

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ALLIANCE LAUNDRY SYSTEMS, LLC,
Petitioner,

v.

PAYRANGE LLC,
Patent Owner.

PGR2025-00027
Patent 11,966,920 B2

Before MEREDITH C. PETRAVICK, JUSTIN T. ARBES, and
GEORGE R. HOSKINS, *Administrative Patent Judges*.

PER CURIAM.

DECISION
Granting Institution of Post-Grant Review
35 U.S.C. § 324

I. INTRODUCTION

Petitioner Alliance Laundry Systems, LLC has filed a Petition (Paper 1, “Pet.”) pursuant to 35 U.S.C. §§ 321–329 to institute a post-grant review of U.S. Patent No. 11,966,920 B2 (Ex. 1001, “the ’920 patent”), claims 1–20.

Patent Owner PayRange LLC requested the Director to exercise her discretion to deny institution, which was opposed by Petitioner. *See* Papers 6, 8, and 10. The Director decided not to exercise that discretion, and referred the case to the Board. *See* Paper 11.

Therefore, we now consider the Petition and Patent Owner’s Preliminary Response (Paper 9, “Prelim. Resp.”). For reasons provided below, we determine on behalf of the Director (*see* 37 C.F.R. § 42.4(a)) that the information presented in the Petition demonstrates it is more likely than not that at least one challenged claim is unpatentable. *See* 35 U.S.C. § 324(a); 37 C.F.R. § 42.208(c). Thus, we grant institution of the petitioned post-grant review.

II. BACKGROUND

A. *Real Parties-in-Interest and Related Proceedings*

Petitioner identifies itself (i.e., Alliance Laundry Systems, LLC) as the real party-in-interest. *See* Pet. 101. Patent Owner identifies itself (i.e., PayRange LLC) as the real party-in-interest. *See* Paper 3, 1.

The parties identify several proceedings as possibly related to the present case. *See* Pet. 1–6; Paper 3, 1–3. One of them is *KioSoft Techs., LLC and TechTrex, Inc. v. PayRange Inc.*, PGR2021-00093, concerning U.S. Patent No. 10,891,614 B2 (“the ’614 patent”) which is a parent to the

'920 patent. *See* Ex. 1001, code (63). 1:16–18. In PGR2021-00093, the Board issued a final written decision on December 14, 2022, determining certain claims of the '614 patent were unpatentable. *See* PGR2021-00093, Paper 38. Patent Owner did not appeal the Board's decision, and the Office issued a post-grant review certificate cancelling the unpatentable claims on March 27, 2023. *See, e.g.*, PGR2021-00093, Paper 39.

B. The '920 Patent Specification

The '920 patent is titled “Method and System for Presenting Representations of Payment Accepting Unit Events.” Ex. 1001, code (54).

The “BACKGROUND” section of the '920 patent specification states that “[a]s the number of people with Internet-connected mobile devices proliferates, so does the variety of uses for such devices.” *Id.* at 1:49, 2:16–18. The '920 patent indicates “[m]obile payment is a logical extension” of such uses, and “[t]here is a large development effort around bringing mobile payment to the retail sector in an effort to not only provide options to the user, but also increased convenience.” *Id.* at 2:18–21.

Thus, the '920 patent describes “a mobile-device-to-machine payment processing system for processing transactions over a non-persistent network connection.” *Id.* at 5:63–6:2. This system may include a “payment accepting unit” — that is, “equipment that requires payment for the dispensing of products and/or services,” such as a vending machine. *Id.* at 1:49–2:4.

The '920 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 6:46–54. 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” and “[i]f the machine is located in a location where no network connection is available, cashless payments [are] not possible.” *Id.* at 6:60–64. The ’920 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 a network. *Id.* at 5:64–6:2, 6:64–7:12.

At the same time, the described system in the ’920 patent seeks to minimize or even eliminate user interaction with the mobile device. *See id.* at 6:64–7:3. Thus, a mobile application on the mobile device “automatically connects to the payment accepting unit” via a short range radio communication such as Bluetooth “when the user is within range” of the unit. *Id.* at 7:19–22, 7:45–48, 10:2–15, 14:54–63 (Fig. 5). In particular, according to the ’920 patent, the payment accepting unit “advertises its presence by broadcasting signals” to initiate “an initial handshake” with a mobile device when the mobile device is within range. *Id.* at 10:55–59, 16:53–59, 18:42–19:4 (Figs. 1 and 2), 20:39–50, 23:29–43 (Fig. 2), 25:23–37 (Figs. 8A–8B).

Then, if the mobile device is in “manual mode,” the application causes the mobile device to display the user’s “prepaid balance” on the mobile device’s touch screen, which “the user ‘swipes’ to transfer payment

to the payment accepting unit” for a product or service selected for purchase by the user.¹ *Id.* at 7:13–33, 19:45–53.

This is shown, for example, in Figure 10C of the ’920 patent, reproduced below.

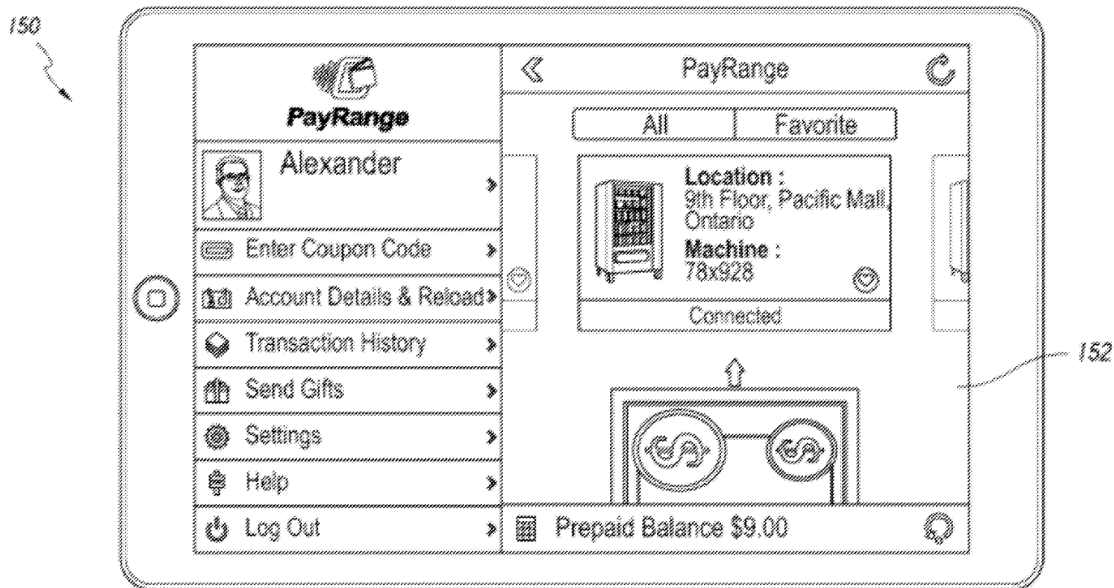


Figure 10C
The ’920 Patent, Figure 10C.

Figure 10C shows mobile device 150 including a user interface (i.e., touch screen 152) controlled by a mobile application implementing the system of the ’920 patent. *See id.* at 4:49–53, 9:18–20, 24:53–55, 36:34–38.

Figure 10C shows the user interface including “a visual indication of the payment accepting unit 120 (e.g., a picture and/or a payment accepting unit ID of the payment accepting unit 120) for visual confirmation,” wherein “the

¹ In a different “hands-free mode,” the application automatically causes the payment accepting unit to display the funds available to the user without requiring the user to interact with the mobile device to transfer payment to the unit. *See Ex. 1001, 2:25–29, 7:34–60, 16:40–65.*

user can manually change the payment accepting unit 120.” *Id.* at 24:55–59.

Figure 10C also shows how:

the user of the mobile device 150 initiates a transaction with the machine 120 (e.g., vending machine 78x928) by performing a swipe gesture at a location corresponding to the representation of the dollar bill (e.g., a substantially vertical swipe gesture from a location corresponding to the representation of the dollar bill to the top edge of the mobile device 150).

Id. at 36:38–45, Figs. 10C–10D.

Figure 26A of the ’920 patent, reproduced below, shows touch screen 152 upon the successful completion of the purchase transaction initiated in Figure 10C above. *See id.* at 34:18–22, 35:49–55.

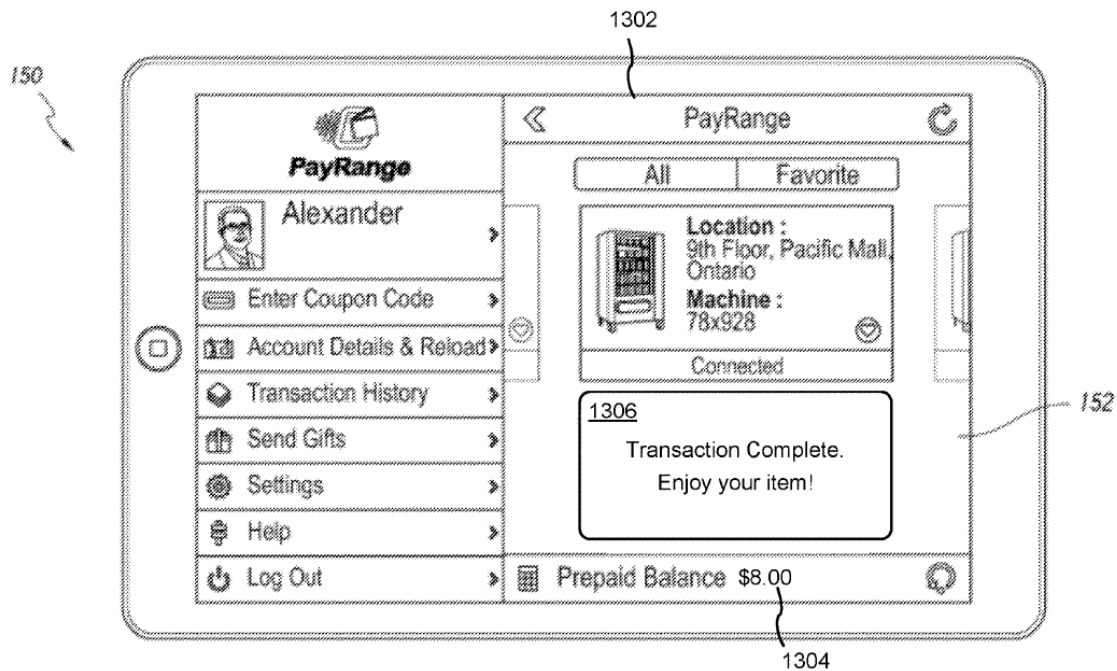


Figure 26A
The ’920 Patent, Figure 26A.

Figure 10C shows mobile device 150 including a user interface (i.e., touch screen 152) including message 1306 that the transaction with the payment accepting unit is complete, and message 1304 that the user’s prepaid balance

has been reduced from \$9.00 in Figure 10C to \$8.00 in Figure 26A as a result of the transaction. *See id.* at 36:46–57, 38:6–12, 38:53–67.

Figures 26B–26D show other examples of touch screen 152 displays to communicate that the purchase transaction was not completed, and that the user’s prepaid balance has not been reduced. *See id.* at 34:22–30, 36:58–37:28, 38:12–18.

C. *The ’920 Patent Claims*

The ’920 patent includes twenty claims, all of which are challenged here. *See Ex. 1001, 47:5–50:42; Pet. 6.* Claim 1 is illustrative, and it recites, with Petitioner’s labeling [1.P]–[1.14] added as utilized by both parties (*see Pet. 14–15; Prelim. Resp. 5 n.3*):

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

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

[1.2] identifying one or more payment accepting units that are available to accept payment from a mobile payment application executing on the mobile device, [1.3] the identifying based at least in part on an identifier or location corresponding to the one or more payment accepting units, [1.4] wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services;

[1.5] displaying a user interface of the mobile payment application on the display of the mobile device, [1.6] the user interface being configured to display a visual indication of the one or more payment accepting units and [1.7] accept user input selecting

an available payment accepting unit of the one or more payment accepting units;

[1.8] 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;

[1.9] after establishing the wireless communication path, enabling user interaction with the user interface of the mobile payment application to complete a transaction with the available payment accepting unit, [1.10] wherein the user interface includes a visual representation of the available payment accepting unit, [1.11] an indication of a balance, and [1.12] an affordance that, in response to a user input, indicates completion of the transaction;

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

[1.14] 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. 1001, 47:6–47.

D. Asserted Prior Art References

Petitioner relies on the following four references as prior art against all claims of the '920 patent. *See* Pet. 6.

Name	Reference	Exhibit No.
Low	US 10,210,501 B2	1005
Arora	US 9,898,884 B1	1006

Name	Reference	Exhibit No.
Freeny	US 8,958,846 B2	1007
Casey	US 8,255,323 B1	1008

Patent Owner does not dispute at this time that these references are prior art against all claims of the '920 patent. *See* Prelim. Resp. *generally*.

E. Asserted Grounds

Petitioner asserts the following three grounds of unpatentability. *See* Pet. 6.

35 U.S.C. §	References / Basis	Claim(s) Challenged
101	Eligibility	1–20
103	Low, Arora, Freeny	1–10, 12–20
103	Low, Arora, Freeny, Casey	11

F. Testimonial Evidence

Petitioner relies on the proffered expert witness testimony of B. Clifford Neuman, Ph.D. (Exhibit 1003). Patent Owner does not rely on opposing expert witness testimony at this time. *See* Prelim. Resp. *generally*.

III. POST-GRANT REVIEW TIMELINESS AND ELIGIBILITY

A. Timeliness of the Petition

A petition for post-grant review of a patent “may only be filed not later than the date that is 9 months after the date of the grant of the patent.” 35 U.S.C. § 321(c). The '920 patent issued on April 23, 2024. *See*

Ex. 1001, code (45). The Petition’s filing on January 17, 2025 (*see* Paper 5) therefore was timely.

B. Post-Grant Review Eligibility of the ’920 Patent

The post-grant review provisions of 35 U.S.C. §§ 321–329 apply only to patents subject to the first-inventor-to-file provisions of the Leahy-Smith America Invents Act² (“the AIA”). *See* AIA § 6(f)(2)(A) (“The amendments made by subsection (d) [enacting 35 U.S.C. §§ 321–329] . . . shall apply only to patents described in section 3(n)(1).”). The first-inventor-to-file provisions of the AIA apply to any patent issuing from an application that contains or contained at any time a claim to a claimed invention that has an “effective filing date” on or after March 16, 2013. *See id.* § 3(n)(1).

The earliest possible effective filing date of the ’920 patent is December 18, 2013. *See* 35 U.S.C. § 100(i)(1) (defining the term “effective filing date”); Ex. 1001, codes (60) and (63). That date is after March 16, 2013, so the ’920 patent is eligible for post-grant review.

IV. PETITIONER’S GROUNDS OF UNPATENTABILITY

A. Legal Standards — Petitioner’s Burden

In a post-grant review, “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) (discussing 35 U.S.C. § 312(a)(3), which is identical to 35 U.S.C. § 322(a)(3) in requiring petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”). This

² Pub. L. No. 112-29, 125 Stat. 284 (2011).

burden of persuasion never shifts to the patent owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

B. Level of Ordinary Skill in the Art

Petitioner contends a person having ordinary skill in the art pertaining to the '920 patent “would have had an educational background of, or practical experience equivalent to, 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.” Pet. 20; Ex. 1003 ¶¶ 20–26. Further: “Lack of work experience can be remedied by additional education, and vice versa.” Pet. 20; Ex. 1003 ¶ 22.

Patent Owner does not oppose Petitioner’s formulation of ordinary skill. *See Prelim. Resp. generally.*

Based on the record presented, including our review of the '920 patent and the types of problems and solutions described in the '920 patent and cited prior art, we agree with Petitioner’s definition and apply it for purposes of this Decision. *See, e.g.*, Ex. 1001, 1:42–2:21 (stating “[t]he present application relates to the field of payment processing systems” and describing the functionality of payment accepting units in the “BACKGROUND” section).

C. Claim Construction

We interpret the '920 patent claims “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.200(b). This “includ[es]

construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

Petitioner argues “the Board need not construe any claim terms to resolve the parties’ disputes.” Pet. 20.

Patent Owner argues: “No constructions are necessary to deny institution because denial is warranted for numerous reasons that do not depend on claim construction.” Prelim. Resp. 3. However, as discussed below, several of Patent Owner’s arguments seeking to distinguish claim 1 from Low rely on underlying claim construction positions.

Except as discussed below in connection with those arguments, we determine no explicit construction is needed to resolve the parties’ controversy as to whether institution should be granted here. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

*D. Section 101 — Subject Matter Eligibility
(Claims 1–20)*

Petitioner asserts claims 1–20 of the ’920 patent are unpatentable under 35 U.S.C. § 101 as lacking statutory subject matter. *See* Pet. 6, 74–93. Patent Owner disagrees. *See* Prelim. Resp. 2–3, 24–39. We consider the parties’ competing contentions as to claim 1, and we conclude the information presented in the Petition demonstrates it is more likely than not that claim 1 claims patent-ineligible subject matter despite Patent Owner’s

opposition. Therefore, we grant the petitioned post-grant review as to all grounds and all claims.

I. Legal Standards — Statutory Subject Matter

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. However, the U.S. Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g., Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Court’s two-part framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as: fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes,

such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Court held that “a claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 187; *see also id.* at 191 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Id.* (citation omitted) (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second part of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (quotation marks omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (alterations in original) (quoting *Mayo*, 566 U.S. at 77). “[M]erely

requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

In January 2019, the U.S. Patent and Trademark Office (USPTO) published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”).³ “All USPTO personnel are, as a matter of internal agency management, expected to follow the guidance.” *Id.* at 51; *see also* October 2019 Update at 1.

Under the Guidance and the October 2019 Update, we first look to whether the claim recites:

- (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes) (“Step 2A, Prong One”); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)) (“Step 2A, Prong Two”).⁴

Guidance, 84 Fed. Reg. at 52–55.

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look, under Step 2B, to whether the claim:

³ We also have considered the October 2019 Patent Eligibility Guidance Update at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf (“October 2019 Update”).

⁴ This evaluation is performed by (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception, and (b) evaluating those additional elements individually and in combination to determine whether the claim as a whole integrates the exception into a practical application. *See* Guidance, Section III(A)(2), 84 Fed. Reg. 54–55.

(3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

Guidance, 84 Fed. Reg. at 52–56.

2. *Claim 1*

Petitioner provides arguments and evidence in support of contending claim 1 is unpatentable as lacking statutory subject matter under 35 U.S.C. § 101. *See* Pet. 6, 74–87. Patent Owner opposes. *See* Prelim. Resp. 2–3, 24–39. For the following reasons, we conclude the information presented in the Petition demonstrates it is more likely than not that claim 1 claims patent-ineligible subject matter despite Patent Owner’s opposition.

(i) *Collateral Estoppel*

Petitioner argues Patent Owner is collaterally estopped from arguing claims 1–6, 8–10, and 13–19 of the ’920 patent are not unpatentable under 35 U.S.C. § 101. *See* Pet. 74–79. According to Petitioner, those claims are “materially identical” to claims of the ’614 patent that the Board determined to be unpatentable under 35 U.S.C. § 101 in PGR2021-00093. *See id.* at 75–78 (citing Ex. 1011, showing a redline comparison of the claims).

Patent Owner disagrees, arguing “Petitioner ignores multiple differences between” the ’920 patent claims challenged here and those of the ’614 patent. *See* Prelim. Resp. 24–29. Patent Owner further contends that “the patent-eligibility inquiry under § 101 ‘requires that the claims be read as a whole’” and “Petitioner cites to no authority that collateral estoppel as

to the issue of patent eligibility can be applied on a limitation-by-limitation basis.” *Id.* at 29.

For the reasons explained below, we conclude, on the merits and based on the current record, that Petitioner has shown it is more likely than not that claim 1 is unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101. *See* Pet. 79–87. Accordingly, we need not determine at this time whether collateral estoppel applies based on the Board’s decision in PGR2021-00093. The parties, however, should address the issue in their papers during trial, with citations to relevant authority. In particular, the parties are encouraged to address (1) how the collateral estoppel requirement that the issue be “identical to one decided in the first action” applies in the context of an asserted ground under 35 U.S.C. § 101, and (2) the parties’ apparent disagreement as to whether collateral estoppel may be applied in such circumstances on a “limitation-by-limitation basis.” *See* Pet. 74, 78 (quoting *Google LLC v. Hammond Dev. Int’l, Inc.*, 54 F.4th 1377, 1381 (Fed. Cir. 2022)); Prelim. Resp. 29; *see also* *Kroy IP Holdings, LLC v. Groupon, Inc.*, –F.4th –, No. 2023-1359, 2025 WL 2178321, at *4 (Fed. Cir. Aug. 1, 2025) (Dyk, J., dissenting) (“In subsequent Board proceedings, it is well established that collateral estoppel applies to claims adjudicated by the Board to be unpatentable and also to ‘related claims that present identical issues of patentability,’ i.e., patentably indistinct claims. . . . ‘It is well established that patent claims need not be identical for collateral estoppel to apply.’” (citing *MaxLinear, Inc. v. CF CRESPE LLC*, 880 F.3d 1373, 1377 (Fed. Cir. 2018); *Google*, 54 F.4th at 1381)).

(ii) *Step 1: Statutory Category*

We first determine “whether the claim is to a statutory category (Step 1),” namely a process, machine, manufacture, or composition of matter. Guidance, 84 Fed. Reg. at 53–54. Claim 1 of the ’920 patent recites a “method” (Ex. 1001, 47:6–7), which is a “process” that is statutory subject matter under 35 U.S.C. § 101.

(iii) *Step 2A, Prong 1: Whether the Claim Recites an Abstract Idea*

Under Step 2A, Prong 1 of the Guidance, we must determine whether claim 1 recites limitations that fall within any of the recognized categories of abstract ideas. The Guidance identifies certain groupings of abstract ideas that have been recognized under the case law: mathematical concepts, certain methods of organizing human activity, such as fundamental economic principles or practices, and mental processes. Guidance, 84 Fed. Reg. at 52. As part of this inquiry, we must examine the relevant limitations in the context of the claim language as a whole. *Alice*, 573 U.S. at 218 n.3. “The § 101 inquiry must focus on the language of the [a]sserted [c]laims themselves.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016); *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013) (“[T]he important inquiry for a § 101 analysis is to look to the claim.”).

Petitioner argues claim 1 is directed to “identifying a merchant and enabling completion of a purchase from the merchant, which can be performed by a human in the mind or via oral, or written communication with a merchant.” Pet. 80. Claim 1 recites (with number designations used in the Petition):

[1.2] identifying one or more payment accepting units that are available to accept payment from a mobile payment application executing on the mobile device, [1.3] the identifying based at least in part on an identifier or location corresponding to the one or more payment accepting units, [1.4] wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services;

[1.5] displaying a user interface of the mobile payment application on the display of the mobile device, [1.6] the user interface being configured to display a visual indication of the one or more payment accepting units and [1.7] accept user input selecting an available payment accepting unit of the one or more payment accepting units;

[1.8] 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;

[1.9] after establishing the wireless communication path, enabling user interaction with the user interface of the mobile payment application to complete a transaction with the available payment accepting unit, [1.10] wherein the user interface includes a visual representation of the available payment accepting unit, [1.11] an indication of a balance, and [1.12] an affordance that, in response to a user input, indicates completion of the transaction;

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

[1.14] 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. 1001, 47:12–47.

Petitioner addresses each of the limitations above and explains how they support Petitioner's contention that the claim, as a whole, is directed to

the alleged abstract idea. *See* Pet. 80–84. Petitioner argues limitations [1.2] and [1.3] recite “a customer using the generic mobile device to identify a merchant (i.e., a ‘payment accepting unit’) for purchasing goods based on an identifier or its location,” which “can be done completely in the mind of the customer.” *Id.* at 81. Petitioner contends limitation [1.4] merely limits the field of use of the alleged abstract idea to “a generic mobile phone and payment accepting unit,” limitation [1.5] recites a generic “user interface” for performing a purchase, and limitation [1.8] recites generic “radio transceivers” for communication between the mobile device and payment accepting unit. *Id.* at 81–82, 83. Petitioner further argues the user interface functionality in claim 1 “merely ‘takes the place of the human acting as an intermediary,’ communicating with the customer and merchant.” *Id.* at 82. In particular, Petitioner argues the recited functionality is “akin to a customer seeing one or more merchants (limitations [1.6], [1.10]) selecting a merchant (limitations [1.7], [1.9]), seeing the amount of money the customer has in their pocket or that is owed (limitation [1.11]), and allowing the transaction to proceed (limitation [1.12]).” *Id.* at 82–83. According to Petitioner, the ’920 patent specification describes these functions as being “performed using known, generic technology, such as an iPhone 5.” *Id.* at 82 (citing Ex. 1001, 7:13–18, 21:3, 36:14–25, 37:9–12, 38:50–52, 47:39–41). Finally, Petitioner argues limitations [1.13] and [1.14] merely recite “a merchant communicating with a customer about a transaction.” *Id.* at 83.

Patent Owner responds that Petitioner “fails to apply the proper analysis” because the Petition addresses each limitation individually and does not show claim 1 as a whole is “directed to” an abstract idea. *See* Prelim. Resp. 31–33. Patent Owner contends that “at step one [of the *Alice*

inquiry], ‘it is not enough to merely identify a patent-ineligible concept underlying the claim,’ it must be ‘determine[d] whether that patent-ineligible concept is what the claim is “directed to.”’” *Id.* at 33 (quoting *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1050 (Fed. Cir. 2016)) (internal quotation marks omitted, alteration in original). Patent Owner also argues that “simply contending that the claims employ known or conventional components that existed in the prior art at the time of the invention is insufficient to establish that the claim is directed to an abstract idea at step one.” *Id.* at 32 (citing *Contour IP Holding LLC v. GoPro, Inc.*, 113 F.4th 1373, 1380 (Fed. Cir. 2024)). Patent Owner further contends Petitioner “fail[s] to cite to any evidence to support its arguments (apart from unexplained citations to the patent’s specification and case law).” *Id.*

We determine Petitioner has made a sufficient showing for Step 2A, Prong 1 based on the current record. Petitioner addresses each of limitations [1.2]–[1.14] and explains how they support Petitioner’s contention that the claim, as a whole, is directed to the alleged abstract idea. *See* Pet. 80–84. For example, Petitioner notes specifically how limitation [1.2], reciting “identifying one or more payment accepting units,” pertains to identifying a merchant, and how limitations [1.6], [1.7], and [1.9] recite user interaction using the mobile device that enables the completion of a purchase. *See id.* Petitioner thus shows sufficiently how claim 1, by virtue of the limitations reproduced above,⁵ recites the concept of “identifying a merchant and enabling completion of a purchase from the merchant.” *Id.* at 80.

⁵ As explained further below in the context of Step 2A, Prong 2 and Step 2B of the Guidance, claim 1 recites that the method steps are performed “at a

Petitioner also argues persuasively, on this record, that identifying a merchant and enabling completion of a purchase from the merchant is similar to other concepts held to be an abstract idea. *See* Pet. 80–83; *Universal Secure Registry LLC v. Apple Inc.*, 10 F.4th 1342, 1349–50 (Fed. Cir. 2021) (“The claims are directed to a method for enabling a transaction between a user and a merchant, where the merchant is given a time-varying code instead of the user’s secure (credit card) information.”); *cxLoyalty, Inc. v. Maritz Holdings, Inc.*, 986 F.3d 1367, 1376–77 (Fed. Cir. 2021) (“[C]laim 1 is directed to ‘facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant using points in whole or in part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency).’”); *Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1372 (Fed. Cir. 2017) (“Taken together, the Asserted Claims are directed to the formation of financial transactions in a particular field (i.e., mass transit) and data collection related to such transactions.”); *In re AuthWallet, LLC*, No. 2022-1842, 2023 WL 3330298, at *3 (Fed. Cir. May 10, 2023) (“[T]he claims are directed to a method for processing financial transaction data that implements authorization requests and confers discounts and benefits upon the consumer.”); *In re Elbaum*, No. 2021-1719, 2021 WL 3923280, at *2

mobile device with one or more processors, memory, one or more output devices including a display, and one or more radio transceivers,” and also recites “one or more payment accepting units,” a “mobile payment application executing on the mobile device,” and a “user interface” of the mobile payment application displayed on the mobile device. *See infra* Sections IV.D.2(iv)–(v).

(Fed. Cir. Sept. 2, 2021) (“[T]he claim is directed to an abstract idea, specifically a method of providing information and allowing customers to utilize that information to engage in a commercial transaction.”); *Ex parte James*, Appeal No. 2018-005345, 2019 WL 2763407, at *7–8 (PTAB June 21, 2019) (affirming rejection of claims directed to “transmitting information to conduct financial transactions, including writing checks and maintaining an associated account ledger”). Patent Owner in its Preliminary Response does not address the cases cited by Petitioner or explain why they are inapplicable.

Based on the current record, Petitioner has shown sufficiently that claim 1 recites identifying a merchant and enabling completion of a purchase from the merchant, which falls within the enumerated “[c]ertain methods of organizing human activity” grouping of abstract ideas. *See* Guidance, 84 Fed. Reg. at 52.

(iv) Step 2A, Prong 2: Whether the Judicial Exception is Integrated Into a Practical Application

The Guidance provides that, if a claim recites an abstract idea, it must be further analyzed to determine whether the recited judicial exception is integrated into a practical application. Guidance, 84 Fed. Reg. at 53. Specifically, under Step 2A, Prong 2 of the Guidance, a claim reciting an abstract idea is not “directed to” the abstract idea “if the claim as a whole integrates the recited judicial exception into a practical application of that exception.” *Id.* Step 2A, Prong 2 is evaluated by “(a) [i]dentifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and (b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a

practical application.” *Id.* at 54–55. “A claim that integrates a judicial exception into a practical application will apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” *Id.* at 53. One example in which a judicial exception may be integrated into a practical application is when the claim includes “[a]n additional element [that] reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field.” *Id.* at 55.

Petitioner argues: “Other than the abstract idea, [c]laim 1 recites only generic elements: (1) a mobile device; (2) an application executing on the mobile device; (3) a payment accepting unit; and (4) a user interface.” Pet. 84. According to Petitioner, the generically-recited “mobile device,” “mobile payment application,” “one or more payment accepting units,” and “user interface” are “merely used as a tool” to perform the alleged abstract idea and do not integrate the exception into a practical application. *Id.* at 84–85.

Patent Owner responds that claim 1 recites a “specific method that is directed to an improvement over the way conventional payment operated machines can operate.” Prelim. Resp. 33–35. Patent Owner points specifically to the claim limitations reciting the identification of payment accepting units “based at least in part on an identifier or location corresponding to the one or more payment accepting units” (Ex. 1001, 47:12–17); a user interface “configured to display a visual indication of the one or more payment accepting units and accept user input selecting an available payment accepting unit” (*id.* at 47:21–25); after establishing a

wireless communication path, enabling user interaction with the user interface “to complete a transaction with the available payment accepting unit” (*id.* at 47:33–36); and the user interface providing “a visual representation of the available payment accepting unit, an indication of a balance, and an affordance that, in response to a user input, indicates completion of the transaction” (*id.* at 47:37–41). *See* Prelim. Resp. 34. Patent Owner argues that the conventional usage of a payment accepting unit involved the user approaching the unit, determining from the face of the unit what products are available, inserting payment, and inputting a selection into the unit’s user interface. *Id.* at 35 (citing Ex. 1001, 2:5–15). By contrast, according to Patent Owner, the claimed method “provides a user interface that improves upon such a traditional payment operated machine interface by extending its operating range,” “ensures that a user is interfacing with the desired payment operated machine and is able to complete the desired transaction,” and manages issues arising from “multiple users” or “multiple payment accepting units . . . available to [a] user.” *Id.* (citing Ex. 1001, 2:16–21, 9:57–65, 18:23–19:53, 23:9–24:15, 24:19–59).

We determine Petitioner has made a sufficient showing for Step 2A, Prong 2 based on the current record. Claim 1 recites a “mobile device,” “mobile payment application,” “one or more payment accepting units,” and “user interface” as generic components at a high level of generality. And, as Petitioner points out, the ’920 patent specification describes the use of generic technology. *See* Pet. 82. For example, the ’920 patent specification states that “[m]obile devices include, but are not limited to smart phones, tablet or laptop computers, or personal digital assistants (PDAs), smart cards, or other technology (e.g., a hardware-software combination) known or

yet to be discovered that ha[ve] structure and/or capabilities similar to the mobile devices described herein,” and discloses an application on the mobile device that can be “*any* software program(s) capable of implementing the features described herein.” Ex. 1001, 9:9–18 (emphasis added); *see also id.* at 21:2–6 (describing an iPhone 5 as the mobile device).

Petitioner persuasively argues that these components are merely used as a tool to identify a merchant and enable completion of a purchase from the merchant. *See* Pet. 84–85; *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017) (“The ‘focus of the claims’ is on the method of financing, and the recited generic computer elements ‘are invoked merely as a tool.’”); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016) (determining whether the claims at issue were focused on a “specific asserted improvement in computer capabilities” or “a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool”). This includes the requirements in claim 1 for the user interface to include a visual representation of the selected payment accepting unit, an indication of a balance, and an affordance indicating completion of the transaction. *See, e.g.*, Pet. 85.

Patent Owner’s arguments also do not appear, on this record, to be commensurate with the language of claim 1. Patent Owner contends the alleged technical improvement manages issues with “multiple users” and “multiple payment accepting units . . . available to [a] user,” but claim 1 recites a singular “user” of the mobile device and recites “one or more” payment accepting units (thus encompassing only one such unit). *See* Prelim. Resp. 35. Similarly, Patent Owner argues the alleged technical improvement “extend[s] [the] operating range” of a “traditional payment

operated machine interface,” but does not explain why that would be the case. *See id.* It is the subject matter of the claims, not embodiments disclosed in ’920 patent specification, that we analyze. *See ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 769 (Fed. Cir. 2019) (“[A]ny reliance on the specification in the § 101 analysis must always yield to the claim language. . . . [T]he specification cannot be used to import details from the specification if those details are not claimed.”).

Finally, to the extent Patent Owner relies on the recited identification of one or more payment accepting units “based at least in part on an identifier,” the term “identifier” appears only once in the claim and is not used later in any respect, and Patent Owner does not explain why such use of an “identifier” amounts to a technical improvement over the conventional usage of payment accepting units.

Based on the current record, Petitioner has shown sufficiently that claim 1 as a whole, looking at the additional limitations of the “mobile device,” “mobile payment application executing on the mobile device,” “one or more payment accepting units,” and “user interface,” does not integrate the recited abstract idea into a practical application. Petitioner has shown sufficiently that claim 1 is directed to identifying a merchant and enabling completion of a purchase from the merchant.

(v) *Step 2B: Whether the Claim Provides an Inventive Concept*

Under the second step of the *Alice* inquiry, we “scrutinize the claim elements more microscopically” for additional elements that might be understood to “transform the nature of the claim” into a patent-eligible application of an abstract idea. *Electric Power Grp., LLC v. Alstom S.A.*,

830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (quoting *Alice*, 573 U.S. at 222–24). That is, we determine whether the claims include “an ‘inventive concept’ — *i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Alice*, 573 U.S. at 217–18 (quoting *Mayo*, 566 U.S. at 72–73) (alteration in original). The relevant inquiry is whether “additional substantive limitations . . . narrow, confine, or otherwise tie down the claim so that, in practical terms, it does not cover the full abstract idea itself.” *Accenture*, 728 F.3d at 1344–45. If the claimed elements involve “well-understood, routine, [and] conventional activity previously engaged in,” they do not include an “inventive concept.” *Mayo*, 566 U.S. at 72–73. Notably, the patent eligibility inquiry may contain underlying issues of fact. *Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). In particular, “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018).

Consistent with the foregoing, under the Guidance, if a claim has been determined to be directed to a judicial exception at Step 2A, we must evaluate the additional elements individually and in combination at Step 2B to determine whether they provide an inventive concept (*i.e.*, whether the additional elements amount to significantly more than the exception itself). Guidance, 84 Fed. Reg. at 56. We must consider in Step 2B whether an additional element or combination of elements: (1) “[a]dds a specific limitation or combination of limitations that are not well-understood,

routine, conventional activity in the field, which is indicative that an inventive concept may be present,” or (2) “simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.” *Id.*

Petitioner argues claim 1 recites “a well-understood, routine, and conventional wireless mobile device” that “uses well-known, routine, and conventional elements to carry out the abstract idea” which is “identifying a merchant and enabling completion of a purchase from the merchant,” citing supporting testimony from Dr. Neuman. Pet. 85–87 (citing Ex. 1003 ¶¶ 287–320). As to the combination of recited elements, Petitioner contends:

Taken as a whole, the steps of using a generic mobile phone to identify some information, display some information on the user interface of the mobile phone, accept user input via the user interface, and process and incorporate that user input, and then generally communicate with one or more other generic devices was well-understood, routine, and conventional.

Id. at 87 (citing Ex. 1003 ¶¶ 291–299).

Patent Owner refers to its earlier arguments regarding an alleged technical improvement, arguing that “the specific user interface elements and how those elements interact with the payment operated machine provide an improvement over traditional operation of such machines, which required a user to interact with a user interface provided on the machine itself.” Prelim. Resp. 36–37. Patent Owner further contends that claim 1 “provide[s] a ‘concrete, specific solution’ to the operation of payment operated machines by reciting specific steps and user interface elements that enable the identification of and connection to an available machine and

ensure the completion of a transaction with the machine through the mobile device’s user interface.” *Id.* at 37 (citing *CosmoKey Solutions GmbH & Co. KG v. Duo Security LLC*, 15 F.4th 1091, 1096, 1099 (Fed. Cir. 2021)).

Patent Owner moreover relies on “the particular user interface elements” recited limitations [1.10]–[1.12] of claim 1. *Id.* Those elements include a visual representation of the selected available payment accepting unit, an indication of a balance, and an affordance indicating completion of the transaction. *See* Ex. 1001, 47:37–41. Patent Owner asserts “Petitioner does not even attempt to show that these elements were ‘well-understood, routine, [and] conventional,’” so the Petition here is deficient for the same reasons that the Board concluded the petition in PGR2021-00093 failed with respect to dependent claims 11 and 12 of the ’614 patent. Prelim. Resp. 37–38 (citing Pet. 86–87; PGR2021-00093, Paper 38, at 46–47).

We determine Petitioner has made a sufficient showing for Step 2B based on the current record. Petitioner explains, with supporting testimony from Dr. Neuman, why claim 1 merely recites generic and conventional computer components (i.e., “mobile device,” “one or more processors,” “memory,” “one or more output devices including a display,” “one or more radio transceivers,” “one or more payment accepting units,” “application,” “user interface”) and functionality (i.e., “wireless communication path”) for identifying a merchant and enabling completion of a purchase from the merchant. *See* Pet. 85–86; Ex. 1003 ¶¶ 287–320; *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (“[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.”); *see also Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1341 (Fed. Cir.

2017) (holding that the claims at issue, which “recite[d] both a generic computer element — a processor — and a series of generic computer ‘components’ that merely restate their individual functions, . . . merely describe the functions of the abstract idea itself, without particularity,” which is “not enough under step two”); *Mortgage Grader*, 811 F.3d at 1324–25 (holding that “generic computer components such as an ‘interface’ . . . do not satisfy the inventive concept requirement”).

Dr. Neuman’s opinion that the recited components were well-understood, routine, and conventional is supported by disclosures in the ’920 patent specification. *See, e.g.*, Ex. 1003 ¶¶ 294 (a processor, memory, output device with a display, and radio transceiver are all “necessary for operation of, and found in, a conventional mobile device”), ¶ 295 (mobile device user interfaces, such as a keypad or touch screen, were well-known), ¶ 297 (payment accepting units, such as vending machines, parking meters, tool booths, etc., were well-known), ¶ 298 (wireless communication between a mobile device and vending machine, such as via Bluetooth, was well-known) (citing Ex. 1001, 1:51–52, 2:5–15, 9:14–22, 9:34–39, 9:55–57, 10:2–20, 10:36–43, 12:30–39).

We also disagree with Patent Owner’s arguments on this record. Patent Owner does not identify or explain in any detail what “specific steps and user interface elements,” or “specific” interactions with a payment operated machine, constitute an inventive concept. *See* Prelim. Resp. 37. Further, to the extent Patent Owner’s position is based on steps that enable the “identification” of an “available machine” and “ensure the completion of a transaction with the machine,” that is the abstract idea itself, not a specific limitation *beyond the judicial exception*, i.e., additional elements. *See id.*

“[A] claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.” *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). Finally, the case relied upon by Patent Owner, *CosmoKey*, is distinguishable because the claims at issue recited “a specific improvement to authentication,” where the patent “disclose[d] a technical solution to a security problem in networks and computers” and described how the claimed steps “provide[] a technical improvement over conventional authentication methods.” 15 F.4th at 1098–99. Patent Owner does not point to, and we do not see, any similar technical problem or solution with respect to claim 1 of the ’920 patent.

As to the Board’s decision in PGR2021-00093, claims 11 and 12 of the ’614 patent survived the § 101 challenge there by virtue of reciting that the user interface includes “an affordance that *when slid*, indicates the initiation of the vending transaction.” PGR2021-00093, Paper 38, at 46–47 (emphasis added); *see also id.* at 47 (“*Simply asserting that swiping as a general concept was known* does not explain adequately . . . (emphasis added)). By contrast, limitations [1.10]–[1.12] in claim 1 of the ’920 patent do not recite that the user interface incorporates a swiping action, and instead recites only that in response to “user input” the affordance indicates completion of the transaction. *See Ex. 1001*, 47:37–41. Moreover, Dr. Neuman’s testimony specifically addresses how those limitations were well-understood, routine, and conventional. *See Pet.* 86–87 (citing, *inter alia*, *Ex. 1003* ¶¶ 306–308, 314–317).

Based on the current record, Petitioner has shown sufficiently that the limitations of claim 1, viewed individually and as an ordered combination,

merely use well-understood, routine, and conventional computer components and functionality to identify a merchant and enable completion of a purchase from the merchant, and that claim 1 does not provide an inventive concept.

(vi) *Conclusion as to Claim 1*

Based on the current record, Petitioner has shown sufficiently that, when considered individually and as an ordered combination, the elements of claim 1 do no more than apply a certain method of organizing human activity, namely identifying a merchant and enabling completion of a purchase from the merchant. *See Alice*, 573 U.S. at 217–18. Petitioner also has shown sufficiently on this record that claim 1 does not recite anything in a manner sufficient to transform that abstract idea into a patent-eligible invention. *See id.* Petitioner has shown on this record that claim 1 is more likely than not unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101.

3. *Claims 2–20*

Petitioner provides arguments and evidence in support of contending claims 2–20 are unpatentable as lacking statutory subject matter under 35 U.S.C. § 101. *See Pet.* 6, 87–93. Patent Owner opposes, relying solely on arguments we have considered above in connection with claim 1, which we have addressed above. *See Prelim. Resp.* 2–3, 24–39.

“When instituting post-grant review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” 37 C.F.R. § 42.208(a). Thus, pursuant to USPTO rules and policy implementing *SAS Inst. Inc. v. Iancu*,

584 U.S. 357 (2018), we “either (1) institute as to all claims challenged in the petition and on all grounds in the petition, or (2) institute on no claims and deny institution.” Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019) (“CTPG”), 5–6, 64.⁶ We “will not institute on fewer than all claims or all challenges in a petition.” *Id.* at 5, 64; *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1359–60 (Fed. Cir. 2018) (stating a decision to institute is “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”).

Thus, because we have decided to grant institution on claim 1, we do the same for claims 2–20. *See supra* Section IV.D.2; 37 C.F.R. § 42.208(a); CTPG 5–6, 64. Further, Patent Owner does not address these claims apart from arguments we have considered above in connection with claim 1, so there is nothing further for us to address with respect to these claims at this time. *See* CTPG 5–6, 64.

4. *Conclusion as to the Section 101 Subject Matter Eligibility Ground*

We conclude the information presented in the Petition demonstrates it is more likely than not that claim 1 claims patent-ineligible subject matter despite Patent Owner’s opposition. Therefore, we grant the petitioned post-grant review as to claims 1–20.

E. *Section 103 — Obviousness over Low, Arora, and Freeny
(Claims 1–10 and 12–20)*

Petitioner asserts claims 1–10 and 12–20 of the ’920 patent are unpatentable under 35 U.S.C. § 103 as having been obvious over Low,

⁶ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

Arora, and Freeny. *See* Pet. 6, 17–19, 21–68. Patent Owner disagrees. *See* Prelim. Resp. 1–2, 3–24.

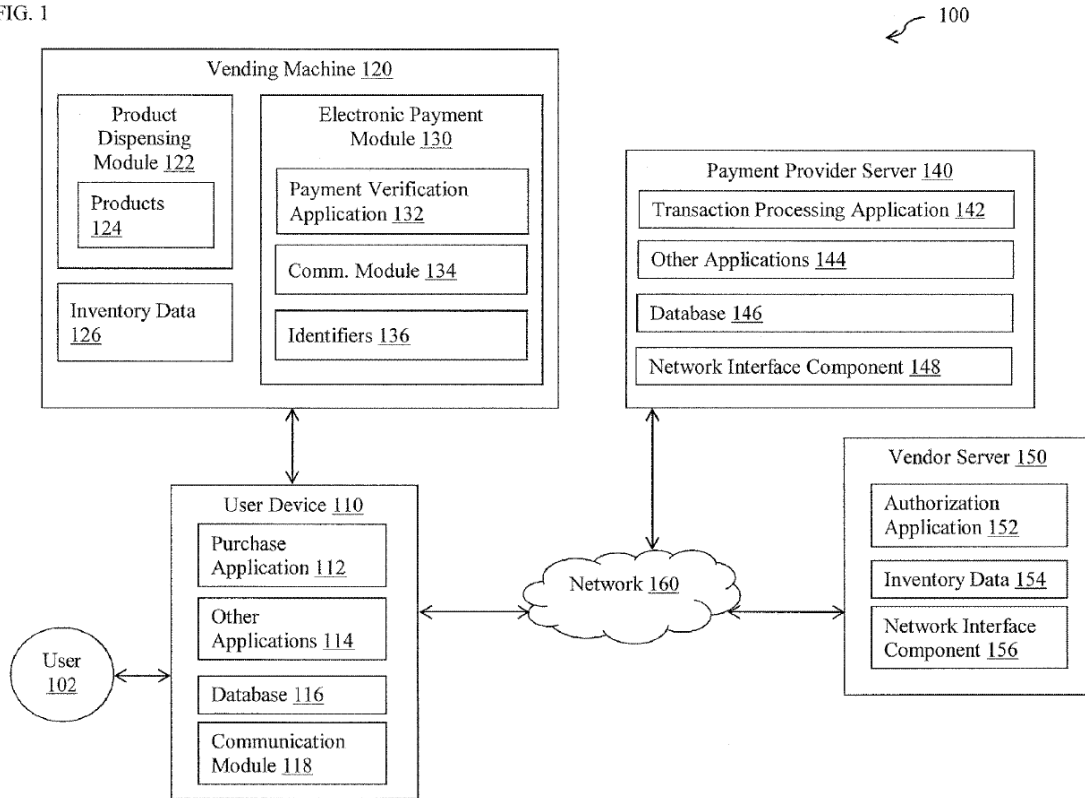
As discussed above, because we have decided to grant institution on Petitioner’s subject matter eligibility ground, we do the same for this obviousness ground. *See supra* Section IV.D.3; 37 C.F.R. § 42.208(a); CTPG 5–6, 64. Nonetheless, we address Patent Owner’s arguments concerning this obviousness ground, to provide guidance to the parties for the upcoming trial. *See* CTPG 6, 64.

I. Low

Low is titled “Electronic Payments to Non-Internet Connected Devices Systems and Methods.” Ex. 1005, code (54).

Low describes how a user device such as a smart phone may be utilized to make wireless electronic payments for purchases at a non-Internet connected machine (“NICM”) such as a vending machine. *See id.* at code (57), 1:17–19, 2:11–20. Figure 1 of Low is reproduced below (on the next page).

FIG. 1



Low, Figure 1.

Figure 1 depicts a block diagram of Low's networked system 100. *Id.* at 1:52–54, 2:63–3:2. System 100 includes user device 110 in wireless communication such as via Bluetooth with vending machine 120 (i.e., a NICM), and also in communication with payment provider server 140 and vendor server 150 through network 160 such as the Internet. *Id.* at 2:11–16, 3:18–25, 4:57–64, 8:48–52. User device 110 has purchase application 112 providing an interface that permits user 102 to select, purchase, and dispense products for sale at vending machine 120. *Id.* at 3:49–51, 3:57–63.

Figure 3 of Low is a flowchart illustrating an exemplary method 300 for user device 110 to make an electronic payment to vending machine 120. *See id.* at 1:59–61, 10:1–5, Fig. 3. In step 302, communication module 118 of user device 110 wirelessly connects to communication module 134 of vending machine 120. *See id.* at 10:5–14, 11:36–43. User device 110 then

receives information about items for sale from vending machine 120, along with “information corresponding to vending machine 120, such as a machine identifier.” *Id.* at 10:5–7, 10:14–17, 11:36–43.

In step 304, user 102 utilizes user device 110 and/or vending machine 120 to select a product to be purchased from vending machine 120. *See id.* at 10:18–34 (“For example, user 102 may utilize user device 110 to view and select a product”), 11:43–55.

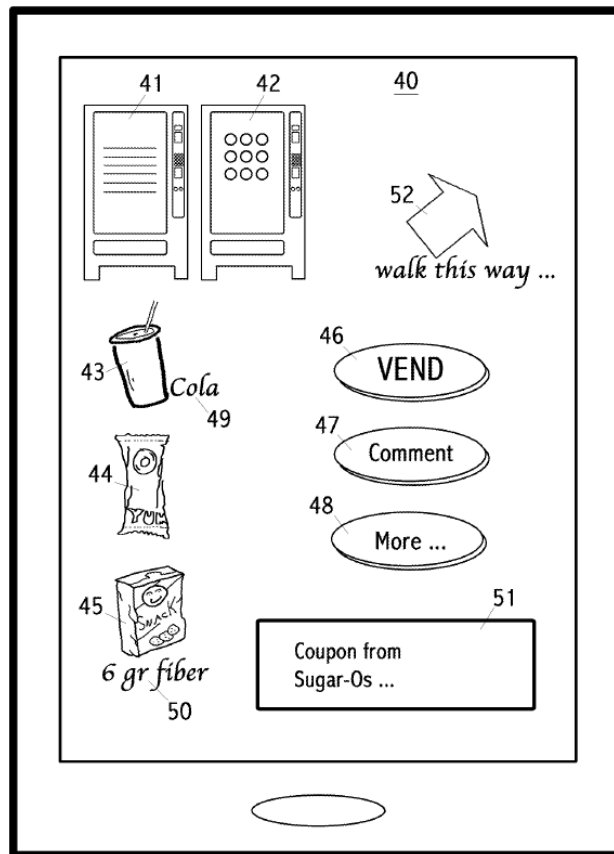
In step 306, user device 110 transmits a purchase request to payment provider server 140 that: includes the machine identifier of vending machine 120; identifies the product to be purchased; identifies a funding source for the purchase; and provides other information. *See id.* at 10:34–44, 11:56–63. Payment provider server 140 processes the purchase request and, if it is approved, in step 308 the server transmits to user device 110 an approval message including a payment authorization. *See id.* at 10:44–61, 11:64–12:8. User device 110 utilizes the payment authorization to cause vending machine 120 to dispense the purchased product. *See id.* at 10:57–61, 12:9–12.

Low further provides that “a user may not know a location of a NICM configured to accept electronic payments.” *Id.* at 9:16–18. In that event, “the user may utilize a user device [110] to access payment provider server 140 and receive locations of available NICMs with lists of available products at each machine” as well as “directions, map coordinates, and/or a GPS location of [a] desired NICM.” *Id.* at 9:18–23.

2. Arora

Arora is titled “Method and System of Personal Vending.” Ex. 1006, code (54). Figure 3 of Arora is reproduced below.

Fig. 3



Arora, Figure 3.

Figure 3 depicts exemplary transaction screen 40 displayed on a personal electronic device configured to communicate with vending machines. *See id.* at Fig. 1 (illustrating personal electronic device 38 and vending machine 31), 11:49–50, 13:8–10, 13:47–48. Screen 40 includes two “icons” or “photographs” 41 and 42 that are representative of actual vending machines co-located with the user of the personal electronic device, and the user “selects which machine she wishes to use by touching icon 41 or 42.” *Id.* at 13:48–54.

3. *Freeny*

Freeny is titled “Communication and Proximity Authorization Systems.” Ex. 1007, code (54). Freeny describes how a customer’s wireless device (e.g., a digital phone) may require finger print or video authorization to perform various control functions such as “control[ling] a customer bank balance request after the customer is connected to their bank.” *Id.* at 9:15–35. Freeny additionally provides a “proximity authorization unit [that] can operate just like a smart card with the approved credit amount stored in the proximity authorization unit,” wherein “the amount can be checked at any time by the user . . . by accessing his account.” *Id.* at 37:58–38:14.

4. *Claim 1*

(i) *Preamble and Limitations [1.1]–[1.4]*

For the preamble limitations [1.1] and [1.4] (assuming the preamble [1.P] is limiting), Petitioner contends Low discloses a method of presenting representations of payment accepting unit events (i.e., vending machine 120 events) at a mobile device (i.e., user device 110) that has a processor, a memory, a display, and a radio transceiver, wherein vending machines 120 accept payment for dispensing of products. *See* Pet. 30–33, 35 (citing Ex. 1005, code (57), Figs. 4 and 5, 3:26–32, 3:40–44, 3:49–60, 4:57–59, 11:11–13, 12:39–56; Ex. 1003 ¶¶ 111–114, 119–120).

For limitations [1.2] and [1.3], Petitioner contends Low’s user device 110 identifies one or more vending machines 120 that are available to accept payment from purchase application 112 executing on user device 110, wherein the identifying is based at least in part on an identifier (i.e., machine identifier 136) or location corresponding to the identified vending machines

120. *See* Pet. 33–35 (citing Ex. 1005, Fig. 1, 2:16–20, 2:26–28, 6:16–21, 9:16–23; Ex. 1003 ¶¶ 115–118).

Patent Owner firstly argues Petitioner “fails to explain . . . how the identifiers 136 identify which of the [vending machines 120] are available to accept payment from the mobile payment application.” Prelim. Resp. 6–7. Patent Owner asserts “limitations [1.2]–[1.3] require identifying a particular type of payment accepting unit — those that are ‘available’ to accept payment from the mobile application.” *Id.* at 7. According to Patent Owner, “it is not enough to show that limitations [1.2]–[1.3] are satisfied by identifying any payment accepting unit” because “the identifying must also identify the payment accepting unit as ‘available’ to accept payment.” *Id.* at 7, 33–36 (citing Ex. 1001, Figs. 1–2, 2:5–21, 9:57–65, 18:23–19:53, 23:9–24:15, 24:19–59). Thus, in Patent Owner’s view, Low falls short of limitations [1.2]–[1.3] because Petitioner does not explain how Low’s machine identifiers 136 “identify payment accepting units that are ‘available’ to accept payment from the mobile payment application.” *Id.* at 7–8 (citing Pet. 33–35; Ex. 1005, 6:16–21).

Based on the current record, we do not agree with Patent Owner’s claim construction that limitations [1.2]–[1.3] require the mobile device to determine the one or more payment accepting units are “available” per claim 1. We conclude it is sufficient for the mobile device to identify a payment accepting unit that is in fact available to accept payment from the mobile device, per the plain language of limitation [1.2] — “*identifying one or more payment accepting units that are available to accept payment* from a mobile payment application executing on the mobile device.” Ex. 1001, 47:12–14 (emphasis added).

We have reviewed the '920 patent disclosures cited by Patent Owner, and they do not reflect that the claimed “identifying” includes an affirmative determination that the payment accepting unit is “available.” *See* Ex. 1001, Figs. 1–2, 2:5–21, 9:57–65, 18:23–19:53, 23:7–24:29. Indeed, those disclosures do not use the term “available” to describe a payment accepting unit. *See id.* Further, we do not discern and Patent Owner does not explain how those disclosures might pertain to identifying some payment accepting units as being “available” versus other payment accepting units being “unavailable,” apart from simply identifying payment accepting units within the wireless communication range of the mobile device. *See* Prelim. Resp. 7, 35. In particular, Patent Owner’s terse descriptions of large swaths of disclosure in the '920 patent specification directed to multiple zone determinations and multiple user scenarios do not explain persuasively how those disparate disclosures relate to “available” payment accepting units in claim 1.⁷ *See id.*

Patent Owner secondly argues Petitioner “fails to explain . . . how Low’s description of receiving locations of available [vending machines 120] is performed ‘via identifiers 136’ as relied on in the [P]etition.” Prelim. Resp. 6–7; *see also id.* at 8–9 (citing Pet. 33–35; Ex. 1005, 9:16–23).

Based on the current record, we conclude Patent Owner fails to account for Petitioner’s alternative arguments in the Petition.

⁷ To the extent the parties disagree as to the meaning of the “available” phrase in the claims, the parties are encouraged to address the issue in their papers during trial and propose an express claim interpretation, citing support in the claim language, specification, and/or prosecution history of the '920 patent.

Limitation [1.3] specifies that the mobile device identifies a payment accepting unit “based at least in part on *an identifier or location*” of the unit. Ex. 1001, 47:14–17 (emphases added). Petitioner’s contentions cover both alternatives separately. Petitioner firstly contends Low’s user device 110 identifies a vending machine 120 using *an identifier* per claim 1 which is the vending machine’s machine identifier 136. *See* Pet. 33–35 (citing Ex. 1005, 2:16–20, 6:16–21). Petitioner secondly contends Low’s user device 110 alternatively identifies a vending machine 120 using its *location* per claim 1 by accessing payment provider server 140 to receive locations of vending machines, including a map and directions to the machines. *See id.* (citing Ex. 1005, 2:26–28, 9:16–23). Petitioner does not argue Low satisfies limitation [1.3] by receiving locations of available vending machines 120 via identifiers 136, as Patent Owner would have it. *See id.*

For the foregoing reasons, Patent Owner’s opposition to Petitioner’s argument for limitations [1.P], [1.1], [1.2], [1.3], and [1.4] is unavailing on the current record.

(ii) *Limitations [1.5] and [1.6]*

For limitations [1.5] and [1.6], Petitioner contends Low’s purchase application 112 displays a user interface on the display of user device 110, including a visual indication of the identified vending machine(s) 120. *See* Pet. 35–36 (citing Ex. 1005, 2:16–20, 2:24–28, 3:57–60, 8:66–9:2; Ex. 1003 ¶¶ 121–124).

Patent Owner firstly argues Petitioner “fails to sufficiently explain how Low’s *machine identifier* — which the [P]etition maps to the claimed ‘visual indication’ — is displayed on the user interface.” Prelim. Resp. 9–10

(citing Pet. 36; Ex. 1005, 2:16–20, 2:26–28, 8:66–9:2). Patent Owner asserts “Low merely describes using this machine identifier as part of the communication transmissions between” user device 110 and payment provider server 140. *Id.* at 10–11 (citing Ex. 1005, 2:23–25, 2:46–49, 8:61–9:4, 9:8–13).

Based on the current record, it is not clear whether Petitioner argues that Low satisfies limitation [1.6] by user device 110 displaying a machine identifier 136 (specifically). *See* Pet. 35–36. Petitioner’s analysis of limitation [1.6] does conclude that Low teaches the device’s interface is configured to display “a visual indication of the one or more payment accepting units (e.g., ‘machine identifier’).” *Id.* at 36 (citing Ex. 1003 ¶ 124 (identical conclusion)). To the extent Petitioner thereby contends Low’s user device 110 specifically displays a machine identifier 136 on its display, we agree with Patent Owner’s argument that the cited disclosures in Low do not support that contention. *See* Ex. 1005, 2:16–20, 2:26–28, 8:66–9:2 (cited at Pet. 36).

However, in the discussion preceding that conclusion, Petitioner more generally asserts Low teaches that when user device 110 receives machine identifiers 136 from multiple vending machines 120, “the user is able to select one or more machines to purchase from” and “*the user device 110 is configured to display the available machines* such that the user is able to interact with the display to select the one or more machines from which to make a purchase.” Pet. 36 (emphasis added). Based on the current record, that more general contention is supported by the cited disclosures in Low.

In particular, Low states that user device 110 utilizes machine identifiers 136 to enable user 102 “to select one or more machines to

purchase from.” Ex. 1005, 2:25–28. Based on the current record, we conclude that in order for the user to select a specific vending machine 120 to make a purchase, user device 110 would necessarily “display a visual indication” of that machine as broadly recited in limitation [1.6] (otherwise the user would not be able to make a selection).

Low further states that user device 110 utilizes machine identifiers 136 “to retrieve a menu of items at the specific machine from the payment provider or an operator of the machine” to be displayed on user device 110 for selection by user 102. *Id.* at 2:16–20, 2:23–25, 3:57–60. This disclosure is consistent with user device 110 displaying a visual indication of a particular vending machine 120 as the machine where the menu of items may be obtained.

Next, Patent Owner argues that “glaringly missing from Low’s disclosure is any depiction of a user interface, let alone what it displays to the user to complete a transaction.” Prelim. Resp. 5, 10 (citing Ex. 1005, Figs. 1–5, 2:16–20, 2:26–28, 8:66–9:2). For example, according to Patent Owner, Petitioner fails to explain “how [Low’s] user device ‘display[s] the available machines’ and what a [person of ordinary skill in the art] would have understood to be displayed as a visual indication of such machines.” *Id.* at 10 (citing Pet. 36).

Based on the current record, we agree with Patent Owner to the extent that Low does not provide much detail concerning exactly what is shown in the display of user device 110 at various times throughout Low’s purchase transaction. At the same time, however, claim 1 also is not very specific on this front. For example, limitation [1.6] merely requires the mobile device to be configured to display “a visual indication of” the identified payment

accepting unit(s), and does not specify exactly when the visual indication must be displayed. Ex. 1001, 47:21–28. As discussed above, Low’s disclosure appears to support Petitioner’s contentions on this record.

For the foregoing reasons, Patent Owner’s opposition to Petitioner’s argument for limitations [1.5] and [1.6] is unavailing on the current record.

(iii) Limitations [1.7] and [1.8]

For limitation [1.7], Petitioner contends Low’s purchase application 112 displays a user interface configured to accept user input selecting an available vending machine 120. *See* Pet. 37 (citing Ex. 1005, 2:16–20, 2:26–28; Ex. 1003 ¶¶ 125–126). For limitation [1.8], Petitioner contends Low’s user device 110 establishes a wireless communication path (e.g., Bluetooth) with the selected vending machine 120. *See id.* at 37–38 (citing Ex. 1005, 2:11–16, 2:38–39, 8:24–28; Ex. 1003 ¶¶ 127–128).

Patent Owner argues limitations [1.7]–[1.8] together “recite an ordered combination in which the user interface first accepts user input selecting an available payment accepting unit [per limitation [1.7]] and *then* a wireless communication path is established between the mobile device and the available payment accepting unit that was selected by the user input [per limitation [1.8]].” Prelim. Resp. 12–13. Patent Owner asserts Petitioner fails to establish Low discloses this ordered combination. *See id.* at 13–14 (citing Pet. 37–38; Ex. 1005, 2:11–20, 2:26–28, 2:38–39, 8:24–28).

Based on the current record, we do not agree with Patent Owner’s claim construction of limitations [1.7]–[1.8] whereby establishing the wireless communication path must occur *after* the user selects an available payment selecting unit. “Unless the steps of a method actually recite an

order, the steps are not ordinarily construed to require one,” although “such a result can ensue when the method steps implicitly require that they be performed in the order written.” *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1342–43 (Fed. Cir. 2001). “[W]e look to the claim language to determine if, as a matter of logic or grammar, [the method steps] must be performed in the order written.” *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (Fed. Cir. 2003).

On this record, we discern no explicit or implicit requirement in the language of claim 1 that limitation [1.8] must be performed after limitation [1.7]. Indeed, in other instances claim 1 specifies that certain steps of the method must be performed “after” other steps. *See* Ex. 1001, 47:33 (“after establishing . . .”), 47:45 (“after exchanging . . .”). There does not appear to be any similar language requiring such an inter-relationship between limitations [1.7] and [1.8]. *See id.* at 47:25–32.

Furthermore, the ’920 patent specification indicates that “the particular order in which the operations in FIGS. 27A–27B [illustrating an exemplary method of presenting representations of payment accepting unit events] have been described is merely for example purposes and is not intended to indicate that the described order is the only order in which the operations could be performed.” Ex. 1001, 37:29–32, 39:38–48. The ’920 patent specification also indicates that, in at least some embodiments, establishing the wireless communication path may occur *before* the user selects an available payment accepting unit. *See id.* at 24:17–60 (discussing a user encountering multiple payment accepting units in the same authorization zone, wherein the user’s mobile device establishes wireless communication with all of the units before the user selects a unit for a

purchase transaction); *see also id.* at 7:13–22 (when a mobile device is in manual mode, it “automatically connects to” a payment accepting unit “when the user is within range”). Thus, Patent Owner’s ordered combination claim construction of limitations [1.7]–[1.8] is not supported by the ’920 patent specification.⁸

As a result, even if Low’s disclosure is limited to establishing a wireless communication path between user device 110 and a selected vending machine 120 before user 102 selects the machine for a purchase, this does not distinguish Low from claim 1.

For the foregoing reasons, Patent Owner’s opposition to Petitioner’s argument for limitations [1.7] and [1.8] is unavailing on the current record.

(iv) *Limitation [1.9]*

For limitation [1.9], Petitioner contends Low’s user device 110, after establishing a wireless communication path with the selected vending machine 120, enables user interaction with the user interface of purchase application 112 to complete a transaction with the selected vending machine 120. *See* Pet. 38–40 (citing Ex. 1005, Figs. 1 and 3, 8:22–28, 10:1–3; Ex. 1003 ¶¶ 129–131).

Patent Owner argues “none of the portions of Low relied upon in the [P]etition explain that *user interaction is enabled ‘to complete a transaction’* after the wireless communication path between the user device and vending

⁸ To the extent the parties disagree as to whether the claim requires a timing relationship between any of limitations [1.7], [1.8], and [1.10], the parties are encouraged to address the issue in their papers during trial, citing support in the claim language, specification, and/or prosecution history of the ’920 patent, as well as supporting case law.

machine is established.” Prelim. Resp. 14 (emphasis added). Patent Owner asserts “Low does not depict or describe in detail the user interface that is provided on the user device 110” as discussed above in connection with limitation [1.6], and “Low is . . . silent on whether user interaction with the user interface of the mobile device is enabled ‘to complete a transaction’ after . . . a communication link has been established.” *Id.* at 15 (citing Ex. 1005, 8:24–28). For example, according to Patent Owner, “Petitioner’s reliance on Low’s Figure 3 does not illuminate what, if any, user interaction is enabled on the user interface ‘to complete a transaction.’” *Id.* at 15–16 (citing Pet. 38–40; Ex. 1005, Fig. 3, 10:5–7, 10:18–29, 10:41–61).

Based on the current record, we agree with Petitioner’s contention that Low’s purchase application 112 enables a user to interact with the user interface of user device 110 to complete a transaction. Specifically, Petitioner cites Figure 3 of Low, which illustrates method 300 for user device 110 to make an electronic payment to a selected vending machine 120. *See* Ex. 1005, Fig. 3, 10:1–5. In step 304 of method 300, “user 102 may utilize user device 110 to . . . select a product” to be purchased from vending machine 120. *Id.* at 10:18–34. Low describes elsewhere that, in order to enable a user to select products to be purchased, user device 110 “retrieve[s] a menu of items at the specific machine [120]” and “[t]he menu is then displayed on the user device [110], and the user selects desired item(s) for purchase.” *Id.* at 2:16–25 (cited at Pet. 35 in relation to the “displaying” limitation [1.5]). This user selection of products to be purchased from a selected vending machine 120 utilizing the user interface of user device 110 is a necessary part of “complet[ing] a transaction” per limitation [1.9].

As discussed above in connection with limitation [1.6], we agree with Patent Owner to the extent that Low does not provide much detail concerning exactly what is shown in the display of user device 110. At the same time, however, claim 1 also is not very specific on this front. For example, limitation [1.9] merely requires the mobile device to enable user interaction with the user interface to complete a transaction, which is satisfied by the disclosures of Low discussed above.

For the foregoing reasons, Patent Owner's opposition to Petitioner's argument for limitation [1.9] is unavailing on the current record.

(v) *Limitation [1.10]*

For limitation [1.10], Petitioner contends: (1) the user interface of Low's purchase application 112 includes a visual representation of the selected vending machine 120; and (2) alternatively, Arora teaches a mobile device user interface including a visual representation of an available vending machine such that it would have been obvious to modify Low's purchase application 112 to provide such a visual representation. *See* Pet. 41–44 (citing Ex. 1005, 2:16–20, 2:26–28, 8:66–9:2, 9:16–21; Ex. 1006, Fig. 3, 13:47–54; Ex. 1003 ¶¶ 132–138). For the latter contention, Petitioner asserts various motivations to combine Low and Arora with a reasonable expectation of success. *See id.* at 21–22, 23–26, 29–30 (citing Ex. 1005, 3:20–23, 3:57–4:2, 6:16–22, 9:14–23; Ex. 1006, Fig. 3, 13:47–52; Ex. 1003 ¶¶ 69–73, 79–90, 108–110).

Patent Owner argues both of Petitioner's theories are flawed because they are “premised on a fundamental misreading of” limitation [1.10] “that addresses the limitation in isolation, rather than in the context of the claim as

a whole.” Prelim. Resp. 16–17. Patent Owner argues Petitioner relies on Low and Arora as teaching “the visual representation of vending machines *from which the user can select to purchase from*” for limitation [1.10], but this “is, at best, relevant to limitation [1.6],” rather than limitation [1.10]. *Id.* at 17. In support, Patent Owner asserts limitations [1.6]–[1.7] recite “a ‘user interface’ that is ‘configured to display a visual indication of the one or more payment accepting units’ for accepting user input selecting an available payment accepting unit.” *Id.* Patent Owner asserts limitation [1.10], by contrast, “goes beyond the visual display of limitation [1.6] by requiring the visual representation of a particular payment accepting unit: the available payment accepting unit *that was selected by the user input*” per an antecedent basis found in limitation [1.7]. *Id.* at 17–18.

Patent Owner next asserts Petitioner’s combination of Low and Arora “completely omit[s] this requirement of” limitation [1.10]. *Id.* at 17. In particular: “[F]or both Low and Arora, Petitioner relies on alleged teachings in which a user seeks to *select* a vending machine *prior to* initiating a transaction” in relation to limitation [1.10]. *Id.* at 18–20 (citing Pet. 41, 42; Ex. 1006, 13:49–54).

Based on the current record, we do not agree with Patent Owner’s claim construction requiring the “visual representation” of limitation [1.10] to be displayed *after* the user selects an available payment accepting unit. “Unless the steps of a method actually recite an order, the steps are not ordinarily construed to require one,” although “such a result can ensue when the method steps implicitly require that they be performed in the order written.” *Interactive Gift Express*, 256 F.3d at 1342–43.

On this record, we discern no explicit or implicit requirement in the language of claim 1 that limitation [1.10] must be performed after the user selects an available payment accepting unit. The only timing requirement imposed on limitation [1.10] is that it must be performed “after establishing the wireless communication path.” Ex. 1001, 47:33–41. Patent Owner correctly points out that limitation [1.10] refers to “a visual representation of *the* available payment accepting unit” (*id.* at 47:37–38 (emphasis added)), which has antecedent basis in the previously-recited *selected* unit (*id.* at 47:6–38). However, that appears to merely define which one of the units is displayed, not *when* it is displayed.

Reading the claim language in this manner does not render limitations [1.6] and [1.10] redundant, as Patent Owner would have it. Limitations [1.5]–[1.7] introduce a “user interface” for the mobile device, and specify the user interface is “*configured to display* a visual indication of the one or more payment accepting units and accept user input selecting an available payment accepting unit of the one or more payment accepting units.” *Id.* at 47:21–27 (emphasis added). Limitations [1.5]–[1.7] only recite “displaying” the “user interface”; they do not recite under what condition(s) the display must be made. *See id.* Limitation [1.10] then adds that the method comprises, after establishing a wireless communication path, “*enabling* user interaction with the user interface . . . wherein the user interface *includes* [that is, actually displays] a visual representation of the available payment accepting unit.” *Id.* at 47:33–38 (emphases added).

Thus, we conclude at this time that limitation [1.10] is satisfied if the “visual representation” is displayed during the user’s selection of an available payment accepting unit, after a wireless communication path is

established between the mobile device and the available payment accepting unit. Thus, even if Petitioner's combination of Low and Arora is limited to user device 110 displaying a visual representation of a selected vending machine 120 during the process of the user selecting the machine, this does not distinguish the combination from claim 1.

For the foregoing reasons, Patent Owner's opposition to Petitioner's argument for limitation [1.10] is unavailing on the current record.

(vi) *Limitation [1.11]*

For limitation [1.11], Petitioner contends: (1) Low "strongly implies" and "teaches" that the user interface of purchase application 112 includes an indication of a balance; and (2) alternatively, Freeny teaches a mobile device user interface including an indication of a balance such that it would have been obvious to modify Low's purchase application 112 to provide such an indication. *See* Pet. 44–45 (citing Ex. 1005, 10:34–38, 11:56–66; Ex. 1007, 9:32–35, 38:3–5; Ex. 1003 ¶¶ 139–143). For the latter contention, Petitioner asserts various motivations to combine Low and Freeny with a reasonable expectation of success. *See id.* at 21, 22, 23, 27–30 (citing Ex. 1005, 3:20–23, 3:57–4:2, 10:34–38, 11:64–66; Ex. 1007, 9:32–35, 9:60–10:2, 38:1–5; Ex. 1003 ¶¶ 74, 79, 98–110).

Patent Owner argues Petitioner's theories for limitation [1.11] are "similarly deficient" as Petitioner's theories for limitation [1.10], because both of these limitations are "recited in the context of the user interface that enables user interaction to complete the transaction *after a user has selected the available payment processing unit.*" Prelim. Resp. 20 (emphasis added). Patent Owner asserts Petitioner's combination of Low and Freeny ignores

this claim requirement. *See id.* at 20–23 (citing Pet. 44, 45; Ex. 1005, 10:34–38, 11:56–66; Ex. 1007, 6:11–31, 9:32–35, 37:60–38:7).

Based on the current record, we do not agree with Patent Owner’s claim construction requiring the balance indication of limitation [1.11] to be displayed *after* the user selects an available payment accepting unit, for substantially the same reasons provided above in the context of limitation [1.10]. Thus, we conclude at this time that limitation [1.11] is satisfied so long as the balance indication is displayed after a wireless communication path is established between the mobile device and the available payment accepting unit. *See* Ex. 1001, 47:33–39; *supra* Section IV.E.4(v).

Patent Owner next argues Petitioner “only discusses [limitation [1.11]] in the abstract — *i.e.*, providing some visual representation of an indication of a balance — and never proposes that any such visual representation would be provided as part of enabling the user to complete the transaction.” Prelim. Resp. 23 (citing Pet. 27–30, 44–45). In Patent Owner’s view, “[b]y failing to identify where in Low’s process (*e.g.*, where in Low’s Figure 3) the user interface enables user interaction to complete the transaction, it is unclear how and why an indication of a balance would be provided with such an interface.” *Id.* For example, Patent Owner asserts Petitioner “fails to provide any explanation as to why checking for adequate funds to meet a purchase request ***by the payment service provider*** ‘strongly implies’ that the ***user device*** provides a visual representation of an indication of a balance.” *Id.* at 21.

In addressing limitation [1.11], Petitioner cites Low’s description of method 300 in Figure 3, particularly: “Once user device 110 has identified a

product, a machine identifier, and/or a transaction number, *user device 110 may request funding source information.*” Ex. 1005, 10:34–38 (emphasis added) (cited at Pet. 44). That request for funding source information is made after step 302 of method 300, in which wireless communication is established between user device 110 and vending machine 120. *See id.* at 10:5–17. Thus, at the point of Low’s purchase process cited by Petitioner as including user device 110 displaying an indication of a balance per the teachings of Freeny, wireless communication already is established between user device 110 and the selected vending machine 120 per limitation [1.11].

Petitioner also cites Low’s description of Figure 4 in addressing limitation [1.11], particularly: “Once the user has selected an item and initiated a purchase request, user device 410 may communicate the purchase request to payment service provider 440” by transmitting “funding source information, such as a user account and/or funding card or account information.” Ex. 1005, 11:56–66 (cited at Pet. 44). That purchase request is made after user device 410 establishes wireless communication with vending machine 420. *See id.* at 11:36–55. Thus, at the point of Low’s purchase process cited by Petitioner as including user device 410 displaying an indication of a balance per the teachings of Freeny, wireless communication already is established between user device 410 and the selected vending machine 420 per limitation [1.11].

For the foregoing reasons, Patent Owner’s opposition to Petitioner’s argument for limitation [1.11] is unavailing on the current record.

(vii) *Limitations [1.12]–[1.14]*

Patent Owner does not dispute Petitioner’s contentions for the remaining limitations [1.12]–[1.14] of claim 1. *See* Pet. 46–49; Prelim. Resp. 3–24. Thus, there is nothing further for us to address in this regard at this time. *See supra* Section IV.D.3; 37 C.F.R. § 42.208(a); CTPG 5–6, 64.

5. *Claims 2–10 and 12–20*

Patent Owner does not address claims 2–10 and 12–20 separately from claim 1 in connection with Petitioner’s obviousness ground. *See* Prelim. Resp. 3–24. Thus, there is nothing further for us to address in this regard at this time. *See supra* Section IV.D.3; 37 C.F.R. § 42.208(a); CTPG 5–6, 64.

F. *Section 103 — Obviousness over Low, Arora, Freeny, and Casey (Claim 11)*

Petitioner asserts claim 11 of the ’920 patent is unpatentable under 35 U.S.C. § 103 as having been obvious over Low, Arora, Freeny, and Casey. *See* Pet. 6, 17–19, 68–73. Patent Owner does not address this ground apart from contentions we have considered above in relation to claim 1, from which claim 11 depends. *See* Prelim. Resp. 1–2, 3–24. Thus, there is nothing further for us to address in this regard at this time. *See supra* Section IV.D.3; 37 C.F.R. § 42.208(a); CTPG 5–6, 64.

V. CONCLUSION

For the above reasons, we determine the information presented in the Petition demonstrates it is more likely than not that at least one challenged claim of the ’920 patent is unpatentable. Therefore, we institute a post-grant

review of all challenged claims 1–20 on all grounds presented in the Petition. *See* 35 U.S.C. § 324(a); 37 C.F.R. § 42.208(a).

At this preliminary stage, the Board has not made a final determination with respect to the patentability of the challenged claims or any underlying factual or legal issue. The Board’s final determination will be based on the record as developed during the post-grant review. Any arguments not raised by Patent Owner in a timely-filed response may be deemed waived.

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 324(a), a post-grant review is instituted for claims 1–20 of the ’920 patent on all grounds presented in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 324(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.

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Patent 11,966,920 B2

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