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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ALLIANCE LAUNDRY SYSTEMS, LLC,
Petitioner,

v.

PAYRANGE LLC,
Patent Owner.

Case No. IPR2025-00950
Patent No. 10,891,608

PATENT OWNER'S PRELIMINARY RESPONSE

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I. INTRODUCTION

The Board should deny institution of *inter partes* review of U.S. Patent No. 10,891,608 (“the ’608 patent”) because Petitioner Alliance Laundry Systems, LLC, fails to demonstrate a reasonable likelihood that at least one of the claims challenged in the petition is unpatentable.¹ 35 U.S.C. §324(a).

This is the third post-grant proceeding challenging the claims of the ’608 patent. The first two proceedings were denied institution on the merits, which included a challenge where the petitioner applied the same primary reference, Breitenbach, that Petitioner applies here. As explained below, the petition’s grounds of challenge in this proceeding fare no better than the previous proceedings that failed to establish that the prior art teaches or suggests the claimed invention. For example, Ground 1 of the petition challenges independent claim 1 as obvious based on a proposed combination of Breitenbach and Brown. However, an express limitation of the claim requires the output of one or more electrical pulses of a specific type—namely, pulses that each “emulat[es] an analog signal generated by [a] coin receiving switch of [an] offline payment-operated machine in

¹ Patent Owner’s brief in support of discretionary denial explains the reasons why the petition should be denied for discretionary reasons. *See generally* Paper 6. This brief addresses the particular reasons why the petition also fails on the merits.

response to insertion of a single coin of a predetermined type in the offline payment-operated machine.” While the petition asserts that Breitenbach teaches this claim limitation, the petition does not point to any disclosure provided in the reference that describes outputting this specific type of electrical pulse. Instead, the petition rests its analysis on a generic disclosure of the output of a “coin-in signal” indicative of the proper payment amount for a desired product and turns to the testimony of its expert who states in conclusory fashion, without corroborating evidence or specific explanation, that this generic signal corresponds to the electrical pulses as claimed. Similar to the deficiencies identified by the Board in the previous two proceedings challenging these same claims, Petitioner’s failure in explaining, with particularity, how the applied prior art teaches the limitations of the claimed invention is insufficient to satisfy Petitioner’s burden in establishing obviousness.

In addition to its reliance on the gap-filling testimony of its expert, the petition includes other deficiencies. For instance, for multiple limitations, the petition combines teachings relating to distinct embodiments of Breitenbach without providing sufficient rationale for why a POSA would have been motivated to combine the teachings to arrive at the claimed invention. The petition also suffers from internal inconsistency, relying on embodiments of Breitenbach as teaching certain limitations of the claims that run counter to the petition’s

purported reasons why a POSA would have modified Breitenbach in view of Brown.

Accordingly, for the reasons detailed below, the Board should deny institution of the petition.

II. CLAIM CONSTRUCTION

In an IPR, claims are given their ordinary and customary meaning in light of the specification. 37 C.F.R. §42.100(b). No constructions are necessary to deny institution because denial is warranted for numerous reasons that do not depend on claim construction, as further detailed below.

III. GROUND 1 OF THE PETITION FAILS

Ground 1 of the petition challenges independent claims 1, 7, and 13 as obvious based on a proposed combination of Breitenbach and Brown. Pet., 5. The petition fails to meet its burden in showing that the combination of Breitenbach and Brown renders obvious these independent claims.

A. The Petition Fails to Show that the Combination of Breitenbach and Brown Renders Obvious Independent Claim 1

The petition fails to establish that the combination of Breitenbach and Brown renders obvious independent claim 1. As explained below, the petition fails to establish that the combination of Breitenbach and Brown teaches numerous limitations recited by claim 1, including:

- “a first interface module configured to output to a control unit of the offline payment-operated machine one or more electrical pulses, each of the one or more electrical pulses emulating an analog signal generated by the coin receiving switch of the offline payment-operated machine in response to insertion of a single coin of a predetermined type in the offline payment-operated machine” (limitation [1.3]);
- a payment module comprising “memory with one or more programs for execution by the one or more processors” (limitation [1.4]);
- in response to a wireless request, “determining a first number of electrical pulses to output via the first interface module to the control unit of the offline payment-operated machine in order to initiate the requested cashless operation of the offline payment-operated machine” (limitation [1.4(c)(i)]);
- in response to the wireless request, “sending operation information corresponding to the initiated operation of the offline payment-

operated machine to the respective mobile device via the short-range wireless transceiver” (limitation 1.4(c)(iii)).²

The petition primarily asserts that Breitenbach teaches these claim requirements, but, to reach these limitations, the petition attempts to gap-fill the teachings of Breitenbach with conclusory testimony, improper mixing-and-matching of embodiments, and inconsistent analysis that, in some instances, contradicts the petition’s own rationale to combine the applied ground references. Moreover, in asserting that a POSA would have been motivated to modify Breitenbach to store pricing data locally on the retrofit device’s memory in view of Brown, the petition relies on a supposed “efficiency” rationale that fails to adequately account for Brown’s approach to achieving such efficiency. For these reasons, and as explained in more detail below, Petitioner fails to meet its burden in proving the obviousness of the challenged claims based on the applied references.

² Petitioner’s labeling for the claim limitations is used throughout this preliminary response.

1. The petition fails to show that the combination of Breitenbach and Brown teaches limitation [1.3]

Limitation [1.3] recites a payment module for an offline payment-operated machine that includes “a first interface module configured to output to a control unit of the offline payment-operated machine one or more electrical pulses,” where each electrical pulse “emulat[es] an analog signal generated by the coin receiving switch of the offline payment-operated machine in response to insertion of a single coin of a predetermined type in the offline payment-operated machine.” The petition relies on Breitenbach as allegedly teaching this limitation. *See* Pet., 30-33. Specifically, the petition argues that Breitenbach teaches a payment module in the form of a retrofit device 120 that outputs one or more electrical pulses to a processing device 410 of the offline payment-operated machine. *See id.*, 26, 31-33. According to the petition, Breitenbach teaches outputting electrical pulses as claimed because Breitenbach teaches that, “if the desired function is dispensing a product, the retrofit device may “fool” the machine by replicating a “coin-in” signal indicative of the proper payment amount for the desired unit of product.” *Id.*, 30 (citing EX1005, 8:47-62) (emphasis omitted).

As explained below, the petition fails to show that Breitenbach’s generic disclosure of outputting a coin-in signal indicative of the proper payment amount teaches electrical pulses as specifically required by the claims because Breitenbach fails to provide any disclosure indicating that its coin-in signal is or includes the

specific electrical pulses recited by the claims and the conclusory testimony of Petitioner's expert is insufficient to remedy this deficiency.

a. The petition fails to identify any disclosure in Breitenbach describing the claimed electrical pulses

First and foremost, the petition fails to identify any disclosure in Breitenbach that describes the coin-in signal as one or more electrical pulses that each emulates “an analog signal” that would be generated by a coin receiving switch of an offline payment-operated machine “in response to insertion of a single coin of a predetermined type.” *See id.*, 30. Breitenbach only describes the retrofit device as “replicating a ‘coin-in’ signal” that is “indicative of the proper payment amount for the desired unit of product,” which says nothing about the make-up of the coin-in signal itself. EX1005, 8:53-62. For example, Breitenbach's description that the retrofit device “replicat[es] a ‘coin-in’ signal” says nothing about whether the signal that is replicated is an *analog* signal (as opposed to, for example, a digital signal) that would be generated by a coin receiving switch of an offline payment-operated machine. *See id.*; *see also* Pet., 24-25 (relying only on Breitenbach's description of a “function device 114” that may include a “payment acceptance mechanism” as teaching a coin receiving switch). Similarly, Breitenbach's description that the coin-in signal is “indicative of the proper payment amount” says nothing about whether the coin-in signal is an electrical pulse or includes electrical pulses that each emulates a signal generated “in response to insertion of a

single coin of a predetermined type” (as opposed to, for example, a signal corresponding to an item purchase amount). *See* EX1005, 8:53-62. Thus, the petition fails to show that ***Breitenbach*** describes outputting “one or more electrical pulses,” where each electrical pulse “emulat[es] an analog signal generated by the coin receiving switch of the offline payment-operated machine in response to insertion of a single coin of a predetermined type in the offline payment-operated machine,” as required by the claims.

b. The petition’s reliance on expert testimony is insufficient

To bridge the gap between Breitenbach’s generic description of a coin-in signal indicative of a proper payment amount and the express claim limitation reciting a particular type of electrical pulse, the only evidence proffered by the petition is the testimony of its expert. *See* Pet., 30 (citing EX1003, ¶¶104-05). However, this testimony is conclusory, uncorroborated, and fails to sufficiently explain how Breitenbach’s coin-in signal meets the claim requirements.

As an initial matter, the petition, and the testimony it relies upon, fails to identify, with particularity, the grounds on which the challenge is based because the petition takes inconsistent positions as to how Breitenbach’s coin-in signal maps to the claimed electrical pulses. *See* 35 U.S.C. §312(a)(3). On the one hand, the petition asserts that “[a] POSA would have understood that a ‘coin-in’ signal *is an electrical pulse* emulating an analog signal generated by the coin receiving

switch of the office payment-operated machine in response to insertion of a coin of a predetermined type”—*i.e.*, the coin-in signal itself is an electrical pulse that emulates the insertion of a single coin of a predetermined type. *Id.* (emphasis added); *see also* EX1003, ¶105 (stating same); Pet., 33 (mapping the coin-in signal to the claim language of “in response to insertion of a single coin of a predetermined type”). However, elsewhere, the petition asserts that “[a] POSA would have understood that replicating a ‘coin-in’ signal indicative of the proper payment amount ... ***constitutes a particular number of electrical pulses*** required to cause the offline payment-operated machine to initiate the requested cashless operation.” Pet., 40 (emphasis added); *see also* EX1003, ¶127 (stating same); Pet., 39. Petitioner’s inconsistent characterizations of Breitenbach’s coin-in signal—*i.e.*, that it is an electrical pulse that emulates the insertion of a single coin of a predetermined type versus it constitutes a particular number of electrical pulses—fails to satisfy the requirement that the petition particularly identify how the prior art teaches the challenged claims.

Regardless, the petition’s assertions that Breitenbach teaches the claimed electrical pulses are based on conclusory and uncorroborated expert testimony and are not supported by Breitenbach. As noted above, Breitenbach simply describes the coin-in signal as a “signal indicative of the proper payment amount for the

desired unit of product.” EX1005, 8:58-62. From this description, the petition concludes:

A POSA would have understood that a “coin-in” signal is an electrical pulse emulating an analog signal generated by the coin receiving switch of the offline payment-operated machine in response to insertion of a coin of a predetermined type. Specifically, a POSA would have understood that, when connected to a conventional coin-operated machine, the retrofit device emulates the number of coins that would need to be deposited for the VMC to initiate an operation by generating a “coin-in” electrical pulse which emulates the analog signal generated by the coin acceptance mechanism (e.g., 114). Ex. 1003, ¶¶ 104-105.

Pet., 30.

The petition’s assertions are insufficient for several reasons. First, the petition concludes, without explanation, that the emulated signal is an *analog* signal. However, as noted above, Breitenbach does not describe the signal as replicating an analog signal. EX1005, 8:58-62. And in terms of any coin acceptance mechanism, the petition only points to Breitenbach’s description that the machine “may include a ‘function device 114’ ... which may include a ‘payment acceptance mechanism.’” Pet., 24-25 (citing EX1005, 6:38-44). It is not clear how a POSA would understand from this description that an *analog* signal (versus a *digital* signal) is produced in response to insertion of a coin, and the petition fails to provide any rationale, corroborated by additional supporting evidence, as to why this would be the case. The only evidence the petition proffers is its expert’s testimony, which merely makes the same conclusory assertion.

EX1003, ¶105. This is insufficient to meet Petitioner’s burden in establishing that the prior art taught the claim limitation. *See Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15 (precedential) (finding citation to declaration testimony that repeats petition’s conclusory assertion without “any additional supporting evidence or provid[ing] any technical reasoning to support [the] statement” is entitled to little weight); 37 C.F.R. §42.104(b)(4) (IPR petitions “must specify where each element of the claim is found in the prior art patents or printed publications relied upon”).

Second, the petition also concludes, without explanation, that a signal indicating the *payment amount* for a product means that the signal is an electrical pulse (or includes electrical pulses) that emulates *a single coin of a predetermined type*, as opposed to, for example, a sum signal that simply represents the proper payment amount. *Cf.* EX1005, 11:35-40 (Breitenbach describing transmission of a signal “representing the determined actual price”); EX1006, 1:60-64 (Brown suggesting a distinction between signals that “indicat[e] that a valid coin or bill has been accepted” and “a sum signal of a total of an amount of money received”).

The petition again only proffers the testimony of its expert as support for its conclusory assertions, who, in turn, largely repeats the petition’s arguments without citing to any additional supporting evidence or providing any technical

reasoning to support his statements. *See Xerox*, IPR2022-00624, Paper 9 at 15; 37 C.F.R. §42.104(b)(4).

Accordingly, Petitioner fails to establish that the combination of Breitenbach and Brown teaches limitation [1.3].

2. The petition fails to show that the combination of Breitenbach and Brown teaches limitation [1.4]

Limitation [1.4] recites that the payment module comprises “memory with one or more programs for execution by the one or more processors.” The petition asserts that Breitenbach teaches this limitation when it “discloses that apparatus 900 may include ‘a memory device 940.’” Pet., 33 (emphasis omitted). As explained below, Petitioner engages in improper mixing-and-matching of different embodiments described in Breitenbach and Petitioner fails to provide sufficient reasoning as to why a POSA would have understood that Breitenbach’s *retrofit device*—which Petitioner relies on as the claimed payment module—includes, or would be modified to include, the memory device 940 of apparatus 900.

First, the “apparatus 900” that the petition relies on for teaching the claimed memory is an embodiment separate from the retrofit device that Petitioner maps to the claimed payment module. This is apparent from how Breitenbach organizes its disclosure, which is divided into several, distinct sections. *See, e.g.*, EX1005, 4:8 (“III. Retrofit Device”), 16:55 (“IV. Interactive Soda Fountains”), 23:12 (“V. Apparatus”), 25:26 (“VI. Articles of Manufacture”). In asserting that Breitenbach

teaches a “payment module for an offline payment-operated machine including a coin receiving switch,” the petition points to Breitenbach’s “retrofit device 120,” which has its own express section—section III, entitled “Retrofit Device.” *See* EX1005, 4:8-29; Pet., 26 (mapping the claimed payment module to “retrofit device 120”). However, “apparatus 900” is described in a different section of Breitenbach—section V, entitled “Apparatus.” *See* EX1005, 23:12; Pet., 33-34. In addition, Figure 9, which illustrates apparatus 900, is a distinct system from Figures 3 and 4, which the petition relies on as teaching a retrofit device having other recited components of the challenged claims. *See* Pet., 27 (annotating Breitenbach’s FIG. 4 for the claimed short-range wireless transceiver), 29 (annotating Breitenbach’s FIG. 3 for the claimed payment module), 32 (annotating FIG. 4 for the claimed first interface module). The petition does not acknowledge this shift in reliance to a different device described in a different section and illustrated in a different figure of Breitenbach nor does it provide any explanation as to how the “apparatus 900” is the same “retrofit device 120” that Petitioner relies on as the claimed payment module. *See* Pet., 33-34.

Indeed, Breitenbach’s description makes it apparent that the apparatus 900 described in section V does not correspond to the retrofit device 120 described in section III. For example, Breitenbach describes apparatus 900 as including components that are distinct from any retrofit device. Specifically, Breitenbach

highlights certain components of apparatus 900—namely, “components 910, 912, 914, 916”—that Breitenbach explains “may be similar and/or equivalent to the similarly named and/or numbered components described with respect to” embodiments described elsewhere. *Id.*, 23:31-36. These similarly numbered components are components that are not part of the described retrofit device 120, including vending machine controller 110, input device 112, function device 114, and communication device 116.³ *Id.*, 4:10-19, FIG. 1. To the extent Breitenbach mentions the retrofit device in connection with apparatus 900, it broadly states that “the apparatus 900 may be similar in configuration and/or functionality to the controller 102, 702, the mobile customer devices 104a-n, 704, and/or retrofit device 120, 720 of FIG. 1 and/or FIG. 7, the apparatus 320 of FIG. 3, and/or the retrofit devices 420, 520, and/or the processing devices 410, 510 of FIG. 4 and/or FIG. 5 herein.” *Id.*, 23:14-21. In other words, Breitenbach only states, at best, that apparatus 900 may be “similar”—not equivalent—in configuration or functionality to the retrofit device in combination with other components and systems described in Breitenbach. Thus, Breitenbach describes apparatus 900 as an embodiment

³ Notably, Breitenbach does not specifically identify any component in apparatus 900 as “similar and/or equivalent” to retrofit device 120. *Id.*, 23:31-36, FIG. 9.

distinct from retrofit device 120 and the petition fails to provide any evidence or explanation establishing that apparatus 900 and its associated components would have been understood to blanketly apply to the retrofit device 120.

When relying on different embodiments of a reference, it is Petitioner's burden to explain why a POSA would have been motivated to combine the elements of the embodiments to arrive at the claimed invention. *See BlephEx, LLC v. Myco Indus., Inc.*, 24 F.4th 1391, 1398-404 (Fed. Cir. 2022) (affirming district court's finding of no substantial question of invalidity where defendant failed to show a POSA would add element from one embodiment to another); *Sibia Neurosciences, Inc. v. Cadus Pharm. Corp.*, 225 F.3d 1349, 1356 (Fed. Cir. 2000) (stating "there must be a showing of a suggestion or motivation to modify the teachings of [a] reference to the claimed invention in order to support the obviousness conclusion" even when applying a single prior art reference); *Abiomed, Inc. v. Maquet Cardiovascular, LLC*, IPR2017-01204, Paper 9, 10-11 (P.T.A.B. Oct. 23, 2017) (denying institution where petitioner "treat[ed] the various features of [the applied reference's] different embodiments as if they [we]re interchangeable with one another" and "fail[ed] to provide a sufficient rationale to combine the teachings of [the reference's] different embodiments").

The petition fails to provide this required analysis. Despite relying on the retrofit device illustrated in Figures 3 and 4 of Breitenbach as teaching other

components recited in the claims (*see* Pet., 27, 29, 32), the petition does not allege (and there is no indication in Breitenbach itself) that the devices shown in these figures include a memory as required by the claim. *See id.*, 33-34. Nevertheless, in alleging that Breitenbach teaches that the *retrofit device* includes a memory as claimed, the petition turns to apparatus 900 and its inclusion of memory device 940. *Id.* The fact that Petitioner must turn to an entirely different figure and separate section of Breitenbach to map its teachings to the claimed memory further highlights the distinction between the different systems shown in each of the figures. The petition fails to address, and even acknowledge, this distinction, let alone provide a reasoned, evidence-based explanation as to how and why the elements in question might be combined. This is insufficient to satisfy Petitioner's burden in establishing the obviousness of the challenged claims.

Accordingly, Petitioner fails to establish that the combination of Breitenbach and Brown teaches limitation [1.4].

3. The petition fails to show that the combination of Breitenbach and Brown teaches limitation [1.4(c)(i)]

Limitation [1.4(c)(i)] recites that, in response to receiving a wireless request from a mobile device to initiate a cashless operation of the offline payment-operated machine, “determining a first number of electrical pulses to output via the first interface module to the control unit of the offline payment-operated machine in order to initiate the requested cashless operation of the offline payment-operated

machine.” The petition asserts that Breitenbach teaches this limitation because (1) “Breitenbach teaches that the retrofit device may discern or calculate the actual price of a desired product” and transmit a signal to the machine “representing the determined actual price” and (2) “Breitenbach also teaches that the retrofit device may cause the machine to dispense a desired product by replicating a coin-in signal indicative of the proper payment amount,” which a POSA would have understood “constitutes a particular number of electrical pulses associated with the price of an item.” Pet., 38-39. However, as explained below, the petition fails to establish Breitenbach teaches the recited claim limitation because (1) the petition’s reliance on Breitenbach’s description of calculating the product price contradicts the petition’s stated purpose for the proposed combination, and (2) the petition fails to provide sufficient evidence and explanation to show that Breitenbach’s coin-in signal constitutes a particular number of electrical pulses.

First, the petition’s reliance on Breitenbach’s teachings relating to calculating the actual price of the desired product is at odds with the petition’s reasons why a POSA would have been motivated to modify Breitenbach in view of Brown. Specifically, the petition acknowledges that “Breitenbach does not expressly teach ‘storing, in the memory of the payment module, a number of electrical pulses that must be received by the control unit to initiate an operation of the offline payment-operated machine’” and thus turns to Brown as teaching this

limitation. Pet., 19-20 (emphasis omitted). The petition asserts that a POSA would have been motivated to modify Breitenbach to store the number of electrical pulses in view of Brown because it would “*eliminat[e] the need* for the retrofit device to *determine the number of electrical pulses that are needed every time a transaction is conducted.*” *Id.*, 22 (emphasis added). The petition also argues that the proposed modification “would reduce the need for the retrofit processing device to ‘ping’ the machine every time it determines the payment amount” and would “improve the speed of the transaction” because pricing data would be stored locally on the memory of the retrofit processing device. *Id.*, 22-23. Thus, according to the petition, by modifying Breitenbach as proposed, the retrofit device would no longer need to “determine the number of electrical pulses” to carry out an operation nor would it need “to ‘ping’ the machine” to determine the payment amount because pricing data would be stored locally on the retrofit device’s memory.

This rationale conflicts with the petition’s assertions that Breitenbach teaches “determining a first number of electrical pulses” for initiating the requested cashless operation. In support of its contentions, the petition relies on Breitenbach’s embodiment where the retrofit device “transmit[s] a credit signal for a specific monetary amount” (*e.g.*, “a small monetary amount such as five cents (\$0.05)”) along with an identifier of the desired product. *See* EX1005, 11:20-27;

Pet., 38 (citing EX1005, 11:20-23). In response, the retrofit device receives “an indication of the amount by which the credited funds are deficient for the purchase of the desired product.” See EX1005, 11:27-32; Pet., 38-39 (citing EX1005, 11:27-33). The petition then argues that Breitenbach teaches that “[t]he retrofit device may then ‘*calculate the actual price of the desired product and/or service*’ and transmit a second credit signal to the machine representing the determined actual price.” Pet., 39 (citing EX1005, 11:32-39) (emphasis original); see also EX1003, ¶122 (further relying on Breitenbach’s description that the retrofit device may “‘ping’ the machine to *derive any actual price metrics*” (citing EX1005, 11:44-47) (emphasis original)).

The petition fails to acknowledge that Breitenbach states that this determination process is performed when the retrofit device has no “‘knowledge’ of and/or direct access to actual prices for products and/or services available at the machine.” EX1005, 11:17-20. That is, because the retrofit device has no “direct access to actual prices for products and/or services” (*e.g.*, pricing data is not stored on the device), the retrofit device must “ping” the machine to “calculate the actual price” of the desired product. See *id.*, 11:32-47. However, as noted above, the petition’s proposed combination purportedly eliminates the need to “determine the number of electrical pulses” and “‘ping’ the machine” to determine the payment amount because pricing data would be stored locally. Pet., 22-23; *cf.* Pet., 38-39;

EX1003, ¶122. Thus, because the petition’s proposed combination removes the need for this functionality, it is unclear how Breitenbach *as modified* teaches “determining a first number of electrical pulses to output” to initiate the requested cashless operation, as claimed.

Second, as explained above with respect to limitation [1.3], the petition also fails to provide sufficient evidence and explanation to show that Breitenbach’s coin-in signal constitutes a particular number of electrical pulses. In addition to inconsistently asserting that the coin-in signal “is an electrical pulse” that emulates a coin of a predetermined type (Pet., 30), the petition fails to sufficiently explain how Breitenbach’s description of a signal indicative of the payment amount for a product means that the signal constitutes a particular number of electrical pulses (as opposed to, *e.g.*, a sum signal of the entire payment amount). *Supra*, §III.A.1.

Accordingly, Petitioner fails to establish that the combination of Breitenbach and Brown teaches limitation [1.4(c)(i)].

4. The petition fails to show that the combination of Breitenbach and Brown teaches limitation [1.4(c)(iii)]

Limitation [1.4(c)(iii)] recites that the memory further includes instructions for, in response to the wireless request, “sending operation information corresponding to the initiated operation of the offline payment-operated machine to the respective mobile device via the short-range wireless transceiver.” The petition asserts that “Breitenbach teaches that the retrofit device may transmit and the

customer device may receive information descriptive of various parameters and/or metrics associated with the vending machine,” such as ““a confirmation of the dispensing of a desired product.”” Pet., 41 (emphasis omitted). Petitioner fails to meet its burden in establishing that Breitenbach teaches the claim limitation because the petition again mixes and matches disclosure associated with different embodiments of Breitenbach without providing sufficient explanation as to why a POSA would have been motivated to combine the teachings to arrive at the claimed invention.

Specifically, the petition relies on portions of Breitenbach that describe processes specific to its embodiments for “Interactive Soda Fountains” (Section IV of Breitenbach). *See* Pet., 41 (citing EX1005, 18:13-46, 19:32-52); EX1005, 16:55. In the cited portions, Breitenbach describes a process 700 for use with a *soda fountain* 708, where a retrofit device 720 may transmit “information descriptive of various parameters and/or metrics associated with the interactive soda fountain 708,” such as “a confirmation of the dispensing of the desired beverage.” EX1005, 19:32-52, FIG. 7. The claims, however, recite a payment module for an offline payment-operated machine “including a coin receiving switch” and the petition relies on Breitenbach’s “machine 108” that may include a “function device 114” having a “payment acceptance mechanism” that is a coin receiving switch. Pet., 24-25. There is no indication in Breitenbach (nor does the

petition allege) that embodiments relating to an interactive soda fountain include a function device 114 having a coin receiving switch. *Cf.* EX1005, 17:51-58 (explaining soda fountain 708 includes “a plurality of function devices 714,” such as a fountain head, syrup containers, syrup motor, syrup solenoid, etc.). The petition does not explain why a POSA would have been motivated to apply Breitenbach’s teachings relating to processes specific to the operation of an interactive soda fountain to other machines, including, more specifically, to a machine having a coin receiving switch. *See BlephEx*, 24 F.4th at 1398-404; *Sibia*, 225 F.3d at 1356; *Abiomed*, IPR2017-01204, Paper 9, 10-11. For this reason, the petition fails to meet its burden in showing that Breitenbach teaches “sending operation information corresponding to the initiated operation of the offline payment-operated machine to the respective mobile device via the short-range wireless transceiver,” as claimed.

Accordingly, Petitioner fails to establish that the combination of Breitenbach and Brown teaches limitation [1.4(c)(iii)].

5. The petition’s rationale to combine Breitenbach and Brown is insufficient

In combining Breitenbach and Brown, the petition acknowledges that “Breitenbach does not expressly teach ‘storing, in the memory of the payment module, a number of electrical pulses that must be received by the control unit to initiate an operation of the offline payment-operated machine,’” but the petition

turns to Brown as allegedly teaching this limitation. Pet., 19-20 (emphasis omitted). According to the petition, in view of Brown, a POSA would have been motivated to modify the retrofit device of Breitenbach to “stor[e] the number of electrical pulses” required to initiate an operation by “storing the pricing data locally on the memory of the retrofit processing device” (as opposed to “storing the pricing data, for example, remotely on a server”) because doing so “would make the retrofit device more efficient” and “would improve the speed of the transaction.” *Id.*, 21-23 (citing EX1006, 6:25-27). This rationale, however, fails to account for Brown’s approach for achieving such efficiency.

Specifically, while the petition relies on Brown’s description of “predetermin[ing] and stor[ing] in memory 22” the signals to be generated “to improve the speed of the transaction” (*see* Pet., 20 (citing EX1006, 6:25-27)), the petition fails to adequately address that the signals represent only one value—the *maximum* purchase value of a vending machine product—which Brown explains enables a more efficient transaction process. *See, e.g.*, EX1006, Abstract (“The electronic funds acceptor has a memory for *storing the maximum value* of a vending machine product *to reduce the number of coin or bill received signals to be generated* and sent to the electronics in the vending machine....”), 5:65-6:5 (stating “[t]he memory 22 stores a predetermined maximum value of a product,” which is “the value of the most expensive item”). Petitioner’s combination,

however, proposes storing the pricing data specific for a desired product (*see* Pet., 21-22), which runs counter to Brown's approach of achieving efficiency by storing only a maximum purchase value. The petition does not acknowledge this aspect of Brown or explain why a POSA would have nevertheless sought to modify Breitenbach's retrofit device to store pricing data for each product for efficiency purposes in view of Brown's approach. Accordingly, the petition's rationale to combine Breitenbach and Brown is insufficient because it fails to adequately account for Brown's teachings on how a more efficient transaction is achieved.

B. The Petition Fails to Show that the Combination of Breitenbach and Brown Renders Obvious Independent Claim 7

The petition incorporates by reference its claim 1 analysis for independent claim 7, which is directed to a method for accepting electronic payments at an offline payment-operated machine. This includes the limitations that correspond to the limitations of claim 1 and the rationale to combine Breitenbach and Brown discussed above. *See* Pet., 46-47 (incorporating by reference analysis corresponding to limitation [1.4] for limitation [7.1]), 47 (incorporating by reference analysis corresponding to limitation [1.3] for limitation [7.2]), 48 (incorporating by reference analysis corresponding to limitation [1.4(c)(i)] for limitation [7.5(a)]), 48 (incorporating by reference analysis corresponding to limitation [1.4(c)(iii)] for limitation [7.5(c)]). Accordingly, for the same reasons discussed above with respect to independent claim 1, the petition also fails to

establish that the combination of Breitenbach and Brown renders obvious independent claim 7.

C. The Petition Fails to Show that the Combination of Breitenbach and Brown Renders Obvious Independent Claim 13

The petition also incorporates by reference its claim 1 analysis for independent claim 13, which is directed to an offline payment-operated machine. This includes the limitations that correspond to the limitations of claim 1 and the rationale to combine Breitenbach and Brown discussed above. *See* Pet., 50-51 (incorporating by reference analysis corresponding to limitation [1.3] for limitation [13.6]), 51 (incorporating by reference analysis corresponding to limitation [1.4] for limitation [13.7]), 51 (incorporating by reference analysis corresponding to limitation [1.4(c)(i)] for limitation [13.7(b)(i)]), 52 (incorporating by reference analysis corresponding to limitation [1.4(c)(iii)] for limitation [13.7(b)(iii)]). Accordingly, for the same reasons discussed above with respect to independent claim 1, the petition also fails to establish that the combination of Breitenbach and Brown renders obvious independent claim 13.

D. The Petition Fails to Show that the Combination of Breitenbach and Brown Renders Obvious Dependent Claims 2-3, 5-6, 8-9, 11-12, 14-15, and 17-18

The petition also fails to meet its burden with respect to each of dependent claims 2-3, 5-6, 8-9, 11-12, 14-15, and 17-18 for at least the reasons discussed above with respect to independent claims 1, 7, and 13.

IV. GROUND 2 OF THE PETITION FAILS

Ground 2 of the petition challenges independent claim 19 and dependent claims 4, 10, 16, and 20 as obvious over the combination of Breitenbach and Brown in further view of Kaspar. Pet., 52. For the reasons below, the petition fails to establish that the combination of Breitenbach, Brown, and Kaspar renders obvious these claims.

A. The Petition Fails to Show that the Combination of Breitenbach, Brown, and Kaspar Renders Obvious Claims 4, 10, and 16

Claims 4, 10, and 16 each depend from independent claims 1, 7, and 13, respectively. Thus, for the reasons discussed above with respect to claims 1, 7, and 13, the petition fails to establish that the combination of Breitenbach, Brown, and Kaspar render obvious dependent claims 4, 10, and 16.

B. The Petition Fails to Show that the Combination of Breitenbach, Brown, and Kaspar Renders Obvious Claims 19 and 20

Independent claim 19 is directed to a payment module for an offline payment-operated machine including a coin receiving switch. For many of the limitations of claim 19, the petition incorporates by reference its claim 1 analysis. This includes the limitations that correspond to the limitations of claim 1 and the rationale to combine Breitenbach and Brown discussed above. *See* Pet., 74 (incorporating by reference analysis corresponding to limitation [1.4] for limitation [19.5]), 75 (incorporating by reference analysis corresponding to limitation [1.4(c)(i)] for limitation [19.5(c)(i)]), 76 (incorporating by reference analysis

corresponding to limitation [1.4(c)(iii)] for limitation [19.5(c)(iii)]. Thus, for the same reasons discussed above with respect to independent claim 1, the petition also fails to establish that the combination of Breitenbach and Brown renders obvious independent claim 19.

Moreover, the petition additionally fails to show that the combination of Breitenbach, Brown, and Kaspar teach limitation [19.4]. Limitation [19.4] recites “a second interface module configured to count one or more electrical pulses generated by the coin receiving switch of the offline payment-operated machine in response to the insertion of a single coin of a predetermined type in the offline payment-operated machine and to store an output of the control unit corresponding to an operation of the offline payment-operated machine.” The petition asserts that “a POSA would have found it obvious to modify Breitenbach/Brown in view of Kaspar to include this limitation.” Pet., 73. The petition, however, fails to sufficiently explain how the references teach each and every element recited in limitation [19.4].

First, the petition relies on Kaspar as allegedly teaching “stor[ing] an output of the control unit corresponding to an operation of the offline payment-operated machine.” Pet., 73-74. Specifically, the petition alleges that “Kaspar teaches a retrofit coin measuring apparatus that stores data from the vending machine indicating initiation of the transaction, such as data related to the time, date, and

price of a transaction” and “[a] POSA would have understood that the captured data is an output of the control unit of the machine corresponding to an operation of the machine (i.e., a vending transaction).” *Id.* However, the petition fails to show that Kaspar teaches that the relied-upon “output”—*i.e.*, data related to the time, date, and price of a transaction—is an output of ***a control unit of the vending machine***. Kaspar instead teaches that this data is generated ***internally by the retrofit coin measuring apparatus***. See EX1007, Abstract (stating that the retrofit coin measuring apparatus “has a circuit recording the time and day of the sale”), 1:48-50 (FIG. 10 is a “schematic of the electronic system included in the retrofit mechanism”), 10:54-12:28 (describing the circuit design of the retrofit apparatus, including its generation of data relating to time, date, and price), FIG. 10 (showing, e.g., total sales, papers sold, time, day generator). Indeed, the petition fails to even identify an alleged control unit in Kaspar, making it unclear how Kaspar’s “captured data is an output of the control unit.” Pet., 74. Thus, the petition fails to show that Kaspar teaches that the captured data is an output of ***the control unit of payment-operated machine***.

Second, the petition also fails to show that the combination of Breitenbach, Brown, and Kaspar teaches a payment module having “a first interface module” and “a second interface module.” Specifically, the petition maps the same “retrofit processing device 374/474” as meeting both the claimed “first interface module”

and the claimed “second interface module.” *See* Pet., 72 (mapping “a first interface module” to “processing device 374/474”), 74 (mapping “a second interface module” to “retrofit processing device 374/474”). However, the petition fails to explain why a POSA would have understood the same processing device 374/474 as comprising two distinct modules as claimed.

Accordingly, Petitioner fails to additionally establish that the combination of Breitenbach, Brown, and Kaspar teaches limitation [19.4].

Claim 20 depends from claim 19, and thus, the petition fails to meet its burden in establishing the obviousness of claim 20 for these same reasons.

V. CONCLUSION

For at least the reasons discussed above, the petition fails to demonstrate a reasonable likelihood that at least one of the claims challenged in the petition is unpatentable. Accordingly, Patent Owner respectfully requests the Board deny the petition.

Respectfully submitted,

Date: August 28, 2025

/ Matthew A. Argenti /
Matthew A. Argenti, Lead Counsel
Reg. No. 61,836

CERTIFICATE OF COMPLIANCE

Pursuant to §42.24(d), the undersigned certifies that this paper contains no more than 14,000 words, not including the portions of the paper exempted by §42.24(b). According to the word-processing system used to prepare this paper, the paper contains 6391 words.

Respectfully submitted,

Date: August 28, 2025

/ Matthew A. Argenti /
Matthew A. Argenti, Lead Counsel
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VI. APPENDIX – LIST OF EXHIBITS (PREVIOUSLY FILED)

Exhibit No.	Description
2001	PayRange Inc.’s Amended Answer to Complaint and Counterclaims, <i>Alliance Laundry Sys. LLC v. PayRange Inc.</i> , Case No. 24-733-MN (D. Del.)

CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing Patent Owner's Preliminary Response was served on August 28, 2025, on the Petitioner at the electronic correspondence address of the Petitioner as follows:

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