Paper No. _____
Filed: November 24, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

KIOSOFT TECHNOLOGIES, LLC and TECHTREX, INC.,
Petitioners,

v.

PAYRANGE INC.,
Patent Owner.

Case No. PGR2023-00042
Patent 11,481,772

PATENT OWNER'S PRELIMINARY RESPONSE PURSUANT TO 37 C.F.R. §42.207

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I. Introduction

The Board should deny institution of *inter partes* review (IPR) of U.S. Patent No. 11,481,772 ("the '772 patent") because Petitioners KioSoft Technologies, LLC and TechTrex, Inc. fail to demonstrate a reasonable likelihood of prevailing. The petition presents two grounds of challenge, both of which fall short.

Ground 1 attempts to relitigate Petitioners' failed patent eligibility challenges to materially identical claims in a previous PGR. In arguing that the claims are patent ineligible under 35 U.S.C. §101, Petitioners invoke the Board's previous decision in PGR2021-00093—Petitioners' challenge to claims of related U.S. Patent No. 10,891,614 ("the '614 patent")—where the Board found "very similar claims" patent ineligible. Pet., 38 (emphasis in original) (citing PGR2021-00093, Paper 38). Petitioners are correct that the Board has already resolved §101 challenges against very similar claims, and Patent Owner has now disclaimed claims 1-6, 8-10, and 12-20 of the '772 patent, leaving only claims 7 and 11. *See* EX2001 (statutory disclaimer under 37 C.F.R. §1.321(a) filed on November 22, 2023). Petitioners overlook, however, that this prior decision found that Petitioners *failed* to prove patent ineligibility for claims 7 and 11 of the '614 patent, which are virtually identical to claims 7 and 11 of the '772 patent.

Petitioners are collaterally estopped from relitigating the patent ineligibility of these materially identical claims, and in any event the petition fails to prove that the Board should reach a different outcome here.

Ground 2 also contains numerous facial deficiencies. This ground argues that the claims were obvious over a combination of Low, Arora, and Casey, but Petitioners fail to show that the proposed combination satisfies multiple elements of claim 1, which claims 7 and 11 inherit via dependency. Petitioners also fail to show that the proposed combination satisfies the additional limitations recited in claims 7 and 11.

Petitioners thus fail to meet their burden of proving that claims 7 and 11 are patent ineligible under §101 or obvious under §103. Accordingly, institution of *inter partes* review should be *denied*.

II. Claim Construction

In an IPR, a claim is given its ordinary and customary meaning in light of the specification. 37 C.F.R. §42.200(b). No constructions are necessary to deny institution because denial is warranted for numerous reasons that do not depend on claim construction. *Infra*, §§III-IV.

III. Ground 1 Fails

Ground 1 seeks a do-over of Petitioners' failed patent-ineligibility challenges to claims 7 and 11 of the '614 patent. Petitioners correctly argue that

the Board addressed "very similar" claims of the related '614 patent in PGR2021-00093. Pet., 38 (emphasis in original). But Petitioners fail to contend with the consequences of the admitted similarities with respect to claims 7 and 11, as these claims are materially identical to claims that the Board found Petitioners had *not* proven to be patent ineligible. PGR2021-00093, Paper 38 at 45-47, 49. In view of the Board's prior decision addressing materially identical patent eligibility issues, Petitioners are collaterally estopped from challenging the patent eligibility of claims 7 and 11. Even if collateral estoppel does not apply, Petitioners' repetition of the same facially deficient arguments from the previous PGR only confirms that Petitioners have failed to meet their burden of proving that either claim is patent ineligible.

A. Petitioners Are Collaterally Estopped

Petitioners are collaterally estopped from arguing that claims 7 and 11 are patent ineligible under §101. Collateral estoppel applies to AIA proceedings when:

> (1) the issue is identical to one decided in the first action; (2) the issue was actually litigated in the first action; (3) resolution of the issue was essential to a final judgment in the first action; and (4) [the party against whom collateral estoppel is being asserted] had a full and fair opportunity to litigate the issue in the first action.

Google LLC v. Hammond Dev. Int'l, Inc., 54 F.4th 1377, 1381 (Fed. Cir. 2022). As explained below, all four elements are satisfied here.

First, the issues here—the patent eligibility of claims 7 and 11 under §101—are identical to issues decided in PGR2021-00093 because these claims are materially identical to claims challenged under §101 in that proceeding. "It is well-understood that patent claims need not be identical for collateral estoppel to apply." *Id.* "Rather, collateral estoppel requires that the *issues of patentability* be identical," meaning collateral estoppel may apply even when the claims "use slightly different language to describe substantially the same invention, so long as the differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity." *Id.* (internal quotations omitted). Such is the case here.

Claim 7 of the '772 patent describes substantially the same invention as claim 7 of the '614 patent, containing only slight differences that do not materially alter the question of invalidity. The limitations of the parent claims are virtually identical, as shown in the following table, which identifies differences with bold/underline emphasis:

'614 claim 1	**'772 claim 1**
A method of presenting representations of payment accepting unit events, comprising: at a mobile device with one or more processors, memory, one or	A method of presenting representations of payment accepting unit events, comprising: at a mobile device with one or more processors, memory, one or

’614 claim 1	’772 claim 1
more output devices including a display, and one or more radio transceivers: identifying one or more payment accepting units in proximity to the mobile device that are available to accept payment from a mobile payment application executing on the mobile device, the identifying **including detecting predefined radio messages broadcast by the** one or more payment accepting units, wherein the one or more payment accepting units are **vending machines** that accept payment for dispensing of products and/or services; displaying a user interface of the mobile payment application on the display of the mobile device, the user interface being configured to display a visual indication of the one or more payment accepting units and accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units and (ii) trigger payment by the mobile payment application for a **vending** transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units; establishing via the one or more radio transceivers a wireless **connection between** the mobile	more output devices including a display, and one or more radio transceivers: identifying one or more payment accepting units in proximity to the mobile device that are available to accept payment from a mobile payment application executing on the mobile device, the identifying **based at least in part on an identifier corresponding to the** one or more payment accepting units, wherein the one or more payment accepting units are **payment operated machines** that accept payment for dispensing of products and/or services; displaying a user interface of the mobile payment application on the display of the mobile device, the user interface being configured to display a visual indication of the one or more payment accepting units and accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units and (ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units; establishing via the one or more radio transceivers a wireless **communication path including** the

’614 claim 1	’772 claim 1
device and the available payment accepting unit of the one or more payment accepting units; after establishing the wireless **connection**, **presenting the user interface of the mobile payment application and** enabling user interaction with the user interface of the mobile payment application to complete the **vending** transaction; exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the **vending** transaction; and **in response to receiving** the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.	mobile device and the available payment accepting unit of the one or more payment accepting units; after establishing the wireless **communication path**, enabling user interaction with the user interface of the mobile payment application to complete the transaction; exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the transaction; and **after exchanging** the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.

These slight differences do not meaningfully alter the patentability analysis, and Petitioners even expressly invoke the previous Board decision, representing that “the Board in the parent ’614 PGR found very similar claims to be ineligible for patent protection.” Pet., 38 (emphasis in original). Indeed, Petitioners themselves emphasize that the Patent Office previously determined that the ’772 claims “are not patentably distinct” from the claims of the ’614 patent. EX1002, 147; Pet., 14-15. The additional limitations of ’772 claim 7 similarly mirror ’614 claim 7, as shown in the following table, which identifies the sole difference with bold/underline emphasis:

’614 claim 7	’772 claim 7
The method of claim 1, wherein the mobile device includes an accelerometer and the method further comprises: based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit; and in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless **connection**.	The method of claim 1, wherein the mobile device includes an accelerometer and the method further comprises: based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit; and in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless **communication path**.

Petitioners do not even attempt to show—nor could they—that canceling the wireless “communication path,” instead of canceling the wireless “connection,” materially alters the patent eligibility analysis. Accordingly, the differences between ’772 claim 7 and ’614 claim 7 do not materially alter the question of patent eligibility.

Claim 11 of the ’772 patent similarly mirrors claim 11 of the ’614 patent while adding a wherein clause that further narrows the claim. The following table identifies the differences with bold/underline emphasis:

’614 claim 11	’772 claim 11
The method of claim 1, wherein the user interface of the mobile payment application **presented** after establishing via the wireless **connection** includes: a visual representation of available payment accepting unit;	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;

’614 claim 11	’772 claim 11
an indication of a prepared balance; and an affordance that when slid, indicates the initiation of the **vending** transaction.	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**.

As with claim 7, the recitation of the wireless “communication path,” instead of the wireless “connection,” is a trivial difference that does not materially alter the patent eligibility analysis, as is the recitation of the user interface “after establishing” the wireless communication path instead of the user interface “**presented** after establishing” the wireless connection. (emphasis added). The additional wherein clause at the end of ’772 claim 11 does not help Petitioners since it only narrows the claim further, meaning the bar for proving patent eligibility is, if anything, even higher than before. Accordingly, the differences between ’772 claim 11 and ’614 claim 11 do not materially alter the question of patent eligibility.

Second, these issues were “actually litigated in the first action.” *Google*, 54 F.4th at 1381. The identical patent-eligibility issues were addressed in the previous petition (PGR2021-00093, Paper 2 at 25-27) and litigated during the trial phase (*e.g.,* PGR2021-00093, Paper 19 at 14).

Third, resolution of these issues was "essential to a final judgment in the first action." *Google*, 54 F.4th at 1381. The Board's final written decision in the previous PGR expressly addressed Petitioners' failure to prove that '614 claims 7 and 11 were patent ineligible. PGR2021-00093, Paper 38 at 45-47. Those findings were essential to the Board's ultimate determination upholding claims 7 and 11. *See id.*, 68-69.

Fourth, Petitioners had a "full and fair opportunity to litigate the issue in the first action." *Google*, 54 F.4th at 1381. As noted above, these patent eligibility issues were fully litigated during the trial phase of the previous PGR. The Board even expressly considered Petitioners' belated arguments regarding claim 11. PGR2021-00093, Paper 38 at 46-47 ("Even if we were to consider this belatedly-developed articulation of its theory, we agree with Patent Owner that Petitioner still has failed to adequately address the claim as a whole."). Petitioners chose not to file a request for rehearing or appeal the Board's decision to the Federal Circuit. Petitioners thus had a full and fair opportunity to litigate the same patent eligibility issues.

All four requirements of collateral estoppel are therefore satisfied. Petitioners are thus estopped from challenging the patent eligibility of claims 7 and 11 of the '772 patent, and the Board should deny institution accordingly.

B. Petitioners Fail to Prove Claims 7 and 11 Are Patent Ineligible

Even if collateral estoppel did not apply, Petitioners' repetition of the same flawed arguments from PGR2021-00093 confirms that Petitioners fail to meet their burden of proving that claims 7 and 11 are not patent eligible under §101. As explained below, the petition essentially just repeats the same conclusory arguments that the Board already found insufficient.

First, Petitioners fail to prove that the specific requirements of claim 7 were well-known, routine, and conventional under *Alice* step 2B. In the previous PGR, the Board found Petitioners' conclusory arguments insufficient, noting that they had "not explained, for example, how the recited *use* of an accelerometer (as opposed to merely the accelerometer itself) was conventional and is not indicative of an innovative concept." PGR2021-00093, Paper 38 at 45-46. Equally unable to provide such an explanation here, Petitioners' simply repeat their previous assertion that accelerometers in general were well-known while adding a wholly conclusory assertion (copying and pasting language from the Board's decision) that the recited use of the accelerometer was routine and conventional:

> Claim 7, which recites the use of an accelerometer to detect when a user has departed and then to cancel the transaction, is no exception, as **accelerometers were well-known**, Casey (EX1005), and **the recited *use* of an accelerometer (as opposed to merely the accelerometer itself) was routine and conventional and is not indicative of an innovative**

> **concept**. EX1005, 8:4-13, FIGs. 5, 6; EX1012 ¶¶127-130. This is particularly true as of by December 18, 2013, when accelerometers were already being used in payment transactions, including to confirm payments. *Id.*

Pet., 39 (bold, underline emphasis added).

Still missing is any substantive analysis actually showing that the recited use of an accelerometer was routine and conventional. The cited portions of Casey are of no help since they do not even mention an accelerometer, let alone the specific requirements of claim 7. EX1005, 8:4-13, Figs. 5-6. Petitioners' subsequent assertion that "accelerometers were already being used in payment transactions" similarly fails to address the actual requirements of claim 7, which recites "based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit" and "in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless communication path." Accordingly, Petitioners still fail to grapple with the actual claim language, leaving only a conclusory, incomplete argument that, as before, "fails to articulate adequately and with particularity why dependent claim 7 is patent ineligible under §101." PGR2021-00093, Paper 38 at 45-46.

Petitioners similarly fail to prove that the specific requirements of claim 11 were well-known, routine, and conventional under *Alice* step 2B. Petitioners argue

"the iPhone already had a 'Swipe' feature" (Pet., 38), but this is the exact same assertion from Petitioners' reply in the previous PGR that the Board found insufficient. PGR2021-00093, Paper 38 at 46-47 ("Even if we were to consider this belatedly-developed articulation of its theory, we agree with Patent Owner that Petitioner still has failed to adequately address the claim as a whole."). As the Board explained:

> Simply asserting that swiping as a general concept was known does not explain adequately, for example, whether the use as recited in the claim and in conjunction with the other displayed information is indicative that an inventive concept may be present or simply appends well-understood, routine, conventional activities previously known to the industry.

Id.

Petitioners respond by copying and pasting part of the Board's statement, but they miss the point. The petition argues:

> The use of the elements recited in the claim, and in conjunction with the other displayed information recited in the claim, is indicative that an inventive concept was not present, or simply appends well-understood, routine, and conventional activities previously known to the industry.

Pet., 38-39. But this argument begs the question, treating the "use of the elements recited in the claim" as a given without offering any explanation or corroboration. Petitioners' conclusory analysis here is therefore just as deficient as the conclusory analysis in the previous PGR.

Accordingly, even if collateral estoppel does not apply, the petition's conclusory analysis still fails to prove that claims 7 or 11 were patent ineligible under §101.

IV. Ground 2 Fails

Ground 2 presents a cursory, facially insufficient analysis of the challenged claims. The petition argues that claims 1-20 are obvious over Low in view of Arora and Casey. As explained below, however, the petition fails to prove that claim 1 is obvious for numerous reasons, each of which is independently fatal to the challenges to the remaining claims—claims 7 and 11—which depend from claim 1. The petition also fails to show that the proposed combination satisfies claims 7 and 11 for additional reasons. Petitioners thus fail to meet their burden of proving that any challenged claim is obvious.

A. The Petition Fails to Show that the Proposed Combination Satisfies All Requirements of the Independent Claims

The petition's conclusory, piecemeal analysis of claim 1 fails to show that the references, even if combined as proposed, meet all of the requirements of claim 1, including at least elements 1.3, 1.7.2, 1.9, and 1.11.

1. The Petition Fails to Show that the Proposed Combination Teaches Element 1.3

Claim 1 recites identifying one or more payment accepting units ("PAUs") in proximity to the mobile device that are available to accept payment (element

1.2), "the identifying based at least in part on an identifier corresponding to the one or more payment accepting units" (element 1.3). Petitioners argue that element 1.3 is "implicitly" disclosed in Low or "disclosed in the combination of Low in view of Arora and Casey."[1] *Id.*, 57-58. Both arguments fail.

Petitioners' conclusory analysis is legally and factually insufficient to prove their assertion that Low implicitly discloses element 1.3. The petition merely offers a conclusory assertion that Low implicitly discloses this element, followed by several citations that are devoid of analysis. Pet., 57-58 (citing EX1003, 2:25-28, 4:57-5:3, 6:17-31, claim 12). But Petitioners cannot prove obviousness without articulated reasoning supporting their assertion. *In re Kahn*, 441 F. 3d 977, 988 (Fed. Cir. 2006) (proving obviousness requires "articulated reasoning with some rational underpinning"). Petitioners' conclusory assertion of "implicit" disclosure also fails as an inherency theory, since Petitioners do not explain, let alone prove, how this element is necessarily present in the cited passages of Low. *Therasense,*

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[1] The precise basis of Petitioners' alternative argument is unclear—the petition first characterizes it as Low in combination with Arora "and/or" Casey, then as Low in combination with Arora "and" Casey (Pet., 57-58)—but the argument fails under either formulation.

Inc. v. Becton, Dickinson and Co., 593 F. 3d 1325, 1332 (Fed. Cir. 2010) (inherency "may not be established by probabilities or possibilities" (internal quotation marks omitted)).

Regardless, no showing that Low implicitly discloses element 1.3 can be gleaned from the petition's analysis-free citations. While one of the quoted passages mentions sending unique identifiers and the user's selection of machines, it says nothing about *identifying* a PAU *based* at least in part on an identifier, let alone "the" identifying recited in element 1.2 having such a basis. Pet., 58 (quoting EX1003, 2:25-28). The petition's unexplained string cite to column 6, lines 17-31 and its assertion that Low describes communication interfaces "to communicate a machine identifier and other transaction information" similarly fail to show that "the identifying" of element 1.2 is "based at least in part on an identifier." Pet., 58 (citing EX1003, 4:57-5:3, 6:17-31).

Lastly, if anything, the petition's quotation of Low's claim 12 *contradicts* Petitioners' assertion that Low implicitly discloses element 1.3. Petitioners quote Low's recitation of a "payment provider" receiving a request that includes the location of the user device, determining the identification of non-Internet connected machines within a certain distance "based on the location," and communicating that determination to the user's device. Pet., 58 (quoting Low, claim 12). But Petitioners offer no explanation of how Low's description of steps

performed by the *payment provider* implicitly disclose the identifying step recited in the '735 claims, which is performed "at a mobile device." Nor do Petitioners explain how Low's determination based on the user device's *location* implicitly discloses the recited identifying based at least in part on an "identifier corresponding to the one or more payment accepting units."

Accordingly, Petitioners fail to prove their conclusory assertion that Low implicitly discloses element 1.3. If anything, Petitioners prove that it does not.

Petitioners' alternative theory is equally flawed. Petitioners argue that element 1.3 "is disclosed in the combination of Low in view of Arora and Casey," but again provide no meaningful supporting analysis. Pet., 57-58. Instead, the petition offers a single, conclusory sentence addressing Arora and another addressing Casey. *Id.* Petitioners allege that "Arora discloses each machine is unique and identifying based on dynamically querying, and determining which machine is closest to the customer, and then identifying a unique machine." Pet., 58 (citing EX1004, 5:23-30). But even accepting this assertion as true, it does not explain how identifying based on "dynamically querying" discloses the recited identifying based at least in part on the recited identifier. Petitioners then allege that "Casey discloses various communication protocols in which each device broadcasts its identification information using internet protocol or other device identification protocol." *Id.*, 58-59 (citing EX1005, 3:65-4:3; 5:57-6:7; 6:51-7:25).

Again, however, Petitioners do not even allege, let alone prove, that such identification information is used as a basis for the "identifying" step recited in the claims. In fact, this assertion is doubly inapposite since the petition does not even propose applying these teachings of Casey in the combination. Pet., 52-53 (motivation section exclusively discussing use of Casey's swipe/motion inputs to trigger payment). The petition thus facially fails to address all aspects of element 1.3, let alone prove that the proposed combination satisfies this element as a whole.

Nor does the petition show that a POSA would have arrived at element 1.3 by modifying Low in view of Arora and Casey. Petitioners' claim chart provides no analysis of the combination beyond piecemeal assertions regarding individual references' purported disclosures. Pet., 57-59. While a previous section of the petition discusses a proposed combination of Low with Arora and Casey, the petition's discussion of element 1.3 does not cite that section. *Id.* Regardless, these uncited arguments would not help even if they had been cited, since they never mention the basis for the mobile device's identification of a machine. Pet., 49-52. The petition thus fails to show that the proposed combination satisfies element 1.3.

Accordingly, both of the petition's arguments against element 1.3 fall short, which is fatal to Petitioners' challenges to claims 7 and 11 in Ground 2.

2. The Petition Fails to Show that the Proposed Combination Teaches Element 1.7.2

As recited in element 1.7.2, 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 with the available payment accepting unit of the one or more payment accepting units." Petitioners argue that this element is disclosed by Low "alone or in combination with combination with Arora and/or Casey."[2] *Id.*, 64. As explained below, however, both arguments fail.

The petition's conclusory argument based on Low alone is facially incomplete and lacks the required articulated reasoning. *In re Kahn*, 441 F. 3d at 988 (proving obviousness requires "articulated reasoning with some rational underpinning"). The petition merely quotes Low's description of the user's device displaying a purchase request and transmitting a payment request to the server when the user selects a payment button, then similarly argues that in step 306 of Figure 3 "the user device 110 transmits the purchase request to a server." Pet., 64

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[2] As with element 1.3, the precise basis of Petitioners' alternative argument is unclear—it is initially characterized as Low in combination with Arora "and/or" Casey, while the subsequent analysis only mentions Low in view of Arora "and" Casey (Pet., 64)—but the argument fails under either formulation.

(citing EX1003, 2:46-51, 10:41-57, Fig. 3). But the petition never explains, let alone proves, why Low's transmission of a payment/purchase request to the server would satisfy the recited triggering of "payment by the mobile payment application." Nor do Petitioners allege, let alone prove, that the cited disclosures in Low involve payment for "a transaction initiated by the user of the mobile device." The petition's cursory, incomplete analysis is thus facially insufficient to prove obviousness.

Petitioners also fail to prove their assertion that element 1.7.2 is disclosed or rendered obvious by the proposed combination. In support of this argument, the petition offers a single conclusory sentence: "Low in view of Arora and Casey discloses that Low's app would include Casey's swipe-to-pay and other triggering features implementable via the GUI features." Pet., 64 (citing EX1004, 6:7-12; 2:16-30, 25:28-33; EX1005, 9:37-52). This assertion fares no better than the cursory, incomplete discussion of Low alone, as Petitioners do not even attempt to explain how the proposed inclusion of "Casey's swipe-to-pay and other triggering features" would satisfy element 1.7.2 as a whole. For example, Petitioners still do not explain how the proposed combination teaches triggering payment by the mobile payment application for "a transaction initiated by the user of the mobile device." Petitioners cannot meet their burden of proving obviousness with

piecemeal assertions that contain no substantive analysis and fail to address all claim limitations.

Accordingly, both of the petition's arguments against element 1.7.2 fall short, which is fatal to Petitioners' challenges to claims 7 and 11 in Ground 2.

3. The Petition Fails to Show that the Proposed Combination Teaches Element 1.9

Element 1.9 recites "after establishing the wireless communication path, enabling user interaction with the user interface of the mobile payment application to complete the transaction." Petitioners argue that "Low in view of Arora and/or Casey disclosed or rendered obvious this element"[3] but offers only a piecemeal, conclusory analysis. *Id.*, 65-66. The petition makes a few isolated statements about Low's purported disclosure without explaining how this relates to the claim language. *Id.* Petitioners then argue that the proposed combination disclosed or rendered obvious facilitating interaction with the user interface ("UI") after establishing the wireless communication path "to provide more options to the user

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[3] As with elements 1.3 and 1.7.2, the precise basis of Petitioners' alternative argument is unclear—it is initially characterized as Low in combination with Arora "and/or" Casey, while the subsequent analysis only mentions Low in view of Arora "and" Casey (Pet., 65-66)—but the argument fails under either formulation.

for the goal of enabling the purchase" and that this step "necessarily" comes after establishing the wireless communication path to ensure transaction security. *Id.* As explained below, this argument fails in multiple ways, each of which is fatal to all challenges in Ground 2.

First, the petition fails to address all aspects of element 1.9, including enabling user interaction with the UI after establishing the wireless communication path "to complete the transaction." Petitioners argue that in Low, (1) the user device may provide a graphical user interface, (2) the user may view and select products on the user device while it is in communication with electronic payment module 130, (3) the user device may receive a purchase request after the user selects products for purchase, and (4) the user device may receive approval and use a payment authorization in the approval to dispense products from the vending machine. *Id.* (citing EX1003, 4:24-28, 10:18-27, 10:55-61). But none of these piecemeal assertions address the recited requirement that the user interaction with the UI "complete the transaction." The petition's subsequent argument regarding Low in view of Arora and Casey similarly fails to address this requirement. The petition thus facially fails to show that the proposed combination satisfies element 1.9 as a whole.

Second, the petition relies on a flawed inherency theory. *Therasense*, 593 F. 3d at 1332 ("Inherency … may not be established by probabilities or

possibilities."). Petitioners argue "the step in this element would **necessarily** come after the establishment of the wireless communication path in Low, as modified in view of Arora and Casey, in order to ensure that the transaction was secure." Pet., 66 (emphasis added) (citing EX1005, 7:13-22, 16:22-35, 17:35-37; EX1012, ¶256). But Petitioners offer no explanation for why transaction security "necessarily" requires enabling interaction with the UI to complete the transaction after establishing a wireless communication path, nor do Petitioners explain why such transactions must "necessarily" be secure in the first place.

Petitioners' conclusory inherency theory is also unsubstantiated. As an initial matter, Petitioners never explain the relevance of their string cites to Casey. *See* Pet., 66. Regardless, the cited passages say nothing about transaction security or UI interaction necessarily coming after the establishment of a wireless communication path including the mobile device and the available PAU. *See* EX1005, 7:13-22 (describing networking protocols generally), 16:22-35 (describing optional connections that "may" be used to transfer information and "may" be established when a user device is brought into close proximity with another user's device), 17:35-37 (payment information "may" be transferred to electronic device 234 over longer-range connection). Moreover, the petition does not even apply those aspects of Casey in the proposed combination. *See* Pet., 52-53 (exclusively applying Casey's purported swipe/motion inputs to trigger

payment). The cited testimony is equally unhelpful, since it does not even address Petitioners' inherency theory. EX1012, ¶256 (conclusory assertion that it was obvious to enable UI interaction after establishing wireless communication path).

While the conclusory, unsupported nature of Petitioners' assertions is already fatal to this inherency argument, the argument is further undermined by Petitioners' own statements and evidence. For example, Petitioners acknowledge that "Low does not specify a particular methodology for what happens when the user approaches multiple NICMs" (Pet., 49), and Arora describes transaction processing that would not necessarily require enabling UI interaction after establishing the recited wireless communication path including the mobile device and the available PAU, including "advance purchases with deferred dispensing" and "automatic" payments. EX1004, Abstract; *see also id.*, 3:40-41 (technique allows "customer to make a purchase in advance of being adjacent to a vending machine"), 5:13-21 (describing GPS-based location determination and lookup operations that "could be performed either in the app, by the vending machine company, or by a third party"), 12:9-30 (user may select/purchase products selection/purchase when user is not close to vending machine, while subsequent dispensing commands "may come from a remote server"). While Casey is not used in the proposed combination beyond its swipe/motion inputs (Pet., 52-53), it also notes that its close-range connection could be used to "initiate and/**or**

complete" the transaction, which further indicates that a communication path including the mobile device and the available PAU need not be established beforehand. Petitioners' inherency theory thus fails at every level.

This leaves Petitioners with nothing more than their initial conclusory assertion of obviousness, which is facially insufficient to carry Petitioners' burden. Before setting forth their inherency reasoning, Petitioners argue that facilitating UI interaction after establishing the wireless communication path was obvious "in order to provide more options to the user for the goal of enabling the purchase." Pet., 66. But the petition offers no explanation of how such functionality would "provide more options to the user." For example, Petitioners do not even attempt to explain why the mobile device could not be provided with the same options *before* a wireless communication path is established including the mobile device and the available PAU (e.g., if the user device obtains a set of available options from a remote server via cellular communications). Indeed, as noted above, Arora states that its techniques allow the user to select and purchase items before even arriving at the vending machine. EX1005, Abstract, 3:40-41, 12:9-30.

The cited testimony cannot salvage the petition's conclusory argument. Pet., 66 (citing EX1003, ¶253). First, the cited testimony essentially just repeats the petition's conclusory assertion without offering any supporting analysis or corroboration, and it is therefore entitled to little or no weight. *Compare* EX1012,

¶253, *with* Pet., 66; *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15 (precedential) (declarant's conclusory repetition of petition's argument entitled to little weight). Beyond this parroting of the petition, Petitioners' declarant argues that establishing the connection prior to enabling user interaction would keep the user from conducting a transaction with a different machine, but this assertion is irrelevant since the petition never makes this argument. EX1012, ¶253. Petitioners' declarant also argues that a POSA would have been "aware of the capabilities of mobile device technology" and "would have known to look to other technology, including that disclosed in Arora and/or Casey, to arrive at the claimed element" (*id.*), but this vague, uncorroborated assertion provides no technical analysis supporting the petition's argument that facilitating UI interaction after establishing the wireless communication path was obvious "in order to provide more options to the user for the goal of enabling the purchase." Pet., 66. Petitioners' conclusory assertion of obviousness is therefore legally and factually deficient.

Accordingly, the petition's analysis of element 1.9 is facially incomplete, relies on a flawed inherency theory, and boils down to nothing more than a conclusory, unsubstantiated assertion of obviousness. Petitioners therefore fail to prove that the proposed combination satisfies element 1.9, which is fatal to Petitioners' challenges to claims 7 and 11 in Ground 2.

4. The Petition Fails to Show that the Proposed Combination Teaches Element 1.11

The petition's cursory discussion of element 1.11 is facially deficient in multiple ways. Element 1.11 recites "after exchanging the information"—i.e., the "information" recited in element 1.10—"displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device." Petitioners argue that "Low in view of Arora and/or Casey would have disclosed or rendered obvious this element,"[4] but offers only three conclusory sentences to support that assertion. *Id.*, 67-68. As explained below, the petition's piecemeal discussion fails to show that the proposed combination satisfies the claims as a whole and relies on a flawed inherency theory.

First, the petition's conclusory analysis is facially insufficient to prove obviousness. Petitioners argue that Low's user device receives an approval, which is supposedly "conveyed to the user device 110 via purchase application 112

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[4] As with the previously discussed elements, the precise basis of Petitioners' alternative argument is unclear—it is initially characterized as Low in combination with Arora "and/or" Casey, while the subsequent analysis mentions only Low in view of Arora "and" Casey (Pet., 67-68)—but the argument fails under either formulation.

and/or other application 114 (GUI)." Pet., 67. Petitioners then argue without explanation that "Low, as modified in view of Arora and Casey, discloses this element." *Id.*, 68. Missing from this cursory discussion is any explanation of how the proposed combination supposedly satisfies element 1.11. Petitioners cannot meet their burden of proving obviousness with conclusory analysis that does not even address the claim language. *In re Kahn*, 441 F. 3d at 988 (proving obviousness requires "articulated reasoning with some rational underpinning").

The petition's string cites to Arora and Casey cannot salvage this facially deficient analysis. *See* Pet., 68 (citing EX1004, FIG.3, 13:47-14:51; EX1005, 14:25-32). Petitioners do not even attempt to explain the relevance of these citations to Arora. Pet., 68. And while a parenthetical following the last string citation mentions Casey's purported disclosure of updating a display after exchanging information, the petition contains no analysis of how this relates to the proposed combination with Low and Arora. *Id.* In fact, as previously noted, the petition exclusively proposes applying Casey's swipe/motion inputs in the combination (*id.*, 52-53), so the petition never even proposes using the cited portion of Casey in the combination with Low and Arora (let alone proves sufficient motivation to do so with a reasonable expectation of success).

Accordingly, the petition's wholly conclusory analysis of element 1.11 fails to provide any articulated reasoning with some rationale underpinning showing that the proposed combination satisfies this element as a whole.

Petitioners' argument against element 1.11 also relies on a flawed inherency argument. *See Therasense*, 593 F. 3d at 1332 ("Inherency … may not be established by probabilities or possibilities."). After asserting that Low's user device receives approval (*id.*, (citing EX1003, 10:55-61)), Petitioners argue that the information "would **necessarily** have been conveyed to the user device 110 via purchase application 112 and/or other application 114 (GUI)." Pet., 67 (emphasis added) (citing EX1012, ¶265). But the cited passage of Low says nothing about approval being conveyed via purchase application 112 or a GUI, and the petition fails to offer *any* explanation of why the approval would necessarily be conveyed to the user device via those applications (as opposed to being conveyed to the user device via, for example, a different process executing on the user device that simply forwards the approval to the vending machine). *See* EX1003, 10:55-61 ("User device 110 may receive the approval and use a payment authorization included in the approval with electronic payment module 130 to dispense a purchase item of product 124 from vending machine 120."). The petition thus once again relies on wholly conclusory analysis. *See In re Kahn*, 441 F. 3d at 988

(proving obviousness requires "articulated reasoning with some rational underpinning").

Petitioners' inherency argument also lacks meaningful evidentiary support. Pet., 68 (citing EX1012, ¶265). As the Board explained in *Xerox*:

> Petitioner's only evidence in support of its assertion that blocking the purchaser would require recording the blocking in a record in the user's account is the opinion of its Declarant, Dr. Jones. Pet. 28 (citing Ex. 1003 ¶54). We have reviewed this excerpt from Dr. Jones' declaration and note that it merely repeats, *verbatim*, the conclusory assertion for which it is offered to support. *See* Ex. 1003 ¶54 (Dr. Jones declaring that "[a] POSITA would understand that such a blocking would require recording the blocking in a data record associated with that user's account."). Dr. Jones does not cite to any additional supporting evidence or provide any technical reasoning to support his statement. Thus, the cited declaration testimony is conclusory and unsupported, adds little to the conclusory assertion for which it is offered to support, and is entitled to little weight.

Xerox, Paper 9 at 16 (citing, *inter alia*, 37 C.F.R. §42.65(a)). As in *Xerox*, the only cited support is testimony that essentially just repeats Petitioners' attorney argument without providing corroboration or supporting technical analysis. EX1012, ¶265 ("In my opinion, a POSITA would have understood that the information would be conveyed to the user device 110 via purchase application 112 and/or other application 114 (GUI)."); *compare id.*, *with* Pet., 68. The cited

testimony is therefore entitled to little or no weight, leaving the petition's conclusory inherency argument factually unsupported.

Accordingly, the petition's argument against element 1.11 fails for multiple reasons. Each of these deficiencies is fatal to Petitioners' challenges to claims 7 and 11 in Ground 2.

B. The Petition Fails to Show that a POSA Had Reason to Arrive at the Additional Limitations of Claim 7

Petitioners' challenge to claim 7 also fails because Petitioners never identify a reason to include the features of Casey it relies on as allegedly satisfying elements 7.1-3. Motivation analysis must be commensurate in scope with the relied-upon teachings of the references. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418-19 (2007) (obviousness not shown "merely by demonstrating that each of [a claim's] elements was, independently, known in the prior art"); *Axonics, Inc. v. Medtronic, Inc.*, 73 F.4th 950, 957 (Fed. Cir. 2023) (patent challenger must demonstrate reason to "combine the teachings of the prior art references to achieve the claimed invention"). As explained below, however, the petition relies on Casey's purported disclosures for elements 7.1-3, but it never argues that a POSA had reason to combine those disclosures with Low and Arora in the first place.

This deficiency appears throughout the petition's discussion of claim 7. Element 7.1 recites the method of claim 1 "wherein the mobile device includes an accelerometer," and the petition argues that this element is satisfied by Low in

view of Arora and/or Casey because "Casey discloses that its embodiment includes a motion sensing device such as an accelerometer." Pet., 72 (citing EX1005, 7:59-8:3). Petitioners similarly rely on Casey for elements 7.2-3, which respectively recite "based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit" and "in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless communication path." Pet., 72-73 (citing EX1005, 7:40-58, 8:6-8:3, 9:55-60, 18:58-9:9). However, the petition never alleges that a POSA had reason to apply Casey's accelerometer teachings in the proposed combination, since the petition's discussion of the supposed motivation to combine Low and Arora with Casey exclusively discusses Casey's swipe/motion inputs. *Id.*, 52-53. The petition thus fails to allege, let alone prove, that a POSA had reason to combine the teachings of the cited references to arrive at claim 7.

The only time the petition even mentions the POSA's consideration of Casey's accelerometer teachings in combination with Low appears in the discussion of element 7.3, but this conclusory, unsubstantiated assertion does not even come close to satisfying Petitioners' burden. In this portion of the claim chart, Petitioners argue that a "POSITA would have understood that the hardware/software of user device 110 in Low **could** include an accelerometer, and

look[ed] to Casey to understand that certain accelerometer data **may** be used to initiate interaction between two devices." *Id.*, 73 (emphasis added) (citing EX1012, ¶¶309-10). But this conclusory assertion that Low "could" include an accelerometer and that certain accelerometer data "may" be used is facially insufficient to prove obviousness. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (obviousness concerns whether POSITA not simply "could" have, but "would" have arrived at claimed invention). Regardless, this vague assertion that "certain" data may be used to "initiate interaction between two devices" still does not explain why a POSA would have applied the relied upon teachings of Casey to arrive at claim 7, which does not recite merely initiating interaction between devices. The petition also identifies no meaningful evidentiary basis for its assertion, since the cited testimony essentially just copies the petition's flawed assertions *verbatim*—even including the same typographical error—and is therefore entitled to little or no weight. *Xerox*, Paper 9 at 15.

Accordingly, Petitioners fail to meet their burden of proving claim 7 was obvious for these additional reasons.

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

Petitioners' challenge to claim 11 also fails because Petitioners do not prove that the references teach element 11.3, which recites "an affordance that when slid, indicates the initiation of the transaction." As explained below, Petitioners fail to

show that any of the evidence they cite for element 11.3 teaches the recited features.

Petitioners first argue that a "POSITA would have understood Low, at 3:39-48, 11:9-28, *inter alia*, includes element 11.3" (Pet., 79), but neither cited passage mentions a UI, let alone "an affordance that when slid, indicates the initiation of the transaction," as recited. The first cited passage merely lists exemplary devices, which can use "any appropriate hardware and software for wired and/or wireless communication" and "be managed or controller by any suitable processing device." EX1003, 3:39-48. The second cited passage notes merely that the device can communicate with servers to make a payment and that the user can download the payment application from a server, sign in with a password or PIN, and configure settings such as transaction limits. *Id.*, 11:9-28. Petitioners also cite the testimony of their declarant, but this testimony essentially just repeats the petition's conclusory, inaccurate assertion, and it is therefore entitled to little or no weight. *Compare* EX1012, ¶342, *with* Pet., 79; *Xerox*, Paper 9 at 15.

Petitioners' subsequent assertion that Low's device "was capable of initiating a transaction when slid, particularly because the concept of sliding on a user interface was a feature of smart phones like the iPhone" also falls short. Pet., 79 (citing EX1012, ¶342). First, Petitioners' assertion that Low's device was "capable" of initiating a transaction when slid is facially insufficient to prove

obviousness. *Belden*, 805 F.3d at 1073 (obviousness concerns whether POSITA not simply "could" have, but "would" have arrived at claimed invention). Regardless, as noted above, Petitioners never establish that Low's device has a slidable affordance, let alone one that can be slid to initiate a transaction. Petitioners' assertion that "the concept of sliding on a user interface was feature of smart phones" also misses the mark, since element 11.3 does not merely recite the concept of sliding. The cited testimony does not help, since this *ipse dixit* testimony once again is essentially just a *verbatim* copy of the petition's flawed assertion, lacking supporting corroboration for its assertions. *Compare* EX1012, ¶342, *with* Pet., 79; *Xerox*, Paper 9 at 15.

Petitioners also fail to show that the proposed combination with Casey satisfies element 11.3. Petitioners cite Figure 3 of Casey when arguing that "a GUI could be customized to include various windows, buttons, sliders" and that a POSA would have modified Low and Arora "to include to include a sliding interface to initiate a vending transaction in order to avoid inadvertent initiation of transactions, as a sliding interface would require a more active user input." Pet., 79 (citing EX1005, Fig. 3; EX1012, ¶344). But the cited figure is a flow chart that does not describe a sliding interface, let alone one for initiating a vending transaction. EX1005, Fig. 3. The cited testimony is also entitled to little or no weight because it again essentially just repeats Petitioners' attorney argument

without providing corroboration or supporting analysis. *Compare* EX1012, ¶344, *with* Pet., 79; *Xerox*, Paper 9 at 15.

Accordingly, the petition's cursory analysis fails to show that the references teach element 11.3, leaving Petitioners unable to meet their burden of proving claim 11 was obvious.

V. Conclusion

Accordingly, for at least the reasons set forth above, institution of inter partes review should be *denied*.

Respectfully submitted,

Dated: November 24, 2023

/Matthew A. Argenti/
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VI. Appendix

Exhibit No.	Description
2001	Statutory Disclaimer filed in U.S. Patent 11,481,772 B2, on November 22, 2023

CERTIFICATE OF COMPLIANCE

Pursuant to 37 §42.24(d), the undersigned certifies that this paper contains no more than 18,700 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 7,878 words.

Respectfully submitted,

Dated: November 24, 2023

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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing Patent Owner's Preliminary Response and EX2001 were served on November 24, 2023, on Petitioners at the electronic correspondence addresses of Petitioners as follows:

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