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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ALLIANCE LAUNDRY SYSTEMS, LLC,  
Petitioner,

v.

PAYRANGE LLC,  
Patent Owner.

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Case No. IPR2025-00573  
Patent No. 11,481,772

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**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. 11,481,772 (“the ’772 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.<sup>1</sup> 35 U.S.C. §324(a).

The ’772 patent includes two claims, claims 7 and 11, both of which depend from independent claim 1, which previously was disclaimed by Patent Owner. *See* Pet., 1. The petition challenges these two claims of the ’772 patent based on two grounds alleging the claims as obvious over the prior art. *Id.*, 6. Both of these grounds fail because the petition fails to provide the requisite analysis explaining, with particularity, how the applied art teaches each and every limitation of the claims. In multiple instances, the petition merely quotes the applied references and concludes that the quotes disclose the claim limitation. But the disclosures relied upon in the petition do not, on their face, map to the claim language, and the petition fails to sufficiently explain how one could conclude that the disclosure teaches the at-issue claim limitation.

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<sup>1</sup> 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.

As just one example, when addressing claim 7, which requires, “based on data from [an] accelerometer, determining whether the user is walking away from the available payment accepting unit,” the petition simply equates, without providing sufficient explanation, a reference’s description of determining a user’s location relative to a vending machine with a determination of a user’s movement relative to that machine. Then, on the basis of hindsight reasoning alone, the petition goes on to conclude that the reference’s description of determining user location would lead a POSA to “cancel[] the wireless communication path” established between the user’s mobile device and the payment accepting unit as further required by the claim.

As another example, when addressing the requirement of claim 11 that the claimed user interface include “a visual representation of the available payment accepting unit,” the petition argues that the combination teaches the claim limitation by providing visual representations of vending machines *to be selected* by the user. However, the petition overlooks that the claimed visual representation is of the available payment accepting unit that *has been selected* by the user. By ignoring this requirement, the petition’s proposed combination wholly fails to show that the applied prior art teaches the claim limitation. As such, Petitioner fails to show that the ’772 patent claims would have been obvious over the combination proposed in the petition.

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. GROUNDS 1-2: THE PETITION FAILS TO ESTABLISH THAT THE CHALLENGED CLAIMS ARE OBVIOUS**

The petition asserts that claims 7 and 11 of the '772 patent are rendered obvious based on two grounds. The first ground asserts that claim 7 is obvious based on a proposed combination of Low and Arora. The second ground asserts that claim 11 is obvious based on a proposed combination of Low, Arora, Freeny, and Casey. Pet., 6. The petition presents a cursory, facially insufficient analysis of the challenged claims that fails to show that the references meet all of the requirements of the claims. As detailed below, by virtue of the claims' dependency on independent claim 1, claims 7 and 11 recite numerous limitations that result in a specific user interface for a mobile device that enables a user to complete a transaction with a specific payment accepting unit. Not only does the petition fail to establish that the applied references teach each of the limitations specifically recited in claims 7 and 11, the petition also fails to establish numerous

limitations recited in independent claim 1. As such, the petition's inadequacies with respect to the limitations recited in claim 1 are addressed first, followed by the petition's failures with regard to the particular features recited in claims 7 and 11.

**A. The Petition Fails to Show that Low Discloses Each and Every Limitation of Independent Claim 1**

For the limitations recited by independent claim 1, from which claims 7 and 11 depend, the petition applies an anticipation theory and relies solely on Low as allegedly disclosing each and every claim element. *See* Pet., 20 (“Claim 1 would be anticipated by Low”), 21 (“Low Discloses All Elements of Claim 1”). As explained below, the petition fails to establish that Low discloses numerous limitations recited by claim 1, including:

- “identifying one or more payment accepting units in proximity to the mobile device that are available to accept payment from a mobile payment application,” where the identifying is “based at least in part on an identifier corresponding to the one or more payment accepting units” (limitations [1.2]-[1.3]);
- “displaying a user interface” that is “configured to display a visual indication of the one or more payment accepting units” (limitation [1.6]);
- “displaying a user interface” that is configured to “accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units” and

“establishing ... a wireless communication path including the mobile device and the available payment accepting unit” (limitations [1.7] and [1.9]);

- “displaying a user interface” that is configured to “accept user input to ... (2) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units” (limitation [1.8]); and
- “after establishing the wireless communication path, enabling user interaction with the user interface ... to complete the transaction” with the available payment accepting unit (limitation [1.10]).<sup>2</sup>

The petition asserts that Low discloses these user interface requirements, but 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. The petition’s attempts to bridge the gaps in Low result in an incomplete analysis that insufficiently ties the prior art disclosure to the claim limitations and fails to address the limitations as an ordered whole. When the petition’s analysis is tested against the express limitations of the claims, it cannot be said that Petitioner has met its burden in proving the obviousness of the challenged claims based on the applied references.

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

**1. The petition fails to show that Low discloses limitations [1.2]-[1.3]**

Limitation [1.2] of the '772 patent claim 1 recites a method comprising, “at a mobile device,” the step of “identifying one or more payment accepting units in proximity to the mobile device that are available to accept payment from a mobile payment application executing on the mobile device.” Limitation [1.3] further recites that the “identifying” of limitation [1.2] is “based at least in part on an identifier corresponding to the one or more payment accepting units.” The petition asserts that Low discloses the claimed identifying step of limitation [1.2] “via identifiers 136,” which, according to Petitioner, identify “one or more payment accepting units (e.g., NICMs, such as vending machine 120) in proximity to the mobile device ... that are available to accept payment from a mobile payment application ... executing on the mobile device.” Pet., 23-25. For limitation [1.3], the petition again relies on Low’s “identifiers 136”. *Id.*, 25 (asserting “Low teaches the identifying based at least in part on an identifier (e.g., machine identifier, such as the identifiers 136)”). However, as explained below, the petition fails to establish that Low discloses limitations [1.2]-[1.3] because the petition fails to explain how the identifiers 136 identify which of the payment accepting units (i.e., NICMs) are available to accept payment from the mobile payment application.

First, as noted above, 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. In other words, it is not enough to show that limitations [1.2]-[1.3] are satisfied by identifying any payment accepting unit, the identifying must also identify the payment accepting unit as “available” to accept payment. This distinction is material, as confirmed by the specification of the ’772 patent, which describes numerous solutions to identifying the specific payment accepting units that are available to a user to complete a transaction. *See, e.g.*, EX1001, 18:16-19:47 (identifying available payment accepting units by zones in which the user is located), 23:6-24:12 (identifying and managing available units when multiple users are present), 24:17-57 (identifying and managing multiple payment accepting units available to the user), FIGS. 1-2.

In alleging that Low teaches these limitations, Petitioner states that this identification is performed “via identifiers 136,” citing to Low’s discussion that the user device 110 (which Petitioner maps to the claimed “mobile device”) may include “one or more identifiers 136” that may be implemented as “data associated with hardware of vending machine 120” or “other appropriate data used for authentication/identification of vending machine 120.” *Pet.*, 23-24 (citing EX1005, 6:16-21). However, it is not clear from this cited portion of Low how identifiers 136 that provide data on the corresponding vending machine’s hardware

or data for authenticating/identifying the vending machine would be understood to identify payment accepting units that are “available” to accept payment from the mobile payment application. Beyond merely quoting this portion of Low, Petitioner fails to provide any explanation specifically linking Low’s description of these identifiers 136 to the identification of the particular type of payment accepting units that are claimed (*i.e.*, those available to accept payment from the mobile application). *See* Pet., 23-25. Petitioner’s expert provides the same deficient explanation. *See* EX1003, ¶¶66-69.

Accordingly, Petitioner fails to establish that Low discloses limitations [1.2]-[1.3].

**2. The petition fails to show that Low discloses limitation [1.6]**

Limitation [1.6] recites a “user interface” that is “configured to display a visual indication of the one or more payment accepting units.” The one or more payment accepting units recited in this limitation are the payment accepting units that are identified as “available” to accept payment from the mobile application, as recited in limitations [1.2]-[1.3]. The petition argues that Low discloses this limitation through its discussion of “a machine identifier” transmitted from a NICM to a user device, and where “multiple machines may send their unique identifiers, such that the user is able to select one or more machines to purchase from.” Pet., 27 (citing EX1005, 2:16-20, 2:26-28, 8:66-9:2) (alteration omitted).

Based on this disclosure, the petition concludes that “Low teaches the user interface (e.g., ‘interface’) being configured to display (e.g., ‘such that the user is able to select one or more machines to purchase from’) a visual indication of the one or more payment accepting units (e.g., ‘machine identifier’).” *Id.* However, as explained below, the petition fails to sufficiently explain how Low’s *machine identifier*—which the petition maps to the claimed “visual indication”—is displayed on the user interface.

As an initial matter, while the petition generally asserts that “[a] POSA would understand that the user device 110 is configured to display the available machines” based on the cited portions of Low (Pet., 27), none of the cited portions of Low mention a user interface and what it displays, nor is any user interface depicted in Low. *See* EX1005, 2:16-20, 2:26-28, 8:66-9:2, FIGS. 1-5. Aside from the petition’s conclusory assertion, the petition provides no additional explanation as to how Low’s user device “display[s] the available machines” and what a POSA would have understood to be displayed as a visual indication of such machines. Pet., 27. Petitioner’s expert merely parrots the same conclusory assertion. *See* EX1003, ¶74 (stating only “[i]n my opinion, the user device 110 is configured to display the available machines such that the user is able to interface with the display to select the one or more machines from which to make a purchase”).

Instead, the only aspect of Low that the petition identifies as a displayed visual indication of an available vending machine is Low's "machine identifier." Pet., 27. However, Low merely describes using this machine identifier as part of the communication transmissions between, for example, the user device and the payment provider server. For instance, Low explains that the payment provider server 140 can "transmit[] information about items for sale" at a vending machine to a user device, which "may be transmitted in response to a request by user device 110." EX1005, 8:61-66. This can occur when a user "access[es] electronic payment module 130" provided on the vending machine using the user device 110, which causes the user device 110 to "receive a machine identifier" and transmit it "to payment provider server 140 to receive information corresponding to vending machine 120." *See* EX1005, 8:61-9:4.

Thus, Low describes the machine identifier as information that is transmitted between the user device and payment provider server to facilitate a transaction. Low provides no indication that the machine identifier is displayed as a visual indication of the vending machine on the user interface, much less as a visual indication of a vending machine that is *available* to accept payment, as established by limitations [1.2]-[1.3]. *Supra*, section III.A.1. Indeed, when expressly discussing displaying information to the user on the user device, Low contemplates the display of other types of information, not the machine identifier. *See, e.g.*,

EX1005, 2:23-25 (a “menu” is “displayed on the user device”), 2:46-49 (stating “[t]he user device displays the purchase request”), 9:8-13 (explaining payment provider server “may include information in database 146 for transmission to user device 110 to display to user 102,” which may include “lists of products,” “available inventory, nutritional information, or other desirable data”).

As such, Petitioner’s reliance on Low’s machine identifier as the claimed “visual indication of the one or more payment accepting units” is insufficient. Indeed, further highlighting this deficiency is the petition’s analysis with respect to limitation [11.1] of claim 11 (discussed in more detail below), which recites the display of a visual representation of the available payment accepting unit selected by the user. *Infra*, section III.C.1. For that limitation, recognizing Low’s shortcomings, the petition turns to Arora for teachings regarding the display of icons or photographs on a user interface. *See* Pet., 49-53. In contrast, for this limitation [1.6], the petition relies on Low alone (and more specifically, Low’s “machine identifier”) as teaching the claimed display limitation, which, as explained above, is lacking in Low.

Aside from the unsupported theory that the machine identifier is displayed on the user’s mobile device, Petitioner presents no argument or analysis explaining how Low discloses the claimed visual representation. Indeed, the petition theory appears to be premised on an assumption that Low necessarily involves presenting

the user with a visual indication of one or more payment accepting units. To the extent Petitioner intends to present a theory of inherent disclosure, no explanation is provided why display of visual indications of payment accepting units is a necessary predicate for the described selection of one or more machines to purchase from, nor does the petition address potential alternatives such as an inventory-based display or audio cues prompting a selection. Thus, the petition falls far short of supporting its assertion that “Claim 1 would be anticipated by Low.” Pet., 20.

Accordingly, Petitioner fails to establish that Low discloses limitation [1.6].

**3. The petition fails to show that Low discloses limitations [1.7] and [1.9]**

Limitation [1.7] recites that the user interface is configured to “accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units.” Limitation [1.9] further recites “establishing via the one or more radio transceivers [of the mobile device] a wireless communication path including the mobile device and the available payment accepting unit of the one or more payment accepting units.” Taken together, limitations [1.7] and [1.9] thus recite an ordered combination in which the user interface first accepts user input selecting an available payment accepting unit 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.

Petitioner's analysis fails to sufficiently explain how Low discloses these limitations. For limitation [1.7], the petition relies on Low's disclosure of the transmission of a machine identifier from the vending machine to the user device to assert that "[a] POSA would understand that the user device 110 [of Low] 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., 27-28 (citing EX1005, 2:16-20, 2:26-28). For limitation [1.9], the petition cites only to disclosure in Low stating that the user device "communicates with a non-Internet connected unmanned device/machine via wireless communication" and may receive inventory data "after a short range communication link is established" between the user device and vending machine. *Id.*, 29-30 (citing EX1005, 2:11-16, 2:38-39, 8:24-28).

As an initial matter, Petitioner points to *no* disclosure in Low describing or illustrating a user interface that displays payment accepting units and accepts user input selecting an available payment unit. Instead, the petition merely cites to Low's discussion of machine identifiers—which, as discussed above with respect to limitation [1.6], are not disclosed as being displayed on a user interface—and concludes that "[a] POSA would understand" that the user interface would display

the machines and accept user input as claimed, citing only to its expert's testimony, which itself provides no independent basis in support of this conclusion. *See* Pet., 27-28 (citing EX1003, ¶76). This cursory analysis is facially insufficient to support a finding that Low anticipates the relevant claim limitations.

Moreover, Low's explanation that the user device may receive inventory data "after a short range communication link is established" does not make clear when the wireless communication path is established with an available vending machine relative to receiving user input selecting the available vending machine. The petition fails to explain how disclosure of establishing a communication link before receiving inventory data supports a conclusion that the communication link is established after receiving the user input discussed for limitation [1.7], as required by limitation [1.9].

Accordingly, Petitioner fails to establish that Low discloses limitations [1.7] and [1.9].

**4. The petition fails to show that Low discloses limitation [1.8]**

Limitation [1.8] recites that the user interface is configured to accept user input to "trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device." For this limitation, the petition points to Low's disclosure that the user device "communicates [a] payment request to a

payment provider’ and, after processing, ‘communicate[s] the purchase authorization to the machine.’ Pet., 28-29 (quoting EX1005, 2:49-62).

As an initial matter, Petitioner’s citation to this portion of Low is at odds with the petition assertion that Low anticipates Claim 1. Pet., 20. Low is explicit that the disclosure cited for limitation [1.8] is distinct from the embodiments the petition relies on for other aspects of claim 1. EX1005, 2:38 (“In other embodiments...”); *see also, e.g.*, Pet., 25 (relying on distinguished embodiments described in EX1005, 2:16-20 for limitation [1.3]), 26 (relying on distinguished embodiments described in EX1005, 2:24-25 for limitation [1.5]), 27 (relying on distinguished embodiments described in EX1005, 2:26-28 for limitation [1.6]), 27 (relying on distinguished embodiments described in EX1005, 2:26-28 for limitation [1.7]). The petition does not acknowledge Low’s distinctions of its various embodiments and instead treats Low’s disclosure as a grab bag to be cherry-picked as needed. As such, Petitioner neither supports its stated anticipation challenge, nor does it provide requisite explanation as to how and why a POSA would have combined Low’s various bits of disclosure to arrive at the claimed invention. *See also, e.g.*, Pet., 30-31 (relying on Low Fig. 3); EX1005, 10:3-5 (“FIG. 3 presents a method according to ***another embodiment*** for an electronic payment.”) (emphasis added).

Beyond that, the petition does not explain the basis of its limitation [1.8] mapping with particularity. The petition cites Low’s disclosure of “a user select[ing] a payment button or option on the user device” as mapping to the claimed user input to trigger payment, but does not explain how this satisfies the claim. Pet., 28. As the cited portions of Low explain, the user’s selection of a payment button or option causes communication of a payment *request* to a payment provider for subsequent processing. *Id.* (citing EX1005, 2:46-49). Petitioner does not explain how a payment request maps to the claimed triggering of payment. Petitioner also cites to Low’s disclosure of subsequent communication of purchase authorization to the vending machine (Pet., 29) but, again, does not explain how this serves as the recited payment or how it is triggered by the cited user interaction despite multiple intervening communications. The petition does not identify which of these steps is intended to map to the claimed payment, nor does it explain how either the disclosed payment request or the purchase authorization satisfy the claim. *See id.*, 28-29.

Accordingly, Petitioner fails to establish that Low discloses limitation [1.8].

**5. The petition fails to show that Low discloses limitation [1.10]**

Limitation [1.10] recites “after establishing the wireless communication path, enabling user interaction with the user interface of the mobile payment application to complete the transaction.” For this limitation, the petition points to

disclosure in Low that the user device “may receive inventory data 154 (e.g., purchasable products at vending machine 120) from a vending machine” after the communication link is established. *Id.*, 30 (citing EX1005, 8:24-28). The petition also relies on Figure 3 of Low as “illustrating a method for use by a user device for an electronic payment to a non-Internet connected device.” *Id.*, 30-31 (citing EX1005, 10:1-3). This analysis falls short of addressing all aspects of limitation [1.10], which requires, after establishing the wireless communication path, enabling user interaction with the user interface “to complete a transaction” with the available payment accepting unit.

Specifically, none of the portions of Low relied upon in the petition explain that user interaction is enabled “to complete a transaction” after the wireless communication path between the user device and vending machine is established. As noted above, Low does not depict or describe in detail the user interface that is provided on the user device 110. *See supra*, section III.A.2. While Petitioner cites to Low’s discussion that “[i]nventory data 154 may be received from vending machine 120, for example using an Internet connection of user device 110 after a short range communication link is established between user device 110 and vending machine 120” (EX1005, 8:24-28), Low is otherwise silent on whether user interaction with the user interface of the mobile device is enabled “to complete a transaction” after such a communication link has been established.

Furthermore, Petitioner’s reliance on Low’s Figure 3 does not illuminate what, if any, user interaction is enabled on the user interface “to complete the transaction.” The petition simply reproduces the figure but never identifies the specific aspect of the figure that is being relied upon as the claimed user interaction. *See* Pet., 31-32. Petitioner’s expert similarly reproduces the figure with no explanation. *See* EX1003, ¶¶82-84. This omission is significant because Low describes Figure 3 as containing several steps in which the user device communicates with the vending machine and a server for an electronic payment. For example, Low describes receiving information about items for sale from the vending machine to the user device (step 302) and sending a purchase request from the vending machine to the user device after a user has selected a product for purchase (step 304). *See* EX1005, 10:5-7, 10:18-29. Low further explains that the user device then “transmits the purchase request to a server for approval” (step 306), where, after processing, the server sends an approval to the user device, which may “use a payment authorization included in the approval with electronic payment module 130 to dispense a purchased item of products 124 from vending machine 120” (step 308). *Id.*, 10:41-61. In describing the steps of Figure 3, Low provides no indication that user interaction is necessary to transmit the purchase request to the server for approval or transmit the approval from the server to the vending machine for product dispensing. At best, the only user interaction

suggested by Low is when the user selects a product to receive the purchase request from the vending machine (*see* EX1005, 10:18-28), but the petition fails to explain how this selection, which is conditioned on approval from the server, serves to “complete the transaction.” *See* Pet., 30-32. Simply put, the petition fails to meet the requirement that it identify, with particularity, how the applied art teaches the specific requirements of the claim limitation.

Accordingly, Petitioner fails to establish that Low discloses limitation [1.10].

**B. The Petition Fails to Show that the Proposed Combination Teaches the Additional Limitations of Claim 7**

Claim 7 of the '772 patent further requires that “the mobile device includes an accelerometer” (limitation [7.1]) and the method includes the additional steps of: (1) “based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit” (limitation [7.2]); and (2) “in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless communication path” (limitation [7.3]). The petition concedes that Low fails to disclose these additional claim limitations and turns to Arora as allegedly teaching the missing elements. *See* Pet., 35-36. However, as explained below, the petition fails to establish that the combination of Low and Arora teaches the limitations of claim 7.

## 1. The petition fails to show that the proposed combination teaches limitation [7.2]

The petition contends that Arora discloses limitation [7.2] because Arora teaches “two vending machines 30, 31 ... that define multiple transaction distances” and also teaches that “the location of the customer relative to the vending machines 30, 31 may be determined through ‘inertial guidance which may use an accelerometer.’” Pet., 38-39 (citing EX1006, 12:34-13:5, 13:28-35, 26:65-27:6, FIG. 1) (alterations omitted). Citing only to its expert, the petition then concludes that “[a] POSA would understand ‘inertial guidance’ to mean determining the location and trajectory of the user device, including whether the user ... is walking away from the vending machine.” *Id.*, 39 (citing EX1003, ¶¶111-14).

However, as explained below, the petition improperly concludes, without sufficient evidence, that Arora’s description of determining a user’s location relative to a machine (and thus, the “transaction distance”) means that Arora discloses determining whether the user is walking away from the vending machine. Moreover, the petition also ignores the requirement that the claimed determination occurs relative to *the* available payment accepting unit that has been selected by the user using the user interface.

First, the petition cites to no actual disclosure in Arora describing using an accelerometer to determine whether a user is walking away from the vending

machine. Instead, Arora describes only “determin[ing] whether or not a customer is within a particular transaction distance of a particular vending machine or vending group.” EX1006, 18:37-42. For example, in discussing FIG. 1, Arora describes “four transaction distances from a vending machine,” including (from nearest to farthest) a “dispensing distance,” an “identification distance,” a “within sight” distance, and a “potential buyer” distance. *Id.*, 12:34-13:5. Arora goes on to explain that “[w]hen the customer [is] within the transaction distance,” a message “appropriate to the potential transaction is sent to the customer.” *Id.*, 18:44-47, FIG. 6. If no response is received within a timeout period, the user’s position is again determined and the process repeats. *See id.*, 18:53-55 (“If no response is received within a timeout period ..., the flowchart restarts at 89.”), FIG. 6 (illustrating step 89 as initiating “Customer Transaction Distance to Vending Machine?”). If a response is received and validated, Arora teaches “we wait until dispensing distance is confirmed.” *Id.*, 18:56-19:1. Thus, Arora only describes determining a user’s distance from a machine and whether that distance falls within “a particular transaction distance.” Other than citing to Arora’s general mention of “inertial guidance” (Pet., 39), the petition fails to explain how Arora’s description of determining a transaction distance equates to disclosure of a determination of how a user is *moving* relative to a machine and, more specifically, that the user is moving away from the machine.

Petitioner's reliance on its expert fails to remedy this deficiency. *See id.* (citing EX1003, ¶¶111-14). In the cited paragraphs, Petitioner's expert addresses FIG. 6 of Arora, which, as explained above, merely describes "determin[ing] whether or not a customer is within a particular transaction distance of a particular vending machine or vending group." EX1006, 18:37-42; *see also* EX1003, ¶112. Petitioner's expert then points to Arora's process for how a customer's response is verified as valid. EX1003, ¶113 (citing EX1006, 18:57-64). Arora explains that the verification of the received customer's response can be achieved in various ways:

For example, the message may be encrypted; contain a password; contain a communications checksum or hash; fall within predetermined bounds such as time, location, product type or price; use a secure element within a personal electronic device; use a third party to determine validity or any combination of these or other means.

EX1006, 18:56-64.

Petitioner's expert asserts that "[g]iven Arora's prior teachings of determining customer location through inertial guidance, the verification of the message through predetermined bounds such as time and location clearly encompasses determining whether the customer is walking away from the machine." EX1003, ¶114. However, apart from making this conclusory assertion, Petitioner's expert fails to provide any detail explaining how Arora's general listing of time or location as options for verifying a received customer response

“clearly encompasses determining whether the customer is walking away from the machine.” Nor do Petitioner or its expert address the surrounding context of Arora’s description, including the other options listed by Arora, such as product type or price (*e.g.*, whether the received response is in relation to a predetermined product type or within a predetermined price range), which indicate Arora’s reference to time could refer to whether the received response falls within a predetermined time period (*e.g.*, within business hours).

Second, even accepting the petition’s contention that Arora’s general description of “inertial guidance” discloses determining “whether the user ... is walking away from the vending machine” (*id.*), the petition fails to adequately address the express language of the claim language. Specifically, limitation [7.2] recites that the determination that the user is walking away is made relative to ***the available payment accepting unit***. Limitation [1.7] of claim 1 provides the antecedent basis for the available payment unit from which the claimed determination is made: “the user interface being configured to ... accept user input to (i) ***receive selection by a user of the mobile device of an available payment accepting unit*** of the one or more payment accepting units.” Thus, limitation [7.2] requires that the claimed determination occurs relative to the payment accepting unit that ***has been selected by the user*** using the user interface of the mobile device. The petition wholly fails to address this aspect of the claim limitation and

nothing in the cited portions of Arora suggests that the user's location is determined relative to a vending machine that has been selected via user input into the user interface of the mobile device.

Accordingly, Petitioner fails to establish that the proposed combination discloses limitation [7.2].

**2. The petition fails to show that the proposed combination teaches limitation [7.3]**

Limitation [7.3] further recites that “in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless communication path.”

The petition's analysis for limitation [7.3] rests entirely on unsupported, conclusory assertions. Specifically, Petitioner asserts that “Low in view of Arora teaches all limitations of Claim 7” because “[a] POSA would have found it obvious to cancel the communication link between Low's user device and vending machine if the inertial guidance from the accelerometer, as taught by Arora, determined that the user was walking away from the vending machine.” Pet., 40-41. However, as noted above in §III.B.1, the petition fails to explain how Arora's description of “inertial guidance” to determine a user's *location* relative to a vending machine equates to a determination of the user's *movement*, including movement away from the vending machine. Moreover, aside from asserting that “[a] POSA would have found it obvious to cancel the communication link” between the mobile

device and vending machine, Petitioner points to no evidence in Low or Arora that teaches even canceling a communication link, much less canceling the link based on a determination of the user's movement (as opposed to, for example, simply allowing the user to walk outside of communication range or timing out a transaction). Petitioner's analysis rests only on hindsight reasoning and is thus legally and factually insufficient. *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (proving obviousness requires "articulated reasoning with some rational underpinning").

For the reasons outlined above in §§III.A and III.B, Petitioner fails to meet its burden in proving claim 7 obvious based on Low and Arora.

**C. The Petition Fails to Show that the Proposed Combination Teaches the Additional Limitations of Claim 11**

The petition also fails to show that the applied references teach the additional limitations recited in claim 11. Conceding that Low fails to explicitly disclose the limitations of the claim, the petition turns to three additional references—Arora, Freeny, and Casey—as allegedly teaching various aspects of the claim. *See Pet.*, 41-43. However, as explained below, the petition fails to establish that the combination of Low, Arora, Freeny, and Casey teaches the limitations of claim 11.

## **1. The petition fails to show that the proposed combination teaches limitation [11.1]**

Limitation [11.1] recites that “the user interface, after establishing the wireless communication path, includes a visual representation of the available payment accepting unit.” The petition presents two arguments as to how this limitation is met—one based on Low alone and another based on Low in combination with Arora. Pet., 49-53. Under either of these theories, the petition’s analysis is facially deficient because it is premised on a fundamental misreading of the claim limitation that addresses the limitation in isolation, rather than in the context of the claim as a whole. As detailed more below, the petition argues that the combination of Low and Arora teaches the requirements of limitation [11.1] through the visual representation of vending machines *from which the user can select to purchase from*. However, this application of Low and Arora is, at best, relevant to limitation [1.6], which, as discussed above, recites 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 (recited in limitation [1.7]). *Supra*, section III.A.2 (noting Petitioner’s reliance solely on Low for limitation [1.6]). Limitation [11.1], which depends from the limitations of claim 1, 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*. The

petition's theories that Low alone or Low in combination with Arora teach limitation [11.1] completely omit this requirement of the claims and, for this reason, the petition's analysis necessarily fails.

As reproduced below, claim 11 recites in its entirety:

The method of claim 1, wherein the user interface of the mobile payment application, after establishing the wireless communication path, includes:

a visual representation of the available payment accepting unit;

an indication of a prepared balance; and

an affordance that when slid, indicates the initiation of the transaction;

wherein the affordance is slid in response to receiving a user input of swipe on the affordance displayed on the display of the mobile device

EX1001, 48:21-31.

As similarly noted above with respect to claim 7, limitation [1.7] of claim 1 provides the antecedent basis for the claimed available payment accepting unit that is visually represented: “user input to (i) *receive selection by a user of the mobile device of an available payment accepting unit* of the one or more payment accepting units.” Moreover, as recited in limitation [1.10], the user interface refers to the user interface that “enabl[es] user interaction ... to complete the transaction” after establishing the wireless communication path with the selected available payment accepting unit. As a result, the surrounding context of limitation [11.1]

makes clear that it is insufficient to show that any “visual representation” of a payment accepting unit satisfies the claim limitation. Instead, the visual representation (1) must be provided as part of the user interface enabling user interaction to complete a transaction after establishing the wireless communication path (as required by limitation [1.10]) and (2) must be a representation of *the available payment accepting unit that was selected by the user input* by which the wireless communication path had been established.

Petitioner’s analysis fails to address the limitation in this proper context. Instead, for both Low and Arora, Petitioner relies on alleged teachings in which a user seeks to *select* a vending machine *prior to* initiating a transaction. For example, Petitioner argues that Low teaches the claimed visual representation because Low describes that the vending machine “transmits a machine identifier to the user device” and that “the user is able to *select* one or more machines to purchase from.” Pet., 49-50<sup>3</sup> (emphasis added). However, even taking as true

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<sup>3</sup> Indeed, the petition’s conflation of limitation [1.6] with limitation [11.1] is made apparent here when it asserts that “[a] POSA would understand that the purchase application 112 of Low includes a user interface including a visual representation of *one or more payment accepting units*,” rather than what is

Petitioner’s assertion that Low teaches a visual representation of “one or more machines to purchase from,” this fails to establish that Low teaches the claim limitation because such visual representation is provided *prior* to any user selection. As such, any visual representation would not be a representation of the available payment accepting unit that was selected by the user, as required by the claim, nor would it be provided as part of the user interface to complete the transaction after the wireless communication path was established upon the user’s selection.

Petitioner’s reliance on Arora suffers from the same deficiency. Specifically, Petitioner contends that Arora teaches “icons or photographs 41 and 42 [that] are representative of two actual machines” and “the customer *selects* which machine she wishes to use by touching icon 41 or 42.” *Id.*, 51 (quoting EX1006, 13:49-54) (internal quotation marks omitted and emphasis added). As with Low, the icons or photographs of Arora are, at best, visual representations of machines *from which the user can select* to initiate a transaction. The icons or photographs relied upon by Petitioner fail to constitute visual representations of the

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required by limitation [11.1]—*i.e., the selected available payment accepting unit*.  
Pet., 50.

available payment accepting unit that was selected by the user to complete the transaction.

The petition's analysis for this limitation stops at the contention that Low alone or Low in combination with Arora teaches visual representations of vending machines that the user can select to purchase from. In doing so, the petition conflates elements [1.6] and [11.1] and thereby falls short of addressing the requirements of both elements and the claim as a whole.

Accordingly, Petitioner fails to establish that the proposed combination discloses limitation [11.1].

**2. The petition fails to show that the proposed combination teaches limitation [11.2]**

The petition provides a similarly deficient analysis with respect to limitation [11.2], which recites that the user interface includes “an indication of a prepared balance.” Like limitation [11.1], limitation [11.2] is 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 and after a wireless communication path has been established with the available payment processing unit. *Supra*, section III.C.1.

First, Petitioner asserts that Low teaches that, in response to initiating a purchase request, the user device “may request funding source information” (e.g., “a funding card and/or a user account”) and “may communicate the purchase

request” to the payment service provider, which “may validate the funding source, *such as by checking for adequate funds* and charging the account/funding card.” Pet., 53 (quoting EX1005, 10:34-38, 11:56-66) (emphasis original). Based on this disclosure, Petitioner concludes that Low “strongly implies that the user interface includes an indication of a prepared balance.” *Id.* However, beyond this conclusory assertion, the petition 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 in accordance with limitation [11.2]. Petitioner’s expert makes the same conclusory assertion without any articulated reasoning. EX1003, ¶165. Indeed, if anything, Low’s disclosure implies the opposite conclusion—if checking for adequate funds must be performed by a third party (*i.e.*, the payment service provider) to authorize the transaction, then it suggests that the user has not been provided with “an indication of a prepared balance” (or else the user device would have already established that there are adequate funds for the transaction). Petitioner’s argument is thus legally and factually insufficient to establish that Low teaches the claim limitation. *See Kahn*, 441 F.3d at 988 (proving obviousness requires “articulated reasoning with some rational underpinning”).

The petition’s alternative argument relying on Freeny also fails to address the limitation as a whole. Petitioner relies on Freeny “to modify Low/Arora with

the indication of a prepared balance,” arguing that Freeny “teaches a customer performing a ‘customer bank balance request after the customer is connected to their bank’” and “[a]n approved credit amount ‘can be checked at any time by the user of the proximity authorization unit.’” Pet., 54 (quoting EX1007, 9:32-35, 38:3-5). However, neither of these relied-upon portions of Freeny teach providing an indication of a prepared balance as part of a user interface enabling a user to complete the transaction. Instead, in one instance, Freeny discusses the ability of the wireless device to “control a customer bank balance request after the customer is connected to their bank” independent of any transaction. EX1007, 9:32-35. In the other instance, Freeny contemplates that an “approved credit amount” stored on the proximity authorization unit “can be checked at any time by the user of the proximity authorization unit 2910 by accessing his account using a predetermined method involving the keyboard described in connection with FIG. 4,” where the keyboard is provided on the *legacy* unit (*i.e.*, *not* on any mobile device). *See id.*, 6:11-31 (stating “legacy pay phone equipment 200 has equipment such as the keyboard input unit”), 37:60-38:7. The petition thus fails to show how Freeny discloses providing a user interface enabling a user to complete the transaction that provides an indication of a prepared balance as recited in limitation [11.2].

Moreover, in combining Freeny with Low and Arora, the petition only discusses the limitation in the abstract—*i.e.*, providing some indication of a

prepared balance—and never proposes that any such indication would be provided as part of enabling the user to complete the transaction with the selected available payment processing unit. *See* Pet., 45-47, 53-54. This lack of explanation is especially problematic in light of the shortcomings identified above with respect to limitation [1.10], which recites that the user interface (by which an indication of a prepared balance is provided) enables user interaction to complete the transaction. *Supra*, section III.A.5. By 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 prepared balance would be provided with such an interface, especially when it is the service provider in Low that checks for adequate funds (*e.g.*, the petition fails to explain why an indication of a prepared balance would be provided before the service provider checks for any funds or why an indication would be provided after the service provider approves the purchase request).

Accordingly, Petitioner fails to establish that the proposed combination discloses limitation [11.2].

**3. The petition fails to show that the proposed combination teaches limitation [11.3]**

Limitation [11.3] of claim 11 recites that the user interface, after establishing the communication path, further includes “an affordance that when slid, indicates the initiation of the transaction.” Petitioner argues that Low teaches this limitation

because it “teaches the ‘user selects a payment button or option on the user device, which communicates the payment request to a payment provider.’” Pet., 55 (citing EX1005, 2:46-49). Petitioner argues that this payment button alone satisfies the claim limitation or, in the alternative, would be configured as “a swipe” in view of Casey’s teachings. *Id.*, 55-56. Petitioner’s mapping of Low’s payment button (whether configured to be pressed or configured to be slid) is insufficient because Petitioner improperly relies on the same payment button as satisfying two separate limitations of the claim.

Specifically, in addressing limitation [1.8], the petition relies on the same disclosure of Low—*i.e.*, that the “user selects a payment button or option on the user device”—as satisfying the requirement that the user interface is configured to accept user input to “trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device.” Pet., 28-29 (citing EX1005, 2:26-49); *see also supra*, section III.A.4. Thus, according to Petitioner, the payment button disclosed by Low satisfies, on the one hand, means to trigger payment for a transaction ***that has been initiated by the user***, while, on the other hand, also provides an affordance that ***indicates the initiation*** of the transaction. However, the petition does not explain how the ***same*** payment button interaction can both serve to indicate the initiate of a transaction ***and*** trigger payment for the initiated transaction, nor does the petition even acknowledge this apparent

contradiction. Because the petition fails to sufficiently explain why the same payment button can satisfy two separate user interface requirements of the claim, Petitioner fails to establish that the proposed combination discloses limitation [11.3].

For the reasons outlined above in §§III.A and III.C, Petitioner therefore fails to meet its burden in proving claim 11 obvious based on Low, Arora, Freeny, and Casey.

#### **IV. 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: July 7, 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 7,813 words.

Respectfully submitted,

Date: July 7, 2025

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

V. 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.)
2002	<i>Reserved</i>
2003	Excerpts from File History of U.S. Application No. 15/603,400 (U.S. Patent No. 10,891,614)
2004	Alliance Laundry Systems LLC’s Partial Motion to Dismiss PayRange’s Amended Counterclaims, <i>Alliance Laundry Sys. LLC v. PayRange Inc.</i> , Case No. 24-733-MN (D. Del.)
2005	Alliance Laundry Systems LLC’s Opening Brief in Support of Its Partial Motion to Dismiss PayRange’s Amended Counterclaims, <i>Alliance Laundry Sys. LLC v. PayRange Inc.</i> , Case No. 24-733-MN (D. Del.)
2006	Alliance Laundry Systems LLC’s Request for Oral Argument on Its Motion to Dismiss, <i>Alliance Laundry Sys. LLC v. PayRange Inc.</i> , Case No. 24-733-MN (D. Del.)
2007	Alliance Laundry Systems LLC’s Complaint for Declaratory Judgment, <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 July 7, 2025, on the Petitioner at the electronic correspondence address of the Petitioner as follows:

Sarah E. Waidelich  
Scott D. Barnett  
David J. Thomas  
Jenna E. Saunders  
HONIGMAN LLP  
[swaidelich@honigman.com](mailto:swaidelich@honigman.com)  
[sbarnett@honigman.com](mailto:sbarnett@honigman.com)  
[dthomas@honigman.com](mailto:dthomas@honigman.com)  
[jsaunders@honigman.com](mailto:jsaunders@honigman.com)

Dated: July 7, 2025

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