wireless communication with the vending machine, the vending machine application obtains product information from the vending machine and presents it on the device's display. *Id.* at 5:35–41. After the vending machine is authenticated, the device presents prompts to the user to complete the transaction. *Id.* at 7:37–39.

On this record, we determine that Petitioner sufficiently shows that Zhou teaches limitation 1(e). *See* Ex. 1003 ¶¶ 96–97.

c) Limitation 1(g)

Limitation 1(g) recites: “after exchanging the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.” Ex. 1003, 47:39–41.

Patent Owner argues that Petitioner fails to show that Zhou or Zhou combined with Athwal teaches limitation 1(g). Prelim. Resp. 22–24. Taking into account Patent Owner’s argument, on this record, we determine that Petitioner has sufficiently shown that the prior art teaches this limitation. Pet. 28–31, 54–55.

Zhou “presents to the user via the device 10 display various screen displays and prompts to facilitate a transaction with the vending machine.” Ex. 1004, 5:32–34. After a vending machine is authenticated, the display shows “VENDING MACHINE APPROVED.” *Id.* at 7:1–14. Dr. Neuman testifies that: “A POSITA would have understood that these messages are dependent on the result of the authentication process, and thus must occur after exchanging the challenge and response information . . .” Ex. 1003 ¶ 102.

On this record, we determine that Petitioner sufficiently shows that Zhou discloses limitation 1(g). *See* Pet. 54.

Additionally, Athwal discloses a user of a mobile device receiving “positive feedback if the funds have transferred correctly.” Ex. 1005 ¶ 29. “If the ERSS [Electronic Retail System Software] has provided positive feedback, the ERS 120: a) Sends 5 a WES to the customers [sic] MCD 110 informing the customer that the transaction has been completed successfully; [and] b) Provides 5 an electronic receipt to the MCD 110.” Ex. 1005 ¶¶ 30–32.

Dr. Neuman testifies:

A POSITA would have understood sending a notification to the mobile device informing the customer that the transaction has successfully completed as well as an electronic receipt constitutes or renders obvious “*displaying . . . an updated user interface of the mobile payment application.*”

Ex. 1003 ¶ 103. Petitioner contends, relying on the testimony of Dr. Neuman, that “[i]mplementing the features of Athwal would have improved the security and efficiency, and reduced the cost, of Zhou’s method for conducting transactions with automated vending machines.” Pet. 28–31 (citing Ex. 1003 ¶¶ 50–51).

On this record, we are persuaded that Petitioner sufficiently shows that it would have been obvious to one of ordinary skill in the art to combine Athwal’s teaching of providing positive feedback that a transaction has been completed with Zhou’s teaching of presenting prompts on a screen display to facilitate a transaction. *See* Pet. 28–31 (citing Ex. 1003 ¶¶ 50–54), 54–55.

d) Limitation 11(b)

Claim 11, limitation 11(b) requires: “wherein the user interface of the mobile payment application, after establishing the wireless communication path, includes: a visual representation of the available payment accepting unit.” Ex. 1001, 48:21–25.

Patent Owner argues that the Petition does not sufficiently explain how Zhou teaches this limitation. Prelim. Resp. 28–30. Taking into account Patent Owner’s argument, on this record, we determine that Petitioner has sufficiently shown that the prior art teaches this limitation. Pet. 86 (referencing analysis for limitations 1(c) (Pet. 42–48) and 1(g) (Pet. 54–55)).

Zhou discloses displaying a “VENDING MACHINE APPROVED” message after a vending machine is authenticated. Ex. 1004, 7:1–14.

Dr. Neuman testifies that: “A POSITA would have understood that these messages are ‘*visual representation[s] of the available payment accepting unit.*’” Ex. 1003 ¶ 155.

On this record, we determine that Petitioner sufficiently shows that Zhou discloses limitation 11(b).

e) Limitation 11(c)

Claim 11, limitation 11(c) requires: “wherein the user interface of the mobile payment application, after establishing the wireless communication path, includes: . . . an indication of a prepared balance.” Ex. 1001, 48:21–26.

Patent Owner argues that the Petition does not sufficiently explain how the combination of Zhou and Freeny teaches limitation 11(c). Prelim. Resp. 31. Taking into account Patent Owner’s argument, on this record, we determine that Petitioner has sufficiently shown that the prior art teaches limitation 11(c). Pet. 84–85, 88–89.

Freeny discloses a customer performing a “customer bank balance request after the customer is connected to their bank.” Ex. 1009, 9:32–35. An approved credit amount “can be checked at any time by the user of the proximity authorization unit.” *Id.* 38:3–5. Dr. Neuman testifies that: “A POSITA would have understood displaying an approved credit amount and credit balance constitutes ‘*indication[s] of a prepared balance.*’” Ex. 1003 ¶ 159. Dr. Neuman also indicates that it would have been obvious to a POSITA to combine Zhou and Freeny because the combination represents applying known techniques to a known device ready for improvement to yield predictable results and Freeny’s teachings would benefit the system in Zhou. Ex. 1003 ¶ 66.

On this record, we are persuaded that Petitioner sufficiently shows that it would have been obvious to one of ordinary skill in the art to combine Freeny's teaching of displaying a bank balance or an approved credit amount with Zhou's teaching of presenting prompts or information on a screen display to facilitate a transaction. *See* Pet. 84–85 (citing Ex. 1003 ¶ 66).

3. *Conclusion as to Claim 11*

After considering the Petition, the Preliminary Response, and all of the cited evidence of record, we determine that Petitioner shows a reasonable likelihood that claim 11 is unpatentable over Zhou, Athwal, Low, Arora, Casey, and Freeny.

III. CONCLUSION

After considering the evidence and arguments presented in the Petition, and taking into account the Preliminary Response, we determine that the information presented in the Petition shows a reasonable likelihood that Petitioner would prevail in establishing that claim 11 is unpatentable.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted for claim 11 of the '772 patent on the unpatentability ground asserted in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this decision.

IPR2023-01449
Patent 11,481,772 B2

FOR PETITIONER:

Jason Mudd
jmudd@shb.com

Mark Schafer
mschafer@shb.com

Kyle Friesen
kfriesen@shb.com

FOR PATENT OWNER:

Matthew Argenti
margenti@wsgr.com

Michael Rosato
mrosato@wsgr.com

Jad Mills
jmills@wsgr.com