UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,

Petitioner,

v.

TELCOM VENTURES LLC,

Patent Owner.

Case No. IPR2025-00977
U.S. Patent No. 11,707,756

PATENT OWNER'S PRELIMINARY RESPONSE

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TABLE OF CLAIMS

Reference	Claim Limitation
Claim 1	
1[pre]	A method of operating a device, the method comprising:
1[a]	sensing by the device, using a device-based sensor, a parameter that is associated with the device, an environment of the device and/or a user of the device;
1[b]	determining by the device a value of the parameter that is sensed; and
1[c]	responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion, enabling by the device a number of functions of the device and disabling by the device a function of the device;
1[d]	wherein the parameter that is sensed using the device-based sensor, comprises a velocity, an acceleration, a time-of-day, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state; and
1[e]	wherein the device comprises a smartphone.
Claim 2	
2[pre]	The method of claim 1,
2[a]	wherein said enabling by the device a number of functions of the device comprises enabling by the device a number of functions of the device that is greater than or equal to one.
Claim 3	
3[pre]	The method of claim 3, further comprising:
3[a]	while said number of functions is enabled by having sensed by the device the parameter and by having determined by the device that the value of the parameter that is sensed satisfies the threshold criterion, requesting by the device from a second device an authorization to enable a function for conducting a financial transaction by the device;
3[b]	responsive to the requesting, receiving by the device from the second device the authorization to enable the function for conducting the financial transaction; and
3[c]	responsive to receiving the authorization, enabling at the device the function for conducting the financial transaction.
Claim 4	
4[pre]	The method of claim 3,

Reference	Claim Limitation
4[a]	responsive to the device satisfying a proximity condition relative to an entity and responsive to the device sensing the parameter and determining the value that is associated with parameter that is sensed satisfies the threshold criterion, using by the device the function for conducting the financial transaction and conducting by the device the financial transaction by paying for a product.
Claim 5	
5[pre]	The method of claim 3, further comprising:
5[a]	enabling at the second device a function for conducting the financial transaction.
Claim 6	
6[pre]	A device that is configured to perform operations comprising:
6[a]	sensing by the device, using a device-based sensor, a parameter that is associated with the device, an environment of the device and/or a user of the device;
6[b]	determining by the device a value of the parameter that is sensed; and
6[c]	responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion, enabling by the device a number of functions of the device and disabling by the device a function of the device;
6[d]	wherein the parameter that is sensed using the device-based sensor, comprises a velocity, an acceleration, a time-of-day, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state; and
6[e]	wherein the device comprises a smartphone.
Claim 7	
7[pre]	The method of claim 6,
7[a]	w wherein said enabling by the device a number of functions of the device comprises enabling by the device a number of functions of the device that is greater than or equal to one.
Claim 8	
8[pre]	The device of claim 6, wherein the operations further comprise:
8[a]	while said number of functions is enabled by having sensed the parameter and by having determined by the device that the value of the parameter that is sensed satisfies the threshold criterion, requesting by the device from a second device an authorization to enable a function for conducting a financial transaction by the device;

Reference	Claim Limitation
8[b]	responsive to the requesting, receiving from the second device the authorization to enable the function for conducting the financial transaction; and
8[c]	responsive to receiving the authorization, enabling the function for conducting the financial transaction.
Claim 9	
9[pre]	The device of claim 8, wherein the operations further comprise:
9[a]	detecting by the device that a proximity condition has been satisfied between the device and an entity;
9[b]	sensing by the device the parameter and determining by the device the value that is associated with the parameter that is sensed satisfies the threshold criterion; and
9[c]	responsive to the value that is associated with the parameter that is sensed satisfying the threshold criterion, using by the device the function for conducting the financial transaction and conducting by the device the financial transaction by paying for a product.
Claim 10	
10[pre]	The device of claim 8, wherein the operations further comprise:
10[a]	causing a function for conducting the financial transaction to be enabled at the second device.
Claim 11	
11[pre]	A method of operating a wireless device, the method comprising:
11[a]	sensing by the wireless device, using a sensor of the wireless device, a parameter that is associated with the wireless device, an environment of the wireless device and/or a user of the wireless device;
11[b]	determining by the wireless device a value of the parameter that is sensed and determining by the wireless device whether or not the value that is sensed satisfies a threshold criterion;
11[c]	responsive to the value that is sensed satisfying the threshold criterion, enabling a number of functions of the wireless device and disabling a function of the wireless device;
11[d]	requesting by the wireless device from a second device an authorization to enable a function for conducting a financial transaction;
11[e]	responsive to the requesting, receiving by the wireless device from the second device the authorization to enable the function for conducting the financial transaction;

Reference	Claim Limitation
11[f]	responsive to receiving the authorization, enabling at the wireless device the function for conducting the financial transaction; and
11[g]	responsive to the wireless device satisfying a proximity condition relative to an entity and responsive to the wireless device sensing the parameter and determining that the value sensed satisfies the threshold criterion, using the function for conducting the financial transaction and conducting the financial transaction by paying for a product;
11[h]	wherein the parameter that is sensed, using the sensor of the wireless device, comprises a velocity, an acceleration, a time-of-day, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state; and
11[i]	wherein the wireless device comprises a smartphone.
Claim 12	
12[pre]	The method of claim 11,
12[a]	wherein said enabling a number of functions of the wireless device comprises enabling a number of functions of the wireless device that is greater than or equal to one.
Claim 13	
13[pre]	The method of claim 11, further comprising:
13[a]	enabling at the second device a function for conducting the financial transaction.
Claim 14	
14[pre]	A wireless device that is configured to perform operations comprising:
14[a]	using a sensor of the wireless device and sensing a parameter that is associated with the wireless device, an environment of the wireless device and/or a user of the wireless device;
14[b]	determining a value that is associated with the parameter that is sensed and determining whether or not the value satisfies a threshold criterion;
14[c]	responsive to the value satisfying the threshold criterion, enabling a number of functions of the wireless device and disabling a function of the wireless device;
14[d]	requesting from a second device an authorization to enable a function for conducting a financial transaction;

Reference	Claim Limitation
14[e]	responsive to the requesting, receiving from the second device the authorization to enable the function for conducting the financial transaction;
14[f]	responsive to receiving the authorization, enabling the function for conducting the financial transaction; and
14[g]	responsive to the wireless device satisfying a proximity condition relative to an entity and responsive to the wireless device sensing the parameter and determining that the value of the parameter sensed satisfies the threshold criterion, using the function for conducting the financial transaction and conducting the financial transaction by paying for a product;
14[h]	wherein the parameter that is sensed comprises a velocity, an acceleration, a time-of-day, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state; and
14[i]	wherein the wireless device comprises a smartphone.
Claim 15	
15[pre]	The smartphone of claim 9,
15[a]	wherein said enabling a number of functions of the wireless device comprises enabling a number of functions of the wireless device that is greater than or equal to one.
Claim 16	
16[pre]	The wireless device of claim 14, wherein the operations further comprise:
16[a]	causing a function for conducting the financial transaction to be enabled at the second device.
Claim 17	
17[pre]	The wireless device of claim 14, wherein said conducting the financial transaction by paying for a product comprises:
17[a]	establishing by the wireless device a short-range wireless link with the entity;
17[b]	wirelessly transmitting information to the entity using unlicensed frequencies; and
17[c]	wirelessly receiving information from the entity using unlicensed frequencies;
17[d]	wherein said wirelessly transmitting and said wirelessly receiving comprises using a time domain duplex protocol; and

Reference	Claim Limitation
17[e]	wherein said establishing by the wireless device a short-range wireless link with the entity comprises establishing the short-range wireless link with the entity responsive to the wireless device satisfying the proximity condition relative to the entity and responsive to the wireless device sensing the parameter and determining that the value associated therewith satisfies the threshold criterion.
Claim 18	
18[pre]	The wireless device of claim 14, wherein said requesting from a second device an authorization to enable a function for conducting a financial transaction and/or said receiving from the second device the authorization to enable the function for conducting the financial transaction comprises:
18[a]	establishing by the wireless device a link with the second device, comprising a wireless link that comprises a distance that is greater than a distance associated with the proximity condition;
18[b]	wirelessly transmitting information to the second device over said wireless link using unlicensed and/or licensed frequencies; and
18[c]	wirelessly receiving information from the second device over said wireless link using unlicensed and/or licensed frequencies;
18[d]	wherein said wirelessly transmitting and/or said wirelessly receiving comprises using an orthogonal frequency division multiplexing and/or orthogonal frequency division multiple access protocol; and
18[e]	wherein said establishing by the wireless device a link with the second device comprises establishing the link with the second device responsive to the wireless device sensing the parameter and determining that the value sensed satisfies the threshold criterion.

I. INTRODUCTION

Telcom Ventures LLC ("Telcom Ventures" or "Patent Owner") respectfully submits this Preliminary Response ("POPR") requesting that the Board deny institution of the Petition for *inter partes* review (Paper 1, "Petition," or "Pet.") filed by Petitioner Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. ("Samsung" or "Petitioner").

The Petition seeks *inter partes* review ("IPR") of claims 1-18 (the "Challenged Claims") of U.S. Patent No. 11,770,756 (the "'756 Patent," Ex. 1001). The Petition sets forth two grounds. Petitioner's first ground asserts that U.S. Patent Application No. 2009/0069049 to Jain ("Jain," Ex. 1017) alone would have rendered the Challenged Claims obvious. Petitioner has only identified disparate disclosures within Jain and has drawn conclusions contrary to the reference's teachings by relying heavily on gap filling and expert testimony in an attempt to reach the claimed inventions of the '756 Patent.

Petitioner's single-reference obviousness ground based on Jain fails for several reasons. First, despite the claims requiring a device or wireless device that comprises a "smartphone," Petitioner relies on two separate devices (i.e., a mobile device and a separate transaction card) in Jain to meet the claims. *See* Pet. at 9-11. Worse, Petitioner's combination of Jain's distinct transaction card and mobile device, *see* Pet. at 11, to meet the required smartphone fails because there can be no

dispute that Jain's transaction card—not the mobile device—performs the financial transactions. Jain would not have rendered the claimed smartphone obvious because Jain specifically teaches performing certain actions by its mobile device and certain actions by its transaction card.

Second, Petitioner argues that activating Jain's mobile device's antenna would have rendered obvious the claimed "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion, enabling by the device a number of functions of the device and disabling by the device a function of the device." Pet. at 15-18. But activating the mobile device's antenna in Jain is unrelated to "the value . . . that is sensed satisfying a threshold criterion" based on Petitioner's allegations. In fact, Petitioner alleges that a completely distinct process, using a separate transaction card antenna and completely different communications pathway, for the claim requirement of "the value . . . that is sensed satisfying a threshold criterion." Pet. at 14-15. It would not have been obvious to combine the two processes, utilizing separate hardware, to render obvious the claim limitation.

Third, Petitioner contends that the activation code of Jain would have rendered obvious the claimed "authorization to enable the function for conducting the financial transaction." Pet. at 21-22. But Jain's activation code cannot be the claimed "authorization" because Petitioner fails to establish that the activation code

is an authorization. The activation code must still be compared to a pre-stored code on the mobile device before authorization occurs. As such, Petitioner's reliance on the activation code fails.

Finally, Petitioner cannot demonstrate that Jain's mobile device detects "that a proximity condition is satisfied," *see* Pet. at 23-27, because only the transaction card (not the mobile device) includes Near Field Communications ("NFC") capabilities. Shifting this capability to the mobile device would contradict Jain's disclosure of using a separate and distinct transaction card capable of independently performing financial transactions. Accordingly, Ground 1 (alleged obviousness based on Jain alone) fails.

Petitioner's second ground asserts that U.S. Patent Application No. 2006/0165060 to Dua ("Dua," Ex. 1018) alone would have rendered the Challenged Claims obvious. *See* '756 Patent at 2 (identifying Dua in the "References Cited"); *see also* Ex. 2009 ¶75; Ex. 1009 at 169; Ex. 1008 at 212. But Dua fails to render any of the Challenged Claims obvious, and Petitioner's single-reference obviousness ground based on Dua impermissibly disregards key requirements and gap fills missing disclosures. Petitioner's Dua ground fails for multiple reasons.

First, Petitioner ignores that the claimed "enabling by the device a number of functions" must be "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion" by pointing to establishing

Session Initiation Protocol ("SIP") communications as the claimed "enabling by the device a number of functions." Pet. at 45, 49. But establishing SIP communications in Dua is not "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion" because SIP communications begin prior to any disclosed use of such parameters. Worse, Dua discloses that SIP uses a separate authentication process. Petitioner's alternative functions do not meet the claimed "enabling by the device a number of functions" because they are separate and unrelated to credit card issuance which Petitioner relies upon to render this limitation obvious. Because credit card issuance occurs through a SIP session, Petitioner has failed to establish that its relied-upon "enabling a number of functions" is "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion." Pet. at 46-48, 50-51.

Second, Petitioner hand-waves away Dua's lack of disclosure of the claimed "detecting by the smartphone that a proximity condition is satisfied" by asserting that NFC meets the limitations of the claims. *E.g.*, Pet. at 59-60. That is, the Petition solely relies on NFC to address "the wireless device satisfying a proximity condition relative to an entity." *Id.* But Petitioner fails to recognize that Dua mentions NFC only in passing in its background and never discloses or suggests using NFC for its disclosed embodiments—embodiments that Petitioner expressly relies upon for

obviousness. *See* Ex. 2009 ¶¶130-138. Dua thus makes clear that it specifically chose not to rely on NFC in its innovation. Without disclosure in Dua, Petitioner is left to rely on impermissible gap-filling by its expert. *E.g.*, Pet. at 60-61.

Accordingly, the Petition fails to establish that either ground would have rendered the Challenged Claims obvious. Petitioner has failed to meet its burden to show a reasonable likelihood of unpatentability of any of the Challenged Claims. *See* 37 C.F.R. § 42.108(c). Accordingly, Patent Owner requests that the Board deny institution of *inter partes* review.

II. LEGAL STANDARD

It is Petitioner's burden to demonstrate unpatentability by a preponderance of the evidence. The Petition must establish, with particularity, the grounds and evidence that support invalidating the patented claims. 35 U.S.C. § 312(a)(3). Petitioner "must 'specify where each element of the claim is found in the [relied upon] prior art patents.'" *In-Depth Geophysical, Inc. v. ConocoPhillips Co.*, IPR2019-00850, Paper 56 at 27 (P.T.A.B. Sept. 3, 2020) (quoting 37 C.F.R. § 42.104(b)(4)). The Petition must both "clearly point out the differences between the claimed invention and [the prior art]" and "explain why a person of ordinary skill in the art would have found the claimed subject matter obvious in spite of those differences." *Synopsys, Inc. v. Mentor Graphics Corp.*, IPR2012-00041, Paper 16 at 14 (P.T.A.B. Feb. 22, 2013). Petitioner must recite where each challenged limitation

is found in the reference(s) and explain why a person of ordinary skill in the art ("POSITA") would have modified the primary reference. *Microsoft Corp. v. Secure Web Conf. Corp.*, IPR2014-00745, Paper 12, 11-13 (P.T.A.B. Sept. 29, 2014).

In addition, the Board may institute based only on what the Petition actually presents and not what the Petition could have reasonably contained. *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016). The Board cannot "deviate from the grounds in the petition and raise its own" theories of invalidity. *Sirona Dental Sys. GmbH v. Institut Straumann AH*, 892 F.3d 1349, 1356 (Fed. Cir. 2018). The Board may deny institution when the Petition raises an insufficient "number of claims and grounds that meet the reasonable likelihood standard." *Chevron Oronite Co. LLC v. Infineum USA L.P.*, IPR2018-00923, Paper 9, 10-11 (P.T.A.B. Nov. 7, 2018) (informative) (citing *SAS Q&As*, part D, Effect of SAS on future challenges that could be denied for statutory reasons (June 5, 2018)).

III. BACKGROUND

A. The '756 Patent

Applicants filed U.S. Patent Application No. 17/653,748 on March 7, 2022, which issued as U.S. Patent No. 11,770,756 on September 26, 2023. '756 Patent at 1. The '756 Patent claims the benefit of U.S. Patent Application No. 12/264,711—later issued as U.S. Patent No. 9,462,411—which has a filing date of November 4, 2008. *Id.* at 2.

The ’756 Patent describes mobile wireless devices and methods of using a mobile wireless device to perform financial transactions, but only when certain conditions or criteria are met, such as the satisfaction of a proximity condition and a criterion for the value of a parameter, e.g., a physiological parameter. ’756 Patent, 1:25-30, 6:13-23; *see also* Ex. 2009 ¶57. In the prior art, mobile wireless devices were rigidly configured to perform a predetermined number of functions. ’756 Patent, 1:39-44; *see also* Ex. 2009 ¶57. To overcome this rigidity, the ’756 Patent describes devices and methods that “may be used to enable adaptively one or more modes/functions of a device” based upon satisfying certain criteria. ’756 Patent, 1:49-54; *see also* Ex. 2009 ¶57. The ’756 Patent explains that the invention advantageously allows “a mobile wireless device [to] act as a ‘wallet’ (over and above other functions) only when it is time to pay for an item and not act as a wallet when there is no need to do so.” ’756 Patent, 1:44-57; *see also* Ex. 2009 ¶57.

The ’756 Patent also describes estimating “a value of at least one other parameter that may be associated with the wireless communications device . . . and/or an entity (living or otherwise) that is associated with and/or is proximate to the wireless communications device.” ’756 Patent, 6:15-19; *see also* Ex. 2009 ¶58. Such parameters include “velocity, acceleration, ToD, ToM, ToY, humidity, temperature, height, level of brightness, level of darkness, a blood pressure, a heart rate, a blood content, a physiological state, a psychological state,

etc." '756 Patent, 6:20-23; *see also* Ex. 2009 ¶58. These parameters can be estimated using "sensors that may, according to some embodiments, be device-based and/or network assisted/based means and/or sensors." '756 Patent, 6:28-30; *see also* Ex. 2009 ¶58. The disclosed wireless communications devices may be "configured to selectively enable the first communications mode/function" responsive to a value of such a parameter. '756 Patent, 6:40-44; *see also* Ex. 2009 ¶58.

During prosecution, the Examiner issued a non-final rejection that rejected the claims as unpatentable under 35 U.S.C. § 103 over U.S. Patent Application Publication No. 2009/0058637 to Kuo et al. ("Kuo") in view of U.S. Patent Application Publication No. 2003/0172028 to Abell et al. ("Abell"), and for double patenting over claims 1, 7, and 17 of U.S. Patent No. 11,304,118. Ex. 1011 at 104, 106. Following an amendment of the independent claims to include "responsive to the value that is determined . . . enabling . . . a number of functions . . . and disabling a function" and the filing of a terminal disclaimer, the Examiner allowed the claims. *Id.* at 206-07. In the Notice of Allowance, the Examiner explained that Kuo, as the closest prior art of record, alone or in combination failed to teach or suggest "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion, enabling by the device a number of functions of the device and disabling by the device a function of the device." *Id.* at 207.

B. Jain (Ex. 1017)

U.S. Patent Application No. 2009/0069049 to Jain is titled "Interfacing Transaction Cards with Host Devices." Ex. 1017 at 1. Jain has a filing date of September 5, 2008, and was published on March 12, 2009. Jain describes a transaction card that interacts with a separate and distinct mobile device to perform financial transactions. Ex. 2009 ¶¶62-74. Jain's transaction card independently performs financial transactions because it is the only device in Jain that includes the short range communication functionality required to conduct financial transactions. *Id.* ¶62. According to Jain: "For example, the transaction card 112 may execute a contactless transaction with the POS [point of sale] device 114 ***independent of*** the mobile device 110a." Jain ¶[0023] (emphasis added); Ex. 2009 ¶62.

Figure 3 of Jain shows an exemplary transaction card.

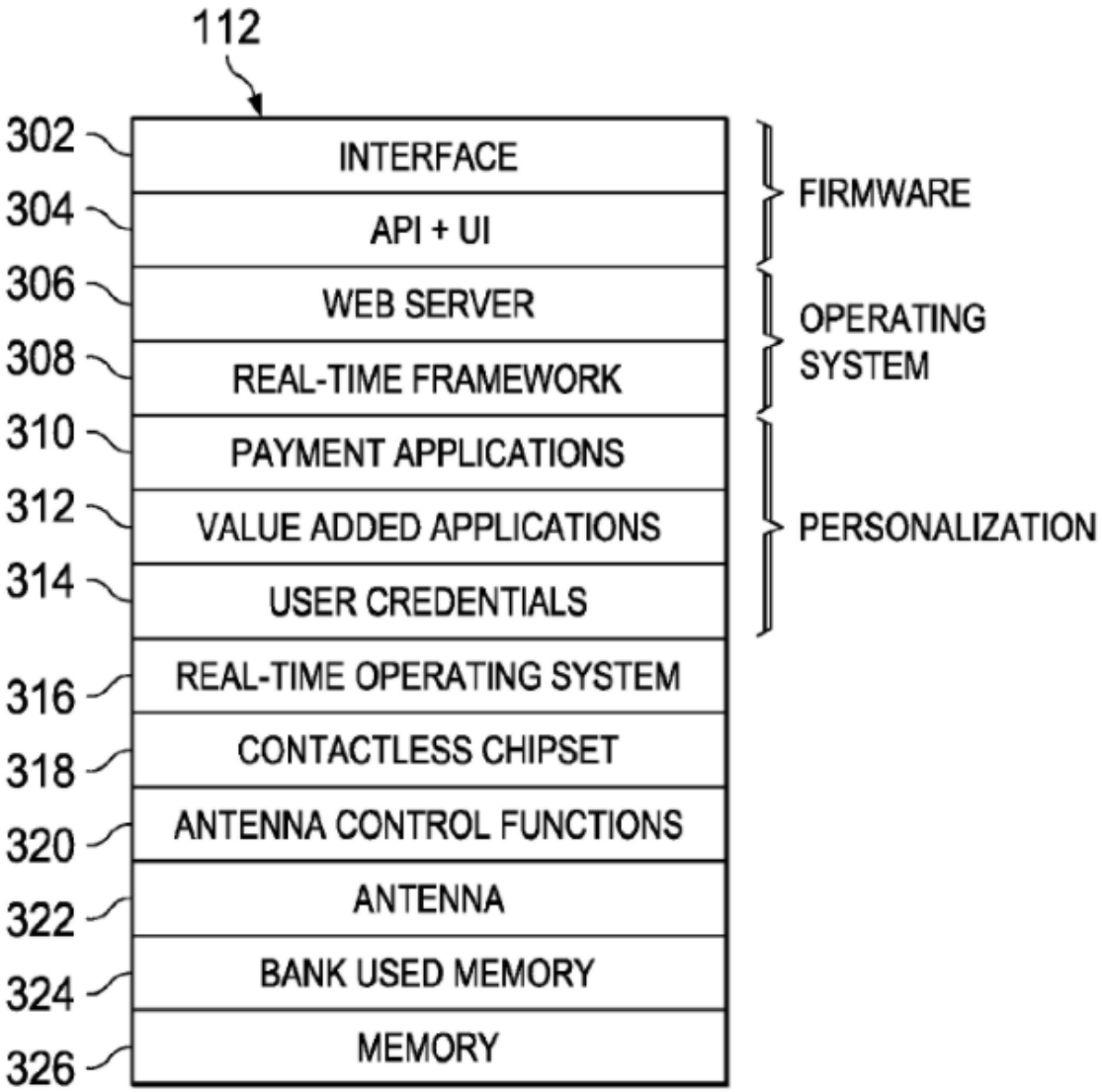

FIG. 3

Jain, Fig. 3; ¶¶[0009], [0049]; Ex. 2009 ¶63.

C. Dua (Ex. 1018)

U.S. Patent Application No. 2006/0165060 to Dua is titled "Method and Apparatus for Managing Credentials Through a Wireless Network." Dua has a filing date of January 21, 2005, and was published on July 27, 2006. Dua at 1. Dua

discloses that "[t]he ultimate goal of the present invention is to securely, accurately and rapidly distribute credentials to the proper wireless devices based upon the actions of credential issuers." Dua ¶[0038]; Ex. 2009 ¶76. Figure 2 of Dua illustrates the steps in the process for issuing a credential according to a preferred embodiment:

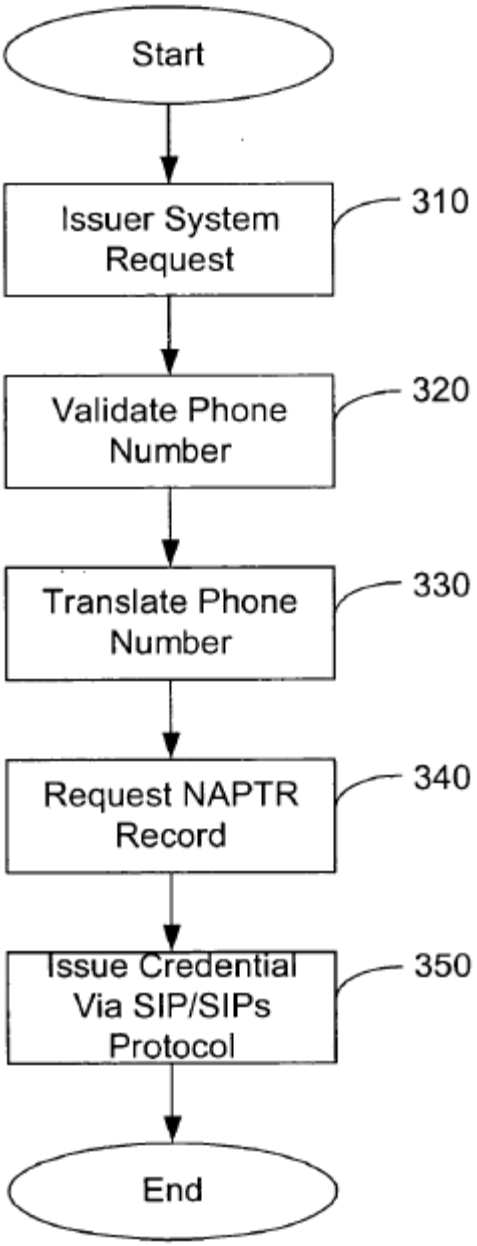

FIG. 2

Dua, Fig. 2; Ex. 2009 ¶77.

Dua depends on SIP (Session Initiation Protocol). Ex. 2009 ¶78. SIP is configured to establish a communication session. *Id.* Once the communication

session is established, Dua discloses another protocol, such as Real Time Protocol ("RTP") or Secure Real Time Protocol ("sRTP"), to transmit any data. *Id.* According to Dua:

> Associated with SIP is the SDP, defined in RFC 2327. SIP is used to invite one or more participants to a session, while the SDP-encoded body of the SIP message contains information about what media encodings (for example, voice, video) the parties can and will use. After this information is exchanged and acknowledged, all participants are aware of the participants' IP addresses, available transmission capacity, and media type. Then, data transmission begins, using an appropriate transport protocol. Typically, the RTP is used.

Dua ¶[0110].

In Dua, the issuer's system issues the credentials and transmits the credentials to the wireless device via the Wireless Credential Manager. Dua ¶¶[0040], [0043]; Ex. 2009 ¶80.

IV. CLAIM CONSTRUCTION

Claim terms should be given their plain and ordinary meaning to a POSITA as of the earliest effective filing date. *See, e.g.*, *Eon Corp. IP Holdings LLC v. Silver Spring Networks, Inc.*, 815 F.3d 1314, 1320 (Fed. Cir. 2016). "The ordinary meaning of a claim term is not 'the meaning of the term in the abstract.' Instead, 'the 'ordinary meaning' of a claim term is its meaning to the ordinary artisan after reading the entire patent.'" *Id.* (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc)).

Petitioner contends that "[n]o express constructions are required to find the '756 patent claims invalid." Pet. at 7. Patent Owner agrees that the Board should apply the plain and ordinary meaning of the terms in the Challenged Claims. Patent Owner does not waive its right to raise additional issues of claim construction in any litigation, nor does it waive any argument in any litigation that claim terms are not indefinite or are otherwise valid. The failure of the Petition to render obvious the Challenged Claims is clear in view of the arguments below without construing any specific claim term.

V. LEVEL OF ORDINARY SKILL IN THE ART

Each of the arguments below is considered from the standpoint of a POSITA in the field of the '756 Patent at the time of the invention. For purposes of this POPR, Patent Owner disputes the definition of a POSITA proposed by Petitioner. Patent Owner contends that a POSITA would have had at least a bachelor's degree in electrical engineering, computer engineering, or a related field, with about two years of experience in wireless communications. Ex. 2009 ¶41. This contrasts with Petitioner's proposal, which calls for "at least a Bachelor of Science in electrical engineering, computer engineering, or similar fields and at least two years of practical experience in the field of secure wireless communication applications." Ex. 1002 ¶79. Patent Owner disagrees that a POSITA should be required to have any experience in secure wireless communications. The claims of the '756 Patent do not

have any requirement that the communications be "secure," such as encryption or encoding of the wireless communications. *E.g.*, '756 Patent at cl. 1; *see also* Ex. 2009 ¶42. Regardless, Petitioner fails to meet its burden under either POSITA definition.

VI. THE BOARD SHOULD NOT INSTITUTE *INTER PARTES* REVIEW

Both of Petitioner's grounds fail. As described below, neither Jain alone nor Dua alone—whether considered based solely on the reference's disclosures or based on the disclosures in view of a POSITA's knowledge—would have rendered obvious all elements of any of the Challenged Claims.

A. Petitioner Has Failed to Establish a Reasonable Likelihood That Jain Would Have Rendered Any of the Challenged Claims Obvious (Ground 1).

Petitioner's first ground asserts that the Challenged Claims would have been obvious over Jain (Ex. 1017). Pet. at 7. In this ground, Petitioner haphazardly combines disparate components and processes within Jain and draws flawed obviousness conclusions contrary to the reference's teachings to try to reach the claimed inventions of the '756 Patent. In view of the deficiencies discussed below, Petitioner failed to demonstrate a reasonable likelihood of prevailing based on Jain.

1. Jain Does Not Disclose or Render Obvious "a method of operating a device"

Jain does not disclose or render obvious "a method of operating a device" of independent claim 1[pre], "a device that is configured to perform operations" of

independent claim 6[pre], "a method of operating a wireless device" of independent claim 11[pre], or the "a wireless device that is configured to perform operations" of independent claim 14[pre], where the device or wireless device comprises a "smartphone" (as all claims require). Ex. 2009 ¶¶83-96. There can be no dispute that the preambles of the independent claims are limiting, and thus require a "device" or "wireless device" that, according to the body of the independent claims, comprises a "smartphone." *Id.* ¶ 83. The preamble recitations of a "device" or "wireless device" provide antecedent basis for the device or wireless device recited later in the claims, and the claims then state that the device or wireless device comprises a "smartphone." *See, e.g.*, '756 Patent, cl. 1 (claiming "sensing by ***the device***" where "the device comprises a ***smartphone***") (emphasis added); cl. 6 (same); cl. 11 (claiming "sensing by ***the wireless device***" where "the wireless device comprises a ***smartphone***") (emphasis added); cl. 14 (claiming "using a sensor of ***the wireless device***" where "the wireless device comprises a ***smartphone***"); *see also C.W. Zumbiel Co. v. Kappos*, 702 F.3d 1371, 1385 (Fed. Cir. 2012) ("[T]he preamble constitutes a limitation when the claim(s) depend on it for antecedent basis." (citing *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 8089 (Fed. Cir. 2002))); *see also* Ex. 2009 ¶ 83. All dependent claims of the '756 Patent depend from one of these four independent claims and thus include this same requirement that the claimed device or wireless device be a "smartphone." Ex. 2009 ¶ 83.

Petitioner inconsistently points to distinctly described elements as comprising the claimed "smartphone" of the '756 Patent. *See, e.g.*, *Google LLC v. Uniloc USA, Inc.*, IPR2017-02082, Paper 10 at 13 (P.T.A.B. Mar. 29, 2018) (denying institution because "Petitioner inconsistently maps the recited 'instant voice message' to different elements of Zydney without sufficient explanation for this incongruity"). Petitioner incorrectly asserts that the claimed "smartphone" can be met by the functionality provided by Jain's "mobile device" in some instances, and the functionality of Jain's separate and distinct "transaction card" in other instances. *See* Pet. at 9-11. For example, Petitioner implies that Jain's mobile device participates in a transaction by alleging that "mobile device 110 then sends a transaction response 119 that identifies information associated with a payment account." Pet. at 10 (citing Jain ¶[0027]). But Jain does not disclose the participation of the mobile device in financial transactions at all. Instead, Jain ¶[0027] confirms it is just the transaction card that participates. As Jain states, "***the transaction card 112*** may transmit one or more transaction responses 119 identifying information associated with a payment account." Jain ¶[0027] (emphasis added); *see also id*. ¶[0023] ("For example, the transaction card 112 may execute a contactless transaction with the POS [point of sale] device 114 ***independent of*** the mobile device 110a.") (emphasis added).

Petitioner's misrepresentations, or at least lack of clarity, regarding Jain's disclosures violate 35 U.S.C. § 312(a)(3) and 37 C.F.R. § 42.104(b)(4). *See* 35

U.S.C. § 312(a)(3) (a petition "may be considered only if . . . the petition identif[ies], in writing and ***with particularity***, . . . the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim") (emphasis added); 37 C.F.R. § 42.104(b)(4) (the petition must "specify where each element of the claim is found in" the prior art); *see also, e.g.*, *Google LLC*, IPR No. 2017-02082, Paper 10 at 14; *Netflix, Inc. v. DivX, LLC*, 84 F.4th 1371, 1377 (Fed. Cir. 2023) ("Ultimately, it is the petitioner's burden to present a clear argument."). Petitioner's reliance on two separate structures in Jain must fail.

The '756 Patent contemplates a ***single*** device or wireless device (which in either case is a "smartphone") capable of performing a financial transaction. Ex. 2009 ¶84. But Petitioner points to two separate pieces of hardware that purportedly meets these limitations. *Id.* ¶85 (citing Ex. 1002 ¶122) (pointing to the receipt of an activation code ***of the mobile device*** as the claimed "receiving by the device from the second device the authorization to enable the function for conducting the financial transaction"); *see also id.* (citing Ex. 1002 ¶128) (pointing to the activation of a reader mode ***of the transaction card*** as the claimed "responsive to the device satisfying a proximity condition relative to an entity"); *see also* Ex. 2009 ¶ 90

The claimed smartphone cannot be the combination of Jain's mobile device and transaction card. First, Jain touts that the "mobile device 110 does not require additional hardware, software, and/or firmware" as an advantage because the

transaction card itself already has the required functionalities, such as NFC. Jain ¶[0022]); *see also id.* ¶[0018]) ("An intelligent card is a device configured to . . . access or otherwise execute services (e.g., transactions) independent of the host device."); *see also* Ex. 2009 ¶91. In fact, Jain discloses a transaction card that "include[s] any software, hardware, and/or firmware configured to wirelessly execute transactions with the POS device 114" independent of the mobile device. Jain ¶[0023] (explaining that "the transaction card 112 may include one or more chipsets that execute an operating system and security processes to independently execute the transaction"); Ex. 2009 ¶91. For example, the Jain transaction card itself includes hardware to transmit short range signals, such as NFC. Jain ¶[0023].

Petitioner also asserts that Figure 1 of Jain shows that mobile device 110a includes or incorporates transaction card 112a. Pet. at 10-11. But Figure 1 describes a system where the transaction card is connected to—not incorporated within—the mobile device. Ex. 2009 ¶92. Furthermore, Petitioner's logic fails when applied elsewhere within Figure 1. Using Petitioner's logic, because the transaction card is "incorporated within" the mobile device, the mobile device must also be incorporated within the offline store, as it appears within the mobile store in the depiction. *Id.* Under Petitioner's logic, the mobile device within the store would itself become a part of the store—a result not contemplated by Jain. *Id.*

Contrary to Petitioner's assertion regarding a block diagram, Jain specifically requires a ***distinct*** transaction card that is "***independent***" of the mobile device. Jain ¶[0076] ("The intelligent card 806 is configured to . . . execute transactions ***independent of the host device 810***.") (emphasis added); *see also id.* ¶[0023] ("[T]he transaction card 112 may wirelessly execute transactions ***without aspects of the transaction being executed by the mobile device 110***.") (emphasis added); *see also* Ex. 2009 ¶93. The transaction card alone, rather than the combination of the transaction card and mobile device, is essential to executing transactions in Jain. *See* Jain ¶[0018] ("***By providing an intelligent card***, the system 100 may wirelessly execute transactions . . . .") (emphasis added); *see also* Ex. 2009 ¶94. Because Jain describes a separate and distinct transaction card, the transaction card cannot be considered part of the mobile device; thus, Petitioner's combination does not disclose the claimed "smartphone." *See* Ex. 2009 ¶93.

Next, Petitioner alleges that integrating the mobile device and the transaction card would have been obvious because "separability of the transaction card ***is not always advantageous***." Pet. at 11 (emphasis added). Not only is this an example of gap filling by Petitioner, without a sufficient motivation to combine, but Jain in fact teaches away from any integration of its transaction card with the mobile device. Ex. 2009 ¶95; *K/S HIMPP v. Hear-Wear Techs., LLC*, 751 F.3d 1362, 1365 (Fed. Cir.

2014) (affirming the refusal to "accept a conclusory assertion from a third party about general knowledge in the art without evidence on the record").

Petitioner then asserts that it might not have been advantageous to have a separate transaction card because of (1) the cost of implementing an independent transaction card and (2) the possible inadvertent loss of the transaction card. Pet. at 11 (citing Ex. 1002 ¶¶98-101). First, Petitioner does not identify anything in Dr. Almeroth's declaration that references a reduction in cost, likely because the cost of modifying a mobile device far outweighs the cost of a transaction card. *See id.*

Regardless, Jain does not support Petitioner's unsupported argument. Ex. 2009 ¶¶94-95. Contrary to Petitioner's argument, Jain touts the benefit that the "mobile device 110 does not require additional hardware, software, and/or firmware" and, thus, reduces the cost of having to modify an existing mobile device. Jain ¶[0023]; *see also* Ex. 2009 ¶94. Further, Petitioner admits that Jain implements security to guard against lost transaction cards, such as by way of a PIN. Pet. at 12 (citing Jain ¶¶[0072], [0075], Fig. 7B (annotated); Ex. 1002 ¶107). Under Petitioner's theory, the inadvertent loss of a transaction card is simply replaced by the inadvertent loss of a mobile device, which provides no added benefit. Ex. 2009 ¶95.

Jain emphasizes, as a stated benefit of the invention, using a separate and distinct transaction card capable of executing transactions independently of the

mobile device. Ex. 2009 ¶95. An independent transaction card that can perform financial transactions offers increased versatility regarding compatible host mobile devices, which is a benefit that would be diminished if the transaction card were integrated within the mobile device. *See* Jain ¶[0021] (identifying digital cameras, pagers, MP3 players, camcorders and portable computers as possible mobile devices); *see also id.* ¶[0037] ("For example, the user may want to re-personalize the transaction card 112 ***to change host devices, to have multiple host devices***, and/or other reasons.") (emphasis added); *see also* Ex. 2009 ¶95. Petitioner identified a disclosure in Jain that actually emphasizes this benefit when it cited Jain's statement that the "mobile device 110 does not require additional hardware, software, and/or firmware to wirelessly execut[e] a transaction," which is a benefit directly attributable to the transaction card being independent of the mobile device. Pet. at 11 (quoting Jain ¶[0023]).

Jain does not disclose and would not have rendered obvious "a method of operating a device" of independent claim 1[pre], "a device that is configured to perform operations" of independent claim 6[pre], "a method of operating a wireless device" of independent claim 11[pre], or the "a wireless device that is configured to perform operations" of independent claim 14[pre].

2. Jain Does Not Disclose or Render Obvious "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion, enabling by the device a number of functions of the device and disabling by the device a function of the device."

Under limitations 1[c] and 6[c], the claimed "enabling by the device a number of functions of the device and disabling by the device a function of the device" must occur "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion." Similarly, under limitations 11[c] and 14[d], the claimed "enabling a number of functions of the wireless device and disabling a function of the wireless device" must occur "responsive to the value that is sensed satisfying the threshold criterion." Petitioner treats these limitations as substantively identical to limitation 1[c]. Pet. at 31-32.

In order to allege that this limitation is taught or suggested by Jain, Petitioner mixes and matches steps from two separate and distinct processes of Jain. Pet. at 15-20. The two relevant methods of Jain are (1) method 700, which describes "automatically bootstrapping an intelligent card in response to at least insertion into a host device," and (2) "method 900 for activating a wireless transaction system including an intelligent card." Jain ¶¶[0072], [0080]. Thus, method 700 relates to connecting or bootstrapping the transaction card to the mobile device (because they are separate) while method 900 relates to activating the transaction card itself. In applying Jain to try to meet this limitation—i.e., the requirement that "responsive to

determining that the value of the parameter sensed satisfies a criterion, . . . selectively requesting an authorization to establish said capability"—Petitioner continues to misinterpret the separate tasks performed by the mobile device and the transaction card in Jain by pointing to ***both*** method 700 and method 900 as if they were the same single continuous method. Pet. at 15-20. They are not. Ex. 2009 ¶103.

To meet the "responsive to" and "enabling" elements of the limitation, Petitioner asserts that "step 714: 'turn antenna on and update host device signature in plug-in'" is the "***enabling by the device a number of functions of the device***" which allegedly occurs "in response to user authentication (in steps 738-742 of FIG. 7B) (***responsive to satisfying a threshold criterion***)." Pet. at 15 (citing Jain ¶¶[0072]-[0075], Fig. 7A) (emphasis in original). But when alleging that Jain performs the claimed "disabling" step, Petitioner pivots away from step 714 as the claimed "enabling" step. Instead, Petitioner identifies a distinct method, method 900 and Figure 9, to allege that the activation of the mobile device's antenna described in method 900 is now the claimed "enabling" step. Pet. at 16 (quoting Jain ¶[0081]). Petitioner's pivot is problematic because method 900 is unrelated to method 700 and uses a different antenna—the antenna on the mobile device, ***not*** the antenna on the

transaction card as in Figure 7[1]—to achieve a different result. *See* Jain ¶[0063] ("As illustrated, the intelligent card 400 includes ***an antenna 402*** . . . .") (emphasis added); *see also id.* ¶[0073] ("[A]t step 714, the antenna is turned on and the intelligent card is updated with host-device signature."); *see also id.* ¶[0081] ("For example, the transaction card 112d of Fig. 2 may wirelessly transmit an activation request to the financial institution 106 ***using the cellular radio technology of the mobile host device***.") (emphasis added); *see also id.* ("If the activation code is not manually entered by the user, then at step 920, the transaction card wirelessly transmits a request for the activation code using the cellular radio technology of the host device."); *see also* Ex. 2009 ¶100. Thus, the user authentication process described by method 700 has no bearing on method 900.

Petitioner does not identify any disclosure in Jain indicating that method 900 necessarily occurs after method 700. Ex. 2009 ¶101. And for good reason. Method 900 pertains to activating a previously inactive card or account. *See* Jain ¶[0080] ("Fig. 9 is a flow chart illustrating an example method 900 for activating a wireless transaction system including an intelligent card.") (emphasis added); *see also id.*

[1] Antenna 322 on the transaction card is "a short range wireless antenna connected to an NFC inlay via a software switch such as a NAND Gate or other element." Jain ¶[0061].

¶[0081] ("Method 900 begins at step 902 where a request ***to activate a transaction card*** is received . . . . If an ***account activation*** is included . . . .") (emphasis added); *see also* Ex. 2009 ¶101. Petitioner can only point to paragraph [0072] of Jain to argue that "[o]nly after bootstrapping/authentication (FIG. 7) is complete can activation (FIG. 9) begin . . . ." But the activation described in paragraph [0072] is activation ***of the transaction card's antenna*** described in the immediately following paragraph, not the unrelated activation described in several paragraphs later in Figure 9 and method 900. *See* Jain ¶[0073] ("As for the example, the transaction card 112 ***may activate the antenna for wireless transactions*** . . . .") (emphasis added). Ex. 2009 ¶101.

Petitioner attempts to cover this deficiency by pointing to paragraph [0072] of Jain, which discloses that "an intelligent card may execute one or more authentication procedures prior to activation." Pet. at 16 (citing Jain ¶[0072]). However, the activation being described there is activation ***of the transaction card's antenna*** described in the immediately following paragraph [0073]), not an unrelated activation described in a separate figure (Figure 9) and several paragraphs later at paragraph [0081]. *See* Jain ¶[0073] ("As for the example, the transaction card 112 ***may activate the antenna for wireless transactions*** . . . .") (emphasis added); *see also* Ex. 2009 ¶101.

Petitioner also cannot point to a claimed "value . . . for the parameter" within method 900. Ex. 2009 ¶102. Jain only discloses the use of an activation code provided by the financial institution or locally stored answers to preprogrammed questions in method 900. Jain ¶[0081]; *see also* Ex. 2009 ¶102. Neither can satisfy the claimed "parameter." *See, e.g.*, '756 Patent, cl. 11[h] ("wherein the parameter that is sensed using the device-based sensor, comprises a velocity, an acceleration, a time-of-day, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state;"). Nor does Petitioner allege that they could satisfy the limitation.

Petitioner improperly conflates method 700 and method 900 to meet the claimed "enabling" and "responsive to" elements of the limitation. Indeed, the activation of the mobile device's antenna of method 900 (Petitioner's relied-upon "enabling" step) is not performed "responsive to" the user authentication within method 700 relied upon by Petitioner as the claimed "the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion." Moreover, a POSITA would not have been motivated to combine methods 700 and 900. *See* Ex. 2009 ¶¶100-101. Petitioner cannot combine the two methods, much less explain why a POSITA would have been motivated to make such a combination. *See id.* ¶¶101-102. Accordingly, Jain does not disclose and would not have rendered

obvious the "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion, enabling by the device a number of functions of the device and disabling by the device a function of the device" of independent claims 1 and 6, "responsive to the value that is sensed satisfying the threshold criterion, enabling a number of functions of the wireless device and disabling a function of the wireless device" of claim 11, and "responsive to the value satisfying the threshold criterion, enabling a number of functions at the wireless device and disabling a function of the wireless device" of claim 14.

3. Jain Does Not Disclose or Render Obvious "responsive to the requesting, receiving by the wireless device from the second device the authorization to enable the function for conducting the financial transaction."

Limitations 11[e] and 14[f] both require "responsive to the requesting, receiving by the wireless device from the second device the authorization to enable the function for conducting the financial transaction." '756 Patent, cls. 11, 14. Petitioner treats these limitations as substantively identical to limitation 3[b]. Pet. at 31-32.

Petitioner points to method 900 of Jain for this limitation. *Id.* at 21-22. Method 900 describes the process of activating a card. Jain ¶[0081]; Ex. 2009 ¶105. At step 920, the transaction card, via the mobile device, "wirelessly transmits a request for the activation code using the cellular radio technology" of the mobile device to the financial institution. Jain ¶[0081]; Ex. 2009 ¶105. The transaction card then

identifies a locally stored activation code at step 922 and compares this locally stored activation code to the received activation code from the financial institution at step 924. Jain ¶[0081]; Ex. 2009 ¶105. If the activation codes match, the transaction card is activated by step 926. Jain ¶[0081]; Ex. 2009 ¶105. Because Jain's transaction card must perform the additional step of comparing the received activation code to a locally stored code, the received "activation code" is not itself a received "authorization to enable the function for conducting the financial transaction." *See* Ex. 2009 ¶107. Because Petitioner's argument on this issue fails and affects nearly half the Challenged Claims, the Board should deny institution of the Petition for failing to raise a sufficient "number of claims and grounds that meet the reasonable likelihood standard." *Chevron Oronite Co.*, IPR2018-00923, Paper 9, 10-11 (citing *SAS Q&As*, part D, Effect of SAS on future challenges that could be denied for statutory reasons (June 5, 2018)).

In applying steps 920-924 to meet this limitation, Petitioner points to receiving the activation code from the financial institution as the claimed "authorization to enable the function for conducting the financial transaction." Pet. at 21. But the activation code is not an authorization. To perform the authorization, Jain's transaction card compares the code sent by the institution and the code stored on the transaction card. *See* Jain ¶[0081] ("If the locally stored information matches the provided information at decisional step 924, then at step 926, the transaction card

is activated."); *see also* Ex. 2009 ¶106. Accordingly, it is the ***transaction card*** that determines whether a particular card can be used. Jain ¶[0080]. ("In general, an ***intelligent card*** may execute one or more activation processes in response to, for example, a selection from a user.") (emphasis added); *see also* Ex. 2009 ¶106. Accordingly, Petitioner has failed to demonstrate that the activation code alone can be the claimed "authorization."

Next, Petitioner argues that a POSITA would "understand that the financial institution ***would not*** provide a matching activation code if the smartphone is not authorized to perform payment services with the financial institution." Pet. at 22 (emphasis added). But Jain "explicitly discloses that the financial institution ***would*** provide a valid activation code to an unauthorized user because the requested activation code must still match the locally stored code." Jain ¶[0081] ("If the provided information does not match the locally stored information, then execution ends."); *see also* Ex. 2009 ¶108. Indeed, Jain does not require that the financial institution first verify that the user is indeed authorized before sending the activation code. Jain ¶[0081] ("[A]t step 920, the transaction card wirelessly transmits a request for the activation code using the cellular radio technology of the host device . . . . If the locally stored information matches the provided information at decisional step 924, then at step 926, the transaction card is activated."); *see also* Ex. 2009 ¶107. The financial institution issues the activation code regardless of whether the

transaction card is authorized. *See* Jain ¶[0081]; *see also* Ex. 2009 ¶107 ("[A] POSITA would have understood that Jain allows a financial institution to send a code to an unauthorized user because the transaction card must compare the two codes and determine that the codes match before activation occurs.").

A POSITA would have recognized that Jain's transaction card compares the received code with the locally stored code because Jain recognizes that institutions will receive requests from unauthorized users, such as users having fraudulent transaction cards. *See, e.g.*, Ex. 2009 ¶108 ("In response to one or more events matching or otherwise violating rules, the transaction card 112 may execute one or more processes to substantially prevent or otherwise notify the financial institutions 106 of potentially fraudulent activity." (quoting Jain ¶[0026])). For instance, if an unauthorized user received a valid activation code, the transaction card would not be activated because the requested code and the locally stored code would not match and execution would end. *See* Ex. 2009 ¶108 (citing Jain ¶[0081]).

Finally, Petitioner states that a POSITA would "find such implementation [i.e., treating the requested activation code as an authorization] well known, thereby rendering it obvious." Pet. at 22 (citing Ex.1019 ¶¶[0145]-[0146]). But merely arguing that something is "well known" fails the rigorous test for single-reference obviousness. *See In re Zurko*, 258 F.3d 1379, 1385 (Fed. Cir. 2001) ("[T]he deficiencies of the cited references cannot be remedied by [Petitioner's] general

conclusions about what is 'basic knowledge' or 'common sense' to one of ordinary skill in the art."). Petitioner alleges that a POSITA would "not provide the [matching activation code] if the transaction is unauthorized." *Id.* But, again, Jain explicitly contravenes this implementation by requiring the authorization to occur at the mobile device rather than at the financial institution. *See* Jain ¶[0081]; *see also* Ex. 2009 ¶110. Petitioner's cited third-party reference at Exhibit 1019 underscores the difference between ***the provider*** "confirm[ing] [that] the information is 'valid'" and Jain's ***transaction card*** confirming that the information is valid. Ex. 1019 ¶¶[0145]-[0146]; Ex. 2009 ¶110. The activation code sent to the mobile device serves only to ***enable*** authorization; it does not itself ***constitute*** authorization.

Petitioner fails to establish that Jain discloses or would have rendered obvious "responsive to the requesting, receiving by the wireless device from the second device the authorization to enable the function for conducting the financial transaction" in independent claim 11 or "responsive to the requesting, receiving by the wireless device from the second device the authorization to enable the function for conducting the financial transaction" of independent claim 14.

4. Jain Does Not Disclose or Render Obvious "responsive to the wireless device satisfying a proximity condition relative to an entity."

Limitations 11[g] and 14[h][2] require "***the wireless device*** satisfying a proximity condition relative to an entity." As stated above, Jain lacks the required "wireless device" (that comprises a "smartphone") because the transaction card cannot be considered part of the separate and distinct mobile device. *See supra* § VI.A.1. But it is Jain's transaction card that has NFC capability that Petitioner identifies as disclosing a proximity condition. Pet. at 22-24. The Petition fails to identify "***the wireless device*** satisfying a proximity condition relative to an entity" and is instead inconsistent about which aspect of Jain performs the "satisfying" function required of the smartphone. Ex. 2009 ¶113. Because Petitioner's argument on this issue fails and affects nearly half the Challenged Claims, the Board should deny institution of the Petition for failing to raise a sufficient "number of claims and grounds that meet the reasonable likelihood standard." *Chevron Oronite Co.*, IPR2018-00923, Paper 9, 10-11 (citing *SAS Q&As*, part D, Effect of SAS on future challenges that could be denied for statutory reasons (June 5, 2018)).

Again, Petitioner misquotes Jain. Petitioner alleges that "***[t]he smartphone*** first 'wirelessly receive[s] a request from the POS device 114 to execute a transaction and/or provide a response.' Jain ¶[0023]." Pet. at 24 (emphasis added).

[2] Petitioner treats these limitations as substantively identical to limitation 4[a]. Pet. at 31-32.

But Jain actually says that "***the transaction card 112*** may execute one or more of the following: wirelessly receive a request from the POS device 114 to execute a transaction and/or and [sic] provide a response." Jain ¶[0023] (emphasis added); *see also* Ex. 2009 ¶113. Furthermore, Jain describes ***the transaction card*** as capable of "execut[ing] transactions with the POS device 114 using short range signals such as NFC." Jain ¶[0023]; *see also* Ex. 2009 ¶113. Because the transaction card is equipped with NFC, "the transaction card 112 may wirelessly execute transactions ***without aspects of the transaction being executed by the mobile device 110***." Jain ¶[0023]; *see also* Ex. 2009 ¶113. However, the claimed "satisfying" step must be performed by the mobile device rather than the transaction card. For the same reasons as above with respect to Section VI.A.1, Jain similarly does not disclose the claimed "***wireless device*** satisfying a proximity condition relative to an entity." *See supra* Section VI.A.1.[3]

Petitioner then argues that Jain renders this limitation obvious. Pet. at 26-27. However, Petitioner does not explain why a POSITA would have disregarded Jain's

[3] Petitioner also cites to the ECMA 340 standard that Jain meets this limitation. Pet. at 24-26. But this standard is irrelevant because Jain's transaction card rather than the mobile device performs the claimed "satisfying" step under Petitioner's theory. Jain ¶[0023]; *see also* Ex. 2009 ¶113.

teachings and added an NFC capability to the mobile device itself. *See* Jain ¶[0023]; *see also* Ex. 2009 ¶114. This is another example of an unsupported argument, particularly in view of Jain's teaching that the mobile device and transaction card are and should remain independent. *See K/S HIMPP*, 751 F.3d at 1365. Therefore, Jain fails to disclose or render obvious "responsive to the wireless device satisfying a proximity condition relative to an entity" in independent claims 11 and 14.

B. Petitioner Has Failed to Establish a Reasonable Likelihood That Dua Would Have Rendered Any of the Challenged Claims Obvious (Ground 2).

Petitioner's second ground asserts that the Challenged Claims would have been obvious over Dua (Ex. 1018). But, for at least the reasons stated below, Petitioner's second ground fails to establish a reasonable likelihood that Dua would have rendered the Challenged Claims obvious. Here, Petitioner handwaves away claim limitations and gap fills holes in Dua with unsupported assertions by Dr. Almeroth. In view of the deficiencies discussed below, Petitioner has failed to demonstrate a reasonable likelihood of prevailing based on Dua.

1. Dua Does Not Disclose or Render Obvious "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion, enabling by the device a number of functions of the device and disabling by the device a function of the device."

Petitioner argues that Dua would have rendered obvious limitations 1[c], 6[c], 11[c], and 14[d] under two separate theories disclosed by Dua, a "Card-Issuing"

Theory and an "External-Storage-Authentication" Theory. Pet. at 42-48.[4] But as Applicants argued during prosecution of the related '432 Patent, and the Examiner agreed, Dua does not teach or suggest "enabling a mode to communicate . . . information requesting an authorization" that is "responsive to at least one physiological parameter." Ex. 1009 at 253, 275-76. Because the '756 Patent similarly requires "enabling by the device a number of functions of the device and disabling by the device a function of the device" that is "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion," and because of the reasons outlined below, Petitioner's argument fails.

a. Dua's "Card-Issuing" Theory Fails

According to Petitioner, Dua's Card-Issuing Theory discloses that "[t]he wallet establishes a Session Initiation Protocol ('SIP') communication session (***enabling . . . a number of functions***) between the wireless device and the issuer's WCM for this authentication process (***enabling . . . a number of functions***)." Pet. at 46 (citing Dua ¶¶[0046], [0104], [0128], [0178]). Petitioner points to the establishing of the SIP session and subsequent authentication as the claimed "enabling . . . a number of functions." *Id.*

[4] Petitioner treats these limitations as substantively identical to limitation 1[c]. Pet. at 31-32.

But the establishing of the SIP session and subsequent authentication must be "***responsive to*** the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion." Ex. 2009 ¶121. Petitioner does not cite any disclosure from Dua that requires authentication to take place ***prior to*** establishing SIP communication. Nor could it. In fact, paragraph [0180] of Dua discloses that "***subsequent to***" establishing a SIP communication session, "the issuer's system ***will authenticate the mobile user's identity in real-time***." Dua ¶[0180] (emphasis added); *see also* Ex. 2009 ¶¶121-122. This is consistent with how Dua uses a PIN to authenticate a financial transaction. As a result, a POSITA, reading Dua, would have understood that communications (which are not financial transactions) use a separate authentication procedure and do not use a PIN. *See* Ex. 2009 ¶121.

Ignoring the separate and distinct authentication process in SIP, Petitioner contends that initiating SIP communications necessitates entering a PIN or fingerprint because access to the wallet application is contingent upon entering a PIN or fingerprint. Pet. at 45. But Dua undercuts Petitioner's position because Dua never requires a PIN or fingerprint to start the SIP process (Petitioner's enabling . . . a number of functions) when issuing a credential. *See* Dua ¶[0129] (disclosing initiating a SIP message exchange without first requiring a PIN); *see also* Ex. 2009 ¶122. A POSITA would have understood that a PIN or fingerprint would not be required because the user is authenticated via a distinct protocol. Dua ¶[0180].

Petitioner's reliance on the wallet and encrypted wallet application (Pet. at 43-44) is of no moment because Dua does not even require the wallet to be opened prior to SIP communications given that the use of SIP allows for the direct delivery of relevant credentials. *See* Dua ¶[0053] ("For example, a subscriber might wish to install a wallet application on wireless device 200 and register the telephone number as the identifier for the wallet application. Multiple issuers can in turn deliver payment methods, identification, or other types of electronic credentials to the wallet application on the wireless device 200 via the Internet using the phone number as the destination address."); Dua ¶[0056] ("According to the teachings of this invention, credential issuers may request from applicants (e.g. over the telephone) a properly formatted E.164 phone number in order to target the delivery of credential(s) to a wallet application on wireless device 200."); *see also* Ex. 2009 ¶123.

Petitioner's analysis is almost entirely focused on PIN-entry being required prior to a wallet being opened (not establishing SIP connection). Pet. at 43-45. Petitioner's citations confirm that Dua relies on a PIN for a financial transaction, not SIP communication. *E.g.*, Dua ¶[0366] ("[d]ata in the wallet application is encrypted and protected with a special wallet PIN code which is set by the wireless device owner during the setup of the application"); ¶[0414] ("Further, online PIN verification also gives certain credential issuers a stronger means by which to

validate a person's identity during a transaction"); ¶[0534] ("the user would be required to provide a E.164 number for a wireless device in order to establish the wallet account on a server hosted and managed by the wallet service provider."); *see also* Ex. 2009 ¶128. In fact, these citations again reference the use of a connection to provide authentication. Dua ¶[0050] ("the resolved Internet address is used to establish secure real-time communication between WCM 110 and the wallet application on wireless device 200 using the Session Initiation Protocol (SIP) . . . to transfer encrypted credentials."). The ***connection*** via SIP is used to ***exchange credentials*** and Dua provides no support of either the opening of a wallet application or entering a separate PIN because SIP communications has its own authentication scheme. Ex. 2009 ¶¶124-125.

Petitioner then attempts to incorporate other functions into the card-issuance process to try to meet this limitation. For example, Petitioner points to separate and unrelated functions and attempts to tie the functions to the Card-Issuing Theory. *E.g.*, Pet. at 46 ("Therefore, opening the wallet application, such as for credit card issuance, causes the wallet application data to be decrypted (***enabling*** . . . ***a number of functions***) . . . ."") (emphasis in original). But as stated above, credential issuance in Dua is performed through a SIP session which is not "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion." *See* Dua ¶[0180]. "Subsequent to" [establishing a SIP communication

session,] "the issuer's system will authenticate the mobile user's identity in real-time."); *see also id.* ¶[0129]; Ex. 2009 ¶122. Petitioner fails to connect the "value that is determined by the device for the parameter that is sensed satisfying a threshold criterion" to any other listed credential issuance "functions" identified at pages 46-47 of the Petition. Ex. 2009 ¶126. Accordingly, Petitioner fails to establish that Dua's "Card-Issuing" Theory would have rendered this limitation obvious.

b. Dua's "External-Storage-Authentication" Theory Fails

Petitioner also argues that, under Dua's "External-Storage-Authentication Theory," "retrieval of credentials from the external storage is only possible after performing fingerprint authentication." Pet. at 48-49 (citing Dua ¶¶[0353]-[0354], [0366], [0429]; Ex. 1002 ¶191). Because Petitioner relies on credit card issuance to render this limitation obvious (which cannot be true as shown above), Petitioner again ignores that "enabling . . . a number of functions" must be "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion." Ex. 2009 ¶128.

The "enabling . . . a number of functions" articulated by Petitioner is not responsive to Petitioner's proffered parameter of a PIN to open the wallet. As shown above, Dua only requires a PIN "***subsequent to***" establishing a SIP communication session when issuing a credential. *See* Dua ¶[0180] (emphasis added); *see also supra* Section VI.B.1.a; Ex. 2009 ¶129. Petitioner then points to the same alternative

functions as the Card-Issuing Theory to attempt to satisfy the requirement. Pet. at 49-51 Those functions again fail because they are separate and unrelated to Dua's credit card issuance. *See supra* Section VI.B.1.a; Ex. 2009 ¶129.

Accordingly, Petitioner has failed to establish that the External-Storage-Authentication Theory, like the "Card-Issuing" Theory, discloses or would have rendered obvious "enabling . . . a number of functions" that is "responsive to the value that is determined by the device for the parameter that is sensed satisfying a threshold criterion."

2. Dua Does Not Disclose or Render Obvious "responsive to the wireless device satisfying a proximity condition relative to an entity."

Limitations 11[g] and 14[h][5] require "***the wireless device*** satisfying a proximity condition relative to an entity." Petitioner alleges that NFC communications would meet this limitation. Pet. at 59-60. But Petitioner fails to establish that NFC communications are contemplated by Dua. Ex. 2009 ¶¶131-140. And Petitioner does not allege that it would have been obvious to implement NFC in Dua. Pet. at 60-61. Accordingly, Petitioner fails to establish that Dua discloses "the wireless device satisfying a proximity condition relative to an entity." Because

[5] Petitioner treats these limitations as substantively identical to limitation 4[a]. Pet. at 31-32.

Petitioner's argument on this issue fails and affects nearly half the Challenged Claims, the Board should deny institution of the Petition for failing to raise a sufficient "number of claims and grounds that meet the reasonable likelihood standard." *Chevron Oronite Co.*, IPR2018-00923, Paper 9, 10-11 (citing *SAS Q&As*, part D, Effect of SAS on future challenges that could be denied for statutory reasons (June 5, 2018)).

Petitioner's sole argument is that NFC teaches or suggests "the wireless device satisfying a proximity condition relative to an entity." Pet. at 59-61. Petitioner alleges that Dua's "short range wireless link between the wireless device and point-of-sale reader includes NFC." *Id.* Other than identifying NFC,[6] Petitioner does not rely on any other radio technologies for this limitation.

But Dua only refers to NFC in the background of the technology section and never discloses that its device has such functionality. Dua ¶[0016] ("Wireless devices with integrated RFID proximity chips or Near Field Communication (NFC) technology may also provide users the ability to transfer information to a reader device."); *see also* Ex. 2009 ¶133. Even after acknowledging the existence of NFC

[6] Dua consistently emphasizes the application of Bluetooth. *See, e.g.*, Dua ¶¶[0321], [0458], [0463]-[0465], [0468], [0485]; *see also* Ex. 2009 ¶131. Petitioner does not allege that Bluetooth meets the claim limitations of 11[g] and 14[h]. Pet. at 59-61.

in the background, Dua specifically ***omits*** NFC entirely from the list of network protocols contemplated by the invention. Dua ¶[0041]; *see also* Ex. 2009 ¶133. In fact, in every example where Dua discusses available "wireless" protocols, Dua omits any discussion or even mention of NFC. *See* Dua ¶[0318] ("Connectivity between the wireless device and the reader/POS terminal could be made via 802.11a/b/g, Bluetooth, or other RF protocols."); *see also id.* ¶[0457] ("The user may accomplish [transferring credentials between devices] using . . . the short-range transmission capability of both devices (e.g. Bluetooth, infra-red, etc.); *see also id.* ¶¶[0102], [0103], [0263], [0429], [0494]; *see also* Ex. 2009 ¶134.

In fact, Dua's "local environment," also described as the "proximity environment," does not include consideration of, much less use of, NFC technology. *See* Dua ¶¶[0314]-[0315]; *see also* Ex. 2009 ¶134. Dua discloses the "proximity environment" as "serv[ing] as a replacement for single-purpose cards and tokens" during which the device "can transmit . . . information to a reader using the short range transmission capability of the wireless device (e.g. RF)." Dua ¶[0315]; *see also* Ex. 2009 ¶137. Dua explains that this proximity environment can allow "a wireless device loaded with a wallet application, ***that also has an integrated RFID chip*** can simply be waved slowly in close proximity to a reader device to facilitate a transaction." *Id.* (emphasis added); *see also* Ex. 2009 ¶137. Here, a POSITA would have understood that Dua was specifically relying on RFID. *See* Dua ¶[0011]

("RFID technology is typically used for POS payments, electronic toll collection, access control, and numerous other applications."). Ignoring the specific disclosure of RFID, Petitioner summarily states that a "short range wireless link . . . includes NFC" (Pet. at 59); however, Dua does not include NFC in this embodiment, and Petitioner does not provide any reason to do so. Ex. 2009 ¶137.

Petitioner then argues that a POSITA would have found it obvious to detect that a proximity condition is satisfied via detecting NFC signals from a POS terminal. Pet. at 60-61. Petitioner points to claims 33, 36, and 50 of Dua as a motivation to implement NFC. *Id.* at 60 (citing Dua, cls. 33, 36, 50). But none of these claims in Dua contemplate a short-range communications protocol, let alone NFC. *See* Ex. 2009 ¶138. Dua's claims 33 and 36 make no mention of a communications protocol. *See* Dua, cl. 33 ("The method of claim 1, wherein said credential corresponds to an account not previously opened by a customer."); *see also id.*, cl. 36 ("The method of claim 35, wherein said electronic payment transfer is a business-to-business transfer."); *see also* Ex. 2009 ¶138. And Dua's claim 50 describes the wireless connection between a wireless device and ***an issuer***, not a supposed NFC connection between a wireless device and a point-of-sale terminal. *See* Dua, cl. 50 ("A system for transmitting a credential ***from an issuer to a wireless device*** . . . .") (emphasis added); *see also* Ex. 2009 ¶138. Petitioner also points to Dua's disclosure of a peer-to-peer communication session as allegedly suggesting

NFC communications. Pet. at 60 (quoting Dua ¶[0359]). However, prior disclosures in Dua indicate that RF communications are used and not any NFC communications. *See* Dua ¶[0354] ("If a matching key is found within the wallet application, the corresponding loyalty information will be transmitted to the reader from the wireless device ***via RF***.") (emphasis added); *see also* Ex. 2009 ¶138.

Further, Dua's disclosure contradicts Petitioner's view because Dua specifically recites its own concepts for protocols that could be used for connectivity instead of relying on NFC. Ex. 2009 ¶139. For example, Dua discloses that for short-range communications, "[c]onnectivity could initially be established by exchanging encryption keys via RFID that allow the devices to establish connectivity via an alternate channel securely so no other device can listen in to the communication. Keys could also initially be exchanged via infra-red technology." Dua ¶[0318]; *see also* Ex. 2009 ¶139. Dua also identifies a 30-second connectivity time-out period—the type of independent connectivity requirement that would not motivate a POSITA, reading Dua, to implement uncontemplated technologies like NFC. Dua ¶[¶[0383], [0384]; *see also* Ex. 2009 ¶139. These examples demonstrate that Dua was not relying on NFC.

At bottom, Petitioner's attempt to integrate the Dua system with NFC rests solely on a single reference to NFC found in Dua's background, which Petitioner alleges would have motivated a POSITA to disregard Dua's explicit disclosures of

separate and secure peer-to-peer communication protocols and instead use an NFC standard. Such a leap is not supported by Dua. *See Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993 (Fed. Cir. 2017) ("[O]bviousness concerns whether a skilled artisan not only ***could have made*** but ***would have been motivated to make*** the combinations or modifications of prior art to arrive at the claimed invention." (quoting *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (emphasis in original)); *see also* Ex. 2009 ¶140. Accordingly, Petitioner has not established that Dua discloses or would have rendered obvious "responsive to ***the wireless device*** satisfying a proximity condition relative to an entity" of limitations 11[g] and 14[h].

VII. CONCLUSION

For the foregoing reasons, institution should be denied.

Date: September 17, 2025

Respectfully Submitted

By: / Christopher TL Douglas /
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CERTIFICATION UNDER 37 CFR § 42.24(d)

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Patent Owner's Response to Petition totals 10,130 which is less than the 14,000 allowed under 37 CFR § 42.24(b)(1).

Date: September 17, 2025

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e)(4), the undersigned certifies that true and correct copies of the above-captioned PATENT OWNER'S PRELIMINARY RESPONSE and Exhibits 2009-2024 its supporting exhibits were served in its entirety on September 17, 2025 via filing through the Patent Trial and Appeal Case Tracking System (P-TACTS) and electronic mail on the following counsel of record for Petitioner:

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