

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner

v.

TELCOM VENTURES LLC,
Patent Owner

Case No. IPR2025-01239
U.S. Patent No. 12,028,793

PATENT OWNER'S PRELIMINARY RESPONSE

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2001	Interim Processes for PTAB Workload Management, Acting Director Memorandum (March 26, 2025) (https://www.uspto.gov/sites/default/files/documents/InterimProcesses-PTABWorkloadMgmt-20250326.pdf)
2002	<i>Telcom Ventures LLC v. Apple, Inc.</i> , No. 3:25-cv-05041-RFL, Dkt. 104 (Sep. 24, 2024)
2003	Third Amended Docket Control Order
2004	Standing Order for Civil Cases Before Judge Rita F. Lin
2005	Telcom Ventures' Proposed Case Schedule for the Apple Litigation
2006	Declaration of Chuck Easttom
2007	<i>Curriculum Vitae</i> of Chuck Easttom
2008	Chiradeep BasuMallick, "What is NFC (Near Field Communication)? Definition, Working, and Examples" (Sept. 29, 2022), https://www.spiceworks.com/tech/networking/articles/what-is-near-field-communication/
2009	Liu et al., "Near-Field Communications: A Comprehensive Survey," IEEE (June 2025)
2010	"The Creation of the NFC Forum and its Vision" (2011) https://cs.stanford.edu/people/eroberts/courses/cs181/projects/2010-11/NFCChips/nfcforum.html
2011	McHugh & Yarmey, "Near Field Communication: Introduction and Implication," ERIC (2012)
2012	Coskun et al., "The Survey on Near Field Communication," Sensors (June 5, 2015)

TABLE OF CLAIMS

Claim	Limitation
1[pre]	A method comprising:
1[a]	sensing a physiological parameter; then
1[b]	determining whether or not the physiological parameter sensed satisfies a criterion; then
1[c]	responsive to the physiological parameter sensed satisfying the criterion, enabling at least one first function; then
1[d]	while said at least one first function is enabled, responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion, requesting an authorization to establish a function to conduct a financial transaction; then
1[e]	responsive to the requesting, receiving the authorization to establish the function to conduct the financial transaction; then
1[f]	responsive to receiving the authorization, establishing the function to conduct the financial transaction; and then
1[g]	responsive to satisfying a proximity condition relative to an entity and responsive to sensing the physiological parameter and determining that the physiological parameter sensed satisfies the criterion, using the function that has been established to conduct the financial transaction and conducting the financial transaction by paying for a product;
1[h]	wherein said paying for a product comprises sensing that the proximity condition is satisfied relative to an access point maintained by a vendor at a point of purchase counter, by detecting a short-range signal that is transmitted by the access point, determining that the physiological parameter sensed satisfies the criterion and then, responsive to having sensed that the proximity condition is satisfied relative to the access point and having determined that the physiological parameter sensed satisfies the criterion, paying for the product by selectively sending information to at least one device;
1[i]	wherein said paying for the product by selectively sending information to at least one device comprises selectively and wirelessly transmitting information to the at least one device using unlicensed frequencies; and
1[j]	wherein said paying for a product further comprises deducting/withdrawing an amount of money from an account.

Claim	Limitation
2[pre]	The method of claim 1, wherein said enabling at least one first function comprises enabling the at least one first function and disabling a second function; and wherein the method further comprises:
2[a]	repeatedly sensing the physiological parameter and repeatedly deciding, based on comparing the physiological parameter sensed to the criterion, whether or not to maintain enabled said at least one first function while maintaining disabled said second function; and
2[b]	maintaining enabled said at least one first function while maintaining disabled said second function responsive to deciding that the physiological parameter sensed satisfies the criterion; or
2[c]	disabling said at least one first function and enabling said second function responsive to deciding that the physiological parameter sensed no longer satisfies the criterion.
3[pre]	The method of claim 1,
3[a]	wherein said paying for a product further comprises wirelessly receiving information from at least one device using unlicensed frequencies.
4[pre]	The method of claim 3,
4[a]	wherein said wirelessly transmitting information to the at least one device using unlicensed frequencies and said wirelessly receiving information from at least one device using unlicensed frequencies comprises using unlicensed frequencies over a short-range link in a Time Division Duplex operation; and
4[b]	wherein said selectively and wirelessly transmitting information to the at least one device further comprises selectively and wirelessly transmitting information to the access point maintained by the vendor at the point of purchase counter and to at least one other device that is predetermined; and further comprises wirelessly receiving information from the access point maintained by the vendor at the point of purchase counter and from at least one other device that is predetermined.
5[pre]	A wireless device that comprises a smartphone and a sensor; wherein the wireless device is configured to perform operations comprising:
5[a]	sensing, by the sensor, a physiological parameter of a user of the wireless device; then
5[b]	determining whether or not the physiological parameter sensed satisfies a criterion; then
5[c]	responsive to the physiological parameter sensed satisfying the criterion, enabling at least one first function of the wireless device; then

Claim	Limitation
5[d]	while said at least one function is enabled, responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion, requesting from a second device an authorization to establish a function to conduct a financial transaction; then
5[e]	responsive to the requesting, receiving from the second device the authorization to establish the function to conduct the financial transaction; then
5[f]	responsive to receiving the authorization, establishing at the wireless device the function to conduct the financial transaction; and then
5[g]	responsive to the wireless device satisfying a proximity condition relative to an entity and responsive to the wireless device sensing the physiological parameter and determining that the physiological parameter sensed satisfies the criterion, using the function that has been established at the wireless device to conduct the financial transaction and conducting the financial transaction by paying for a product;
5[h]	wherein said paying for a product comprises sensing that the proximity condition is satisfied relative to an access point maintained by a vendor at a point of purchase counter, by detecting a short-range signal that is transmitted by the access point, determining that the physiological parameter sensed satisfies the criterion and then, responsive to having sensed that the proximity condition is satisfied relative to the access point and having determined that the physiological parameter sensed satisfies the criterion, paying for the product by selectively sending information to at least one device;
5[i]	wherein said paying for the product by selectively sending information to at least one device comprises selectively and wirelessly transmitting information to the at least one device using unlicensed frequencies; and
5[j]	wherein said paying for a product further comprises deducting/withdrawing an amount of money from an account.
6[pre]	The wireless device of claim 5, wherein said enabling at least one first function of the wireless device comprises enabling the at least one first function of the wireless device and disabling a second function of the wireless device; and wherein the operations further comprise:
6[a]	repeatedly sensing the physiological parameter and repeatedly deciding, based on comparing the physiological parameter sensed to the criterion, whether or not to maintain enabled said at least one first function while maintaining disabled said second function; and

Claim	Limitation
6[b]	maintaining enabled said at least one first function while maintaining disabled said second function responsive to deciding that the physiological parameter sensed satisfies the criterion; or
6[c]	disabling said at least one first function and enabling said second function responsive to deciding that the physiological parameter sensed no longer satisfies the criterion.
7[pre]	The wireless device of claim 5, wherein said conducting the financial transaction by paying for a product comprises:
7[a]	establishing by the wireless device a short-range wireless link with the entity;
7[b]	wirelessly transmitting information to the entity using unlicensed frequencies; and
7[c]	wirelessly receiving information from the entity using unlicensed frequencies;
7[d]	wherein said wirelessly transmitting information to the entity and said wirelessly receiving information from the entity comprises using unlicensed frequencies in a time division duplex operation; and
7[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 physiological parameter and determining that the physiological parameter sensed satisfies the criterion.
8[pre]	The wireless device of claim 5, wherein said requesting from a second device an authorization to establish a function to conduct a financial transaction and/or said receiving from the second device the authorization to establish the function to conduct the financial transaction comprises;
8[a]	establishing by the wireless device a link with the second device, said link comprising a wireless link;
8[b]	wirelessly transmitting information to the second device over said wireless link using unlicensed and/or licensed frequencies; and
8[c]	wirelessly receiving information from the second device over said wireless link using unlicensed and/or licensed frequencies;

Claim	Limitation
8[d]	wherein said wirelessly transmitting information to the second device and/or said wirelessly receiving information from the second device comprises using a WiFi air interface protocol, an orthogonal frequency division multiplexing air interface protocol and/or an orthogonal frequency division multiple access air interface protocol; and
8[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 physiological parameter and determining that the physiological parameter sensed satisfies the criterion.
9[a]	wherein said using unlicensed frequencies comprises using unlicensed frequencies over a short-range link in a Time Division Duplex operation; and
9[b]	wherein said selectively sending information to at least one device further comprises selectively sending information to the access point maintained by the vendor at the point of purchase counter and to at least one other device that is predetermined; and selectively receiving information from the access point maintained by the vendor at the point of purchase counter and from at least one other device that is predetermined.
10[a]	wherein said paying for a product further comprises wirelessly receiving information from at least one device using unlicensed frequencies.
11[a]	wherein said wirelessly transmitting information to the at least one device using unlicensed frequencies and said wirelessly receiving information from at least one device using unlicensed frequencies comprises using unlicensed frequencies over a short-range link in a Time Division Duplex operation; and
11[b]	wherein said selectively and wirelessly transmitting information to the at least one device further comprises selectively and wirelessly transmitting information to the access point maintained by the vendor at the point of purchase counter and to at least one other device that is predetermined; and further comprises wirelessly receiving information from the access point maintained by the vendor at the point of purchase counter and from at least one other device that is predetermined.

I. INTRODUCTION

Telcom Ventures LLC (“Telcom Ventures” or “Patent Owner”) respectfully submits this Preliminary Response (“POPR”) requesting that the Director deny institution of the Petition for *inter partes* review (Paper 1, “Petition,” or “Pet.”) filed by Petitioner Apple Inc. (“Apple” or “Petitioner”).

The Petition seeks *inter partes* review (“IPR”) of claims 1-11 (the “Challenged Claims”) of U.S. Patent No. 12,028,793 (the “’793 Patent,” Ex. 1001). The Petition sets forth eight Grounds. Pet. at 19-20. In all Grounds, Petitioner relies on U.S. Patent No. 8,229,852 to *Carlson* (“*Carlson*,” Ex. 1005) in combination with up to four secondary references. The Petition relies exclusively on multi-reference combinations in an attempt to cobble together a system that allegedly meets the claimed inventions of the ’793 Patent. The eight separate Grounds are summarized in the below chart.

Ground	Claims	Proposed Ground of Unpatentability
1	1, 3-5, 7 and 9-11	Obvious under pre-AIA 35 U.S.C. § 103 over <i>Carlson</i> ¹ in view of <i>Jazayeri</i> ² and <i>ISO-14443</i> ³

¹ U.S. Patent No. 8,229,852 (“*Carlson*,” Ex. 1005).

² U.S. Patent Application Publication No. 2008/0155268 (“*Jazayeri*,” Ex. 1007).

³ ISO/IEC 14443 (“*ISO-14443*,” Ex. 1016).

Ground	Claims	Proposed Ground of Unpatentability
2	2 and 6	Obvious under pre-AIA 35 U.S.C. § 103 over <i>Carlson</i> in view of <i>Jazayeri</i> , <i>ISO-14443</i> , and <i>Doyle</i> ⁴
3	4, 9, 11	Obvious under pre-AIA 35 U.S.C. § 103 over <i>Carlson</i> in view of <i>Jazayeri</i> , <i>ISO-14443</i> , and <i>Birch</i> ⁵
4	8	Obvious under pre-AIA 35 U.S.C. § 103 over <i>Carlson</i> in view of <i>Jazayeri</i> , <i>ISO-14443</i> , and <i>Sherman</i> ⁶
5	1, 3-5, 7 and 9-11	Obvious under pre-AIA 35 U.S.C. § 103 over <i>Carlson</i> in view of <i>Jazayeri</i> , <i>ISO-14443</i> , and <i>Murakami</i> ⁷
6	2 and 6	Obvious under pre-AIA 35 U.S.C. § 103 over <i>Carlson</i> in view of <i>Jazayeri</i> , <i>ISO-14443</i> , <i>Doyle</i> , and <i>Murakami</i>
7	4, 9, 11	Obvious under pre-AIA 35 U.S.C. § 103 over <i>Carlson</i> in view of <i>Jazayeri</i> , <i>ISO-14443</i> , <i>Birch</i> , and <i>Murakami</i>
8	8	Obvious under pre-AIA 35 U.S.C. § 103 over <i>Carlson</i> in view of <i>Jazayeri</i> , <i>ISO-14443</i> , <i>Sherman</i> , and <i>Murakami</i>

Petitioner’s combinations fail for several reasons. First, across all eight Grounds, the Petition fails to show that “requesting [from a second device] an authorization to establish a function to conduct a financial transaction” is taught or rendered obvious by the prior art. Petitioner relies only on *Carlson*’s alleged request for a pseudo primary account identifier (“PPAI”) as the claimed “requesting [from a

⁴ U.S. Patent Application Publication No. 2002/0095586 (“*Doyle*,” Ex. 1008).

⁵ U.S. Patent No. 7,213,742 (“*Birch*,” Ex. 1031).

⁶ U.S. Patent Application Publication No. 2007/0232358 (“*Sherman*,” Ex. 1014).

⁷ WIPO International Application Publication No. WO 01/95246 (“*Murakami*,” Ex. 1009).

second device] an authorization to establish a function to conduct a financial transaction.” Pet. 26-28 (Grounds 1-4), 77 (incorporating analysis of Grounds 1-4 into Grounds 5-8). But *Carlson*’s request for a PPAI is not the claimed “requesting for authorization to establish a function to conduct a financial transaction,” nor would *Carlson*’s disclosure render this limitation obvious to a person of ordinary skill in the art (“POSITA”). Instead, *Carlson*’s request for a PPAI is simply a communication, based on already authorized and stored customer account information, for an identifier that is used as a proxy to protect the consumer’s real account information during a transaction. *Carlson*’s request for PPAI is not and cannot be the claimed “requesting an authorization” because *Carlson*’s transaction may go forward without the device requesting or receiving the PPAI at all. Moreover, *Carlson* itself undercuts Petitioner’s theory because, in *Carlson*’s system, authorization of particular transactions is achieved by a different “authorization request message” that is transmitted by the merchant and not dependent on whether a function is enabled in *Carlson*’s wireless device.

Second, across all eight Grounds, Petitioner fails to show that “responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion, requesting [from a second device] an authorization to establish a function to conduct a financial transaction” is taught or rendered obvious by the prior art. Again, Petitioner relies only on *Carlson*’s

alleged request for a pseudo primary account identifier (“PPAI”) as the claimed “requesting [from a second device] an authorization to establish a function to conduct a financial transaction.” Pet. 26-28 (Grounds 1-4), 77 (incorporating analysis of Grounds 1-4 into Grounds 5-8). But *Carlson*’s PPAI can be received or generated without unlocking the wireless device via biometric authentication. Accordingly, Petitioner’s mapped “requesting [from a second device] an authorization” is not “responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion.”

Similarly in Grounds 5-8, Petitioner fails to show that a POSITA would have been motivated to combine *Carlson*’s device with *Murakami*’s biometric authentication device to render obvious “responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion, requesting [from a second device] an authorization to establish a function to conduct a financial transaction.” As with Grounds 1-4, *Carlson* itself does not suggest using biometrics to request an authorization. And the additional biometrics in the form of a heartbeat sensor of *Murakami* would defy *Carlson*’s stated goal of having the request for PPAI be instantaneous and not result in delays. *Murakami* itself acknowledges that its own biometric sensor can be “impractical” because of the time it takes to capture a good

sample. *See Murakami*, 33:4-6.

Finally, across all eight Grounds, Petitioner fails to show that “responsive to the requesting, receiving [from the second device] the authorization” and “responsive to receiving the authorization” are disclosed or would have been rendered obvious by the prior art. As discussed above, *Carlson*’s request for a PPAI does not disclose or render obvious “requesting [from a second device] an authorization.” Because that limitation provides the antecedent basis for the limitations “responsive to the requesting, receiving [from the second device] *the* authorization” and “responsive to receiving *the* authorization,” the Petition necessarily fails to disclose or render obvious these limitations.

Accordingly, the Petition fails to establish that any 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 CFR § 42.108(c). Accordingly, Patent Owner requests that the Director deny institution of *inter partes* review.

II. LEGAL STANDARD

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). The Petition must recite where the challenged limitation is found in the reference(s) and explain why a POSITA would have modified the primary reference with the recited limitation from the secondary reference(s). *Microsoft Corp. v. Secure Web Conf. Corp.*, IPR2014-00745, Paper 12 at 11-13 (P.T.A.B. Sept. 29, 2014).

The Petition must establish, ***with particularity***, the grounds and evidence that support invalidating the patented claims. 35 U.S.C. § 312(a)(3). In addition, the Director institutes based on what the Petition ***actually presents*** and not what it could have reasonably contained. *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016). The Director cannot “deviate from the grounds in the petition and raise its own” theories of invalidity. *Sirona Dental Sys. GmbH v. Institut Straumann AG*, 892 F.3d 1349, 1356 (Fed. Cir. 2018).

III. BACKGROUND

A. The '793 Patent

Applicants filed U.S. Patent Application No. 18/539,020 on December 13, 2023, which issued as U.S. Patent No. 12,028,793 on July 2, 2024. Ex. 1001 at 1. The '793 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 '793 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. Ex. 1001, 1:1:28-33; 6:17-27; *see also* Ex. 2006, ¶61. In the prior art, mobile wireless devices were rigidly configured to perform a predetermined number of functions. Ex. 1001, 1:42-47; *see also* Ex. 2006, ¶61. To overcome this rigidity, the '793 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. Ex. 1001, 1:52-57; *see also* Ex. 2006, ¶61. The '793 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.” Ex. 1001, 1:47-50; *see also* Ex. 2006, ¶61.

The '793 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.” Ex. 1001, 6:19-23; *see also* Ex. 2006, ¶62. 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.” Ex. 1001, 6:25-28; *see also* Ex. 2006, ¶62. 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.” Ex. 1001, 6:32-34; *see also* Ex. 2006, ¶62. The disclosed wireless communications devices may be “configured to selectively enable the first communications mode/function” responsive to a value of such a parameter. Ex. 1001, 6:45-49; *see also* Ex. 2006, ¶62.

The Examiner issued only one rejection, rejecting the application for double patenting “over claims 1-5, 9-13, 16-18, 22-24, 26, and 27 of U.S. Patent No. 11,770,756.” Ex. 1002 at 179-80. The Examiner allowed the claims of the ’793 Patent following the Applicants’ submission of a terminal disclaimer. *Id.* at 196, 200.

B. *Carlson* (Ex. 1005)

U.S. Patent No. 8,229,852 to Carlson is titled “Secure Mobile Payment System.” *Carlson* is directed to portable wireless devices that are used to conduct contactless payment transactions in a secure manner. *Carlson*, 1:16-20.

Carlson explains that “[d]ue to the wireless nature of the contactless reader, it is possible that the contactless reader may be used for surreptitious interrogation of the portable wireless device by intercepting the portable wireless device’s communication.” *Carlson*, 1:64-2:1. *Carlson* further explains that “it is conceivable that a contactless reader may be developed or modified to enhance its power and sensitivity and thereby increase its ability to interrogate with and intercept signals

from the portable wireless device from a greater distance than specified in standards used for contactless readers.” *Carlson*, 2:1-6.

Carlson describes “[t]heft of sensitive information, such as an account number, using wireless interrogation or interception of communications from [a] portable wireless device” as a “major concern for consumers and businesses alike.” *Carlson*, 2:7-10. *Carlson* notes that wireless interrogation can “occur at virtually any time and place,” and “[o]nce the victim of the wireless interrogation discovers that they had sensitive information stolen, it is often too late to discover where the theft took place.” *Carlson*, 2:10-16. As a result, “[t]he victim must then deal with the consequences and hassle of correcting the unauthorized access and possible uses of the information.” *Carlson*, 2:16-18.

Carlson describes other “safeguards for protecting purchase from fraudulent attacks,” including employing encryption technologies to encrypt the payment account number and other data associated with account transactions. *Carlson*, 2:19-23. *Carlson* explains that many merchants avoid implementing or upgrading to the latest encryption technology “[d]ue to the cost, time, and risk of potential business interruption (e.g., loss of sales).” *Carlson*, 2:27-35.

Carlson’s solution describes the use of “pseudo primary account identifiers” or “PPAI.” *Carlson*, 2:62-63. According to *Carlson*, “[p]seudo primary account identifiers may include identifiers that are similar in format to a consumer’s real

account identifier.” *Carlson*, 5:30-32. “These account identifiers may include account numbers or any other alphanumeric sequence.” *Carlson*, 2:66-3:1. *Carlson* also describes the PPAI as “bogus, fake, decoy, substitute, or the like.” *Carlson*, 5:42-43.

Carlson describes “a method for conducting a transaction that includes receiving a pseudo account identifier that corresponds to a consumer’s account identifier.” *Carlson*, 3:3-6. In some embodiments of *Carlson*, “the pseudo primary account identifier may not be requested at all, but rather is pushed to the portable wireless device at any time, such as when the device is turned on, when the device is idle, periodically, or through any other such criteria.” *Carlson*, 7:4-7, *see also id.* 12:67-13:3. *Carlson* also explains that “the pseudo primary account identifier may not be requested by the portable wireless device at all” and “[t]he portable wireless device may generate the pseudo primary account identifier.” *Carlson*, 7:15-19.

C. *Murakami* (Ex. 1009)

International Patent Application Publication No. WO 01/95246 to *Murakami* is directed to “a method and device for biometric authentication using a signal transmitter (20), a signal receiver (22), a memory module, and a processing module.” *Murakami*, Abstract. Specifically, *Murakami* “employ[s] histological and physiological biometric markers that are substantially unique to an individual in order to permit an individual to activate a device, participate in a transaction, or

identify him or herself.” *Murakami*, 1:10-13.

D. Other Asserted References (Exs. 1007, 1016, 1008, 1031, 1014)

Patent Owner’s expert Dr. Easttom provides an overview of the remaining asserted secondary references, including U.S. Patent Application Publication No. 2008/0155268 to *Jazayeri* (“*Jazayeri*,” Ex. 1007); *ISO-14443* (Ex. 1016); U.S. Patent Application Publication No. 2002/0095586 to *Doyle et al.* (“*Doyle*,” Ex. 1008); U.S. Patent. No. 7,213,742 to *Birch et al.* (“*Birch*,” Ex. 1031), and U.S. Patent Application Publication No. 2007/0232358 to *Sherman* (“*Sherman*,” Ex. 1014). Ex. 2006, ¶¶75-82.

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)). With the sole exception described below, Petitioner contends that “no constructions are necessary to resolve the proposed grounds.” Pet., 4. 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 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.

In Grounds 1-4, the Petition relies on a fingerprint to satisfy the claimed “physiological parameter” limitation. Pet., 6. The Petition then relies on *Murakami*’s biometric sensor for the “physiological parameter” limitation in Grounds 5-8. Pet. 6, 76. Because the Grounds fail regardless of the physiological parameter that the Petition relies on, a construction is not necessary for the purposes of institution. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms that . . . are in controversy only, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))). Patent Owner reserves the right to address “physiological parameter” if this case is instituted.

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 ’793 Patent at the time of the invention. 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. 2006, ¶47. This is different from Petitioner’s

proposal, which calls for “a bachelor’s degree in computer science, electrical engineering, computer engineering or equivalent from an accredited academic program with a year of work experience with mobile payment systems or wireless communication systems.” Pet. at 7; Ex. 1003 ¶48. Petitioner also requires “a working knowledge of short-range communication technologies in portable wireless devices.” Pet. at 7. Patent Owner disagrees that “a working knowledge of short-range communication technologies” is necessary. Regardless, Petitioner fails to meet its burden under either POSITA definition.

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

All of Petitioner’s Grounds fail. In Ground 1, Petitioner asserts that certain of the Challenged Claims, including independent claims 1 and 5, would have been obvious over *Carlson* in view of *Jazayeri* and *ISO-14443*. Pet., 20-21. In Grounds 2-4, Petitioner adds additional secondary references in an attempt to show that certain dependent claims would have been obvious. Pet., 63, 67, 70. In Grounds 5-8, Petitioner replaces *Jazayeri* with *Murakami*. Pet., 75-77. In view of the deficiencies discussed below, Petitioner has failed to demonstrate a reasonable likelihood of prevailing on any of Grounds 1-8.⁸

⁸ Because Grounds 2-4 and Grounds 6-8 challenge only dependent claims, these

A. *Carlson*'s Request for a PPAI Would Not Have Rendered Obvious "while said at least one first function is enabled . . . requesting [from a second device] an authorization to establish a function to conduct a financial transaction." (Grounds 1-8).

Carlson does not disclose and would not have rendered obvious "while said at least one first function is enabled . . . requesting [from a second device] an authorization to establish a function to conduct a financial transaction" of independent claims 1[d] and 5[d]. *See* Ex. 2006, ¶¶84-102. All dependent claims depend from one of these two independent claims and thus include this same requirement.

Petitioner's only argument as to this limitation is that *Carlson*'s request for PPAI is "an authorization to conduct [a] particular transaction or particular limited set of transactions in *Carlson*'s system." Pet., 26-28 (Grounds 1-4); *see also* Pet., 77 (incorporating analysis of *Carlson* into Grounds 5-8).⁹ Indeed, Petitioner equates a

Grounds fail because the independent claims from which they depend are not unpatentable under Grounds 1 and 5, respectively. Petitioner's arguments in Grounds 2-4 and 6-8 do not address the limitations of the independent claims, and therefore Grounds 2-4 and 6-8 do not address the deficiencies of the Petition described herein.

⁹ The Petition solely relies on *Carlson* and, thus, does not rely on Jazayeri or ISO-

PPAI to an authorization to perform a particular transaction or particular limited set of transactions.¹⁰ However, for at least three key reasons, a POSITA would not have understood *Carlson*'s request for PPAI to be the claimed “requesting [from a second device] an authorization to establish a function to conduct a financial transaction” to perform a particular transaction.

First, the request for a PPAI in *Carlson* is not “requesting an authorization” to perform a particular transaction, as the Petition alleges, and *Carlson*'s disclosure of a request for PPAI would not have rendered this limitation obvious to a POSITA. Ex. 2006, ¶91. *Carlson*'s request for PPAI is not “requesting [from a second device] an authorization to establish a function to conduct a financial transaction”—or any type of authorization of a transaction—as it is simply a request for an identifier that can be used as a proxy for the consumer's account identifier during a transaction. In fact, *Carlson* never describes or even suggests that the PPAI is an authorization to perform a transaction. Ex. 2006, ¶91.

14443 in Grounds 1-4 nor Murakami or ISO-14443 in Grounds 5-8 for this part of the limitation.

¹⁰ Petitioner interprets the “authorization” of claims 1[d] and 5[d] to be an authorization for a transaction or a set of transactions. *See* Pet., 26-28 (Grounds 1-4); *see also* Pet., 77 (incorporating analysis of *Carlson* into Grounds 5-8).

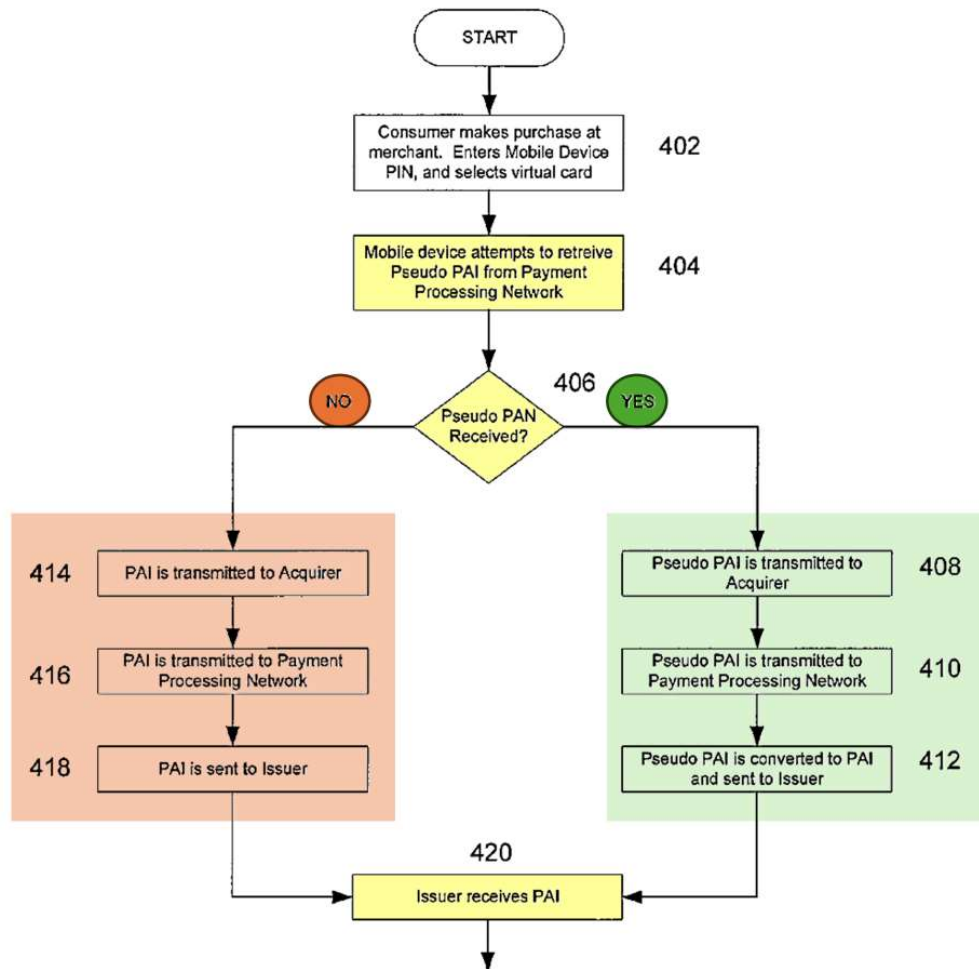
Instead, *Carlson* explains that a PPAI is used during a financial transaction, instead of the user's real account identifier, to protect the user from "[t]heft of sensitive information . . . using wireless interrogation or interception of communications from portable wireless device." *Carlson*, 2:7-10. According to *Carlson*, "[p]seudo primary account identifiers may include identifiers that are similar in format to a consumer's real account identifier." *Carlson*, 5:30-32, 2:66-3:1. *Carlson* also describes the PPAI as "bogus, fake, decoy, substitute, or the like." *Carlson*, 5:42-43. *Carlson* describes that "[i]n the simplest case, this request message [for a PPAI] may include the primary account identifier." *Carlson*, 6:40-41. Accordingly, a POSITA would understand that a request for a PPAI that only requires the primary account number and no other identifying information to secure the request is simply a request for a proxy for the primary account identifier and not a request for an authorization. Ex. 2006, ¶92. Just like a real account number that can be denied by a merchant, the PPAI can likewise be denied when used during a particular transaction. As a result, the PPAI is not and cannot be "an authorization" to perform a transaction, as the Petition alleges. Ex. 2006, ¶92.

Second, it follows that because the PPAI of *Carlson* is not an authorization, a **request** for PPAI is not information requesting an authorization. Ex. 2006, ¶93. Petitioner is relying on an embodiment of *Carlson* wherein the wireless device requests a PPAI from the payment processing network. Pet. 27-28. According to the

Petition, because *Carlson*'s financial transaction “**requires** requesting and receiving the PPAI before the process may proceed” (Pet., 27 (emphasis added)), then the request for PPAI is necessarily the authorization to establish a function to conduct a financial transaction. But Petitioner is wrong. The mere fact that this embodiment discloses **requesting** the PPAI does not transform the PPAI into information requesting **an authorization**. Ex. 2006, ¶93.

The purpose of requesting a PPAI in *Carlson* is so that *Carlson*'s wireless device and the payment processing network can associate the same PPAI with a user's real account information. *See Carlson*, 3:3-6, 6:48-50, 7:21-24. The user's authorized real account information is already authorized and present on *Carlson*'s wireless device at the time of requesting a PPAI. *Carlson*, 12:25-37 (“The user then may select which virtual card they wish to use to conduct the transaction 214. A virtual card corresponds to an account that the user has with an issuer and may be identified by the issuer through the use of a primary account identifier. . . . In this exemplary embodiment, the portable wireless device 202 may then request a pseudo primary account identifier that corresponds with a primary account identifier from the payment processing network 210.”). Indeed, a financial transaction will proceed in *Carlson* regardless of whether a PPAI is received in response to a request for PPAI. For example, if a PPAI is **not** received in response to *Carlson*'s request for PPAI, the particular transaction will **still** proceed using, for example, the primary

account identifier—because a PPAI is not a necessary part of any particular financial transaction. Ex. 2006, ¶94. In *Carlson*'s Figure 4, when the PPAI is not received in response to *Carlson*'s request for PPAI, the transaction still continues with the user's real account identifier (orange, below), instead of proceeding with a received PPAI (green, below). *Carlson*, 14:24-33; Ex. 2006, ¶94.



Carlson, Fig. 4 (cropped and annotated); Ex. 2006, ¶94.

Additionally, *Carlson* is clear that the PPAI “*may not be requested at all.*” *Carlson*, 7:4 (emphasis added). This further undercuts Petitioner’s argument that the

request for PPAI is required for a particular transaction because there is no embodiment in *Carlson* that **requires** a response to a request for PPAI. Ex. 2006, ¶95. For example, the PPAI may be “pushed to the portable wireless device at any time, such as when the device is turned on, when the device is idle, periodically, or through any other such criteria.” *Carlson*, 7:4-7, 12:67-13:3. As another example, *Carlson* discloses that “[t]he portable wireless device may generate the pseudo primary account identifier.” *Carlson*, 7:15-19. In embodiments where the PPAI is pushed or generated, the PPAI cannot act as an authorization for a particular transaction because authorization of the transaction is independent of any actual transaction. Ex. 2006, ¶95.

Third, *Carlson* itself undercuts Petitioner’s theory that a request for a PPAI by *Carlson*’s device is “requesting an authorization.” *Carlson* discloses a different message, an “authorization request message” that is independent of *Carlson*’s wireless device, as a function for requesting an authorization of a particular transaction.¹¹ Thus, the authorization of a transaction in *Carlson* depends on the “authorization request message” and not the call-and-response of an optional request

¹¹ Petitioner interprets the “authorization” of claims 1[d] and 5[d] to be an authorization for a transaction or a set of transactions. *See* Pet., 26-28 (Grounds 1-4); *see also* Pet., 77 (incorporating analysis of *Carlson* into Grounds 5-8).

for PPAI. As a result, a transaction authorization is agnostic to whether the PPAI is received, or if the PPAI request is even made. Ex. 2006, ¶96. *Carlson* discloses that, “[a]fter receiving the [PPAI] from the contactless device, the merchant may then use that identifier, as well as additional information to form an authorization request message.” *Carlson*, 8:10-13. “An authorization request message can include a request for authorization to conduct an electronic payment transaction or some other type of activity.” *Carlson*, 8:13-15. “The payment processing network may then process the authorization message and return a response that indicates if the transaction is authorized or not.” *Carlson*, Abstract. As a result, it is the “authorization request message” sent by the merchant, not the request for PPAI sent by *Carlson*’s device, that drives authorization in the *Carlson* system. Ex. 2006, ¶96.

To be sure, even if the Petition had identified *Carlson*’s “authorization request message” instead of *Carlson*’s request for PPAI as the claimed “requesting an authorization,” the mapping would still fail. Ex. 2006, ¶97. The claims require “*while said at least one first function is enabled . . . requesting an authorization to establish a function to conduct a financial transaction.*” Petitioner maps unlocking *Carlson*’s wireless device to the claimed “at least one first function.” Pet., 27. Because *Carlson*’s “authorization request message” is sent by the merchant, the “authorization request message” cannot be the claimed “authorization.” *Carlson* explains that the “authorization request message” is sent by the merchant and thus

not dependent on whether *Carlson*'s device is unlocked. *Carlson*, 13:18-20, 13:23-27; see also *Pet.*, 25 (arguing that *Carlson*'s device is the claimed smartphone). *Carlson* further discloses that having the merchant send the authorization request message is an advantage because the PPAI is able to be sent over a different communication network than the one used to conduct the authorization for the transaction. *Carlson*, 15:50-53, 11:17-34, Fig. 1.

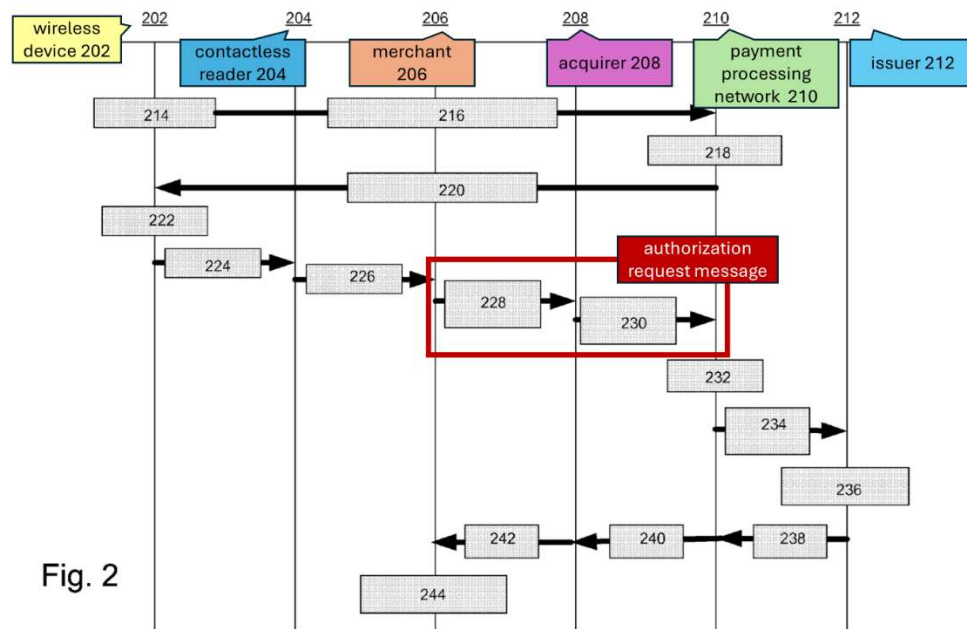


Fig. 2

Carlson, Fig. 2 (annotated); Ex. 2006, ¶97.

Having the “authorization request message” sent by the merchant instead of by *Carlson*'s device is also consistent with *Carlson*'s Figure 4, which shows an authorization step (purple, below) separate from *Carlson*'s device requesting and

potentially receiving the PPAI (yellow).¹²

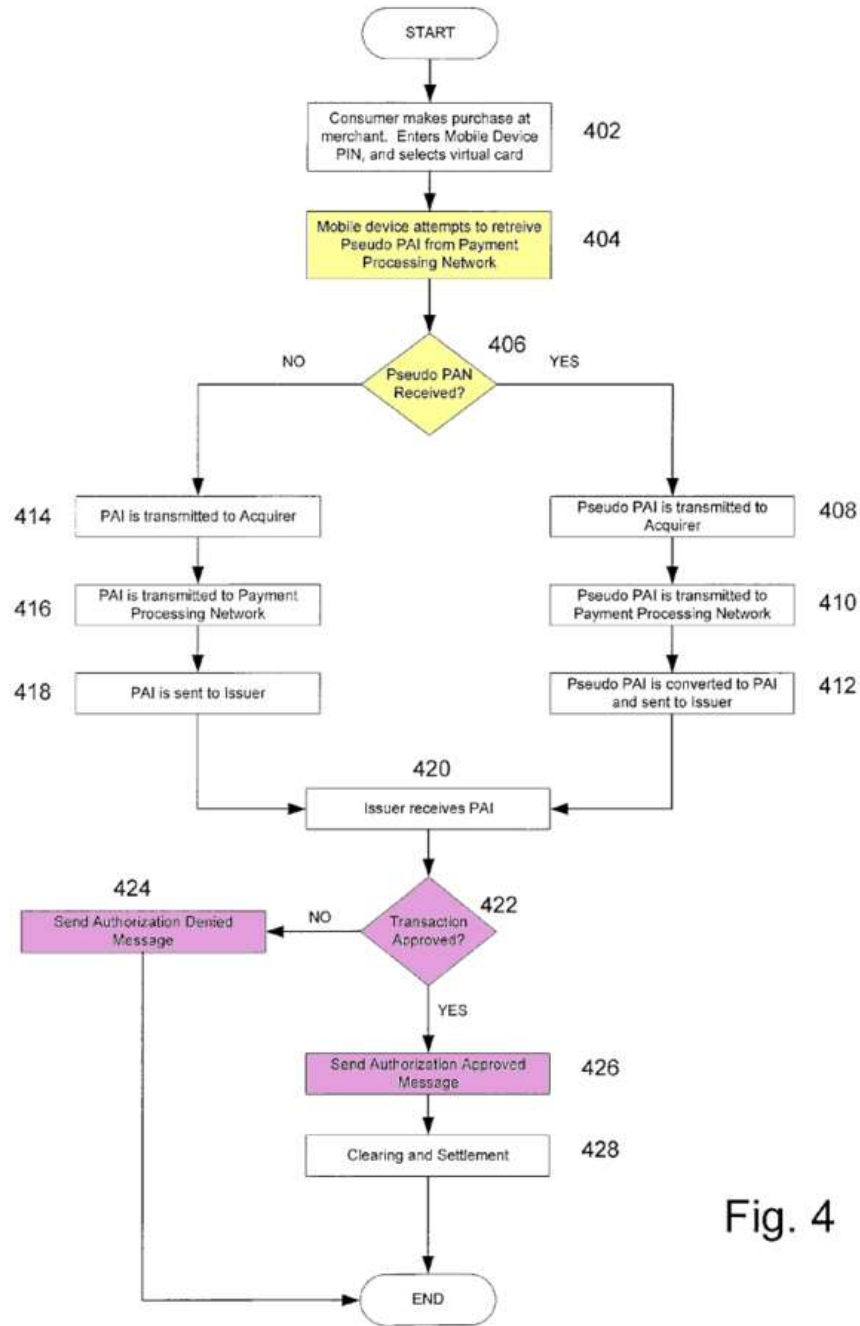


Fig. 4

¹² Notably, the Petition excerpts *Carlson's* Figure 4 in a way that excludes the authorization step in purple below. *See Pet.*, 29.

Carlson, Fig. 4 (annotated); Ex. 2006, ¶98. Once *Carlson*'s method proceeds past step 408 or step 414—when the PPAI or the Primary Account Identifier is sent to the acquirer—the smartphone does not participate in any subsequent steps of the process and therefore does not need to remain unlocked. *See Carlson*, Fig. 4, Ex. 2006, ¶98. Accordingly, a POSITA would not have understood that the authorization request message would be transmitted while the smartphone is unlocked because *Carlson*'s method does not depend on the smartphone for transmitting the authorization request message or any future step.

Petitioner acknowledges that *Carlson* does not actually require receiving a PPAI to conduct a financial transaction but then only addresses this major flaw in its argument in a footnote. Petitioner's footnote states that, because “[t]he proposed grounds rely on the PPAI-based financial transaction,” then “in the context of the proposed grounds, [the failure to receive the PPAI] serves as an indication that the function to conduct the PPAI-based financial transaction has not been established.” *Pet.*, 30 n.6. The Petition then states that “[w]hile it may still be possible in *Carlson*'s system to conduct a different financial transaction (e.g., a less secure process that uses a PAN, rather than PPAI), the function relied upon in the Proposed Grounds is not established absent a PPAI.” *Id.* However, Petitioner invents these two distinct secure and less secure transactions. *Carlson* contemplates just one exchange—one where, regardless of whether a PPAI is received in response to a request for the

PPAI, the exact same financial account is debited for the exact same amount for the exact same purchase. *Carlson*, 14:34-46 (referring to Figure 4 showing that, regardless of whether a PPAI is received, “settlement and clearing processes occur at step 428 to actually transfer funds from the account held at the issuer to the merchant”); Ex. 2006, ¶99. Further, Petitioner fails to appreciate that a PPAI-based financial transaction is still possible in *Carlson* without a response to a request for PPAI.¹³ Ex. 2006, ¶99. Because a PPAI-based financial transaction is still possible in *Carlson*, a request for a PPAI is not information requesting an authorization to perform a PPAI-based financial transaction.

Even if Petitioner were correct that *Carlson* could be limited to a PPAI-based transaction, as described above, it is not true that a PPAI-based transaction requires requesting and receiving a PPAI before a PPAI-based transaction may proceed. Ex. 2006, ¶100. For example, the particular transaction may still (1) go forward without a response to the device’s request for PPAI, as set forth in Figure 4; or (2) go forward without any request at all, either because the PPAI was (i) pushed to the device independent of any request (*Carlson*, 7:3-15) or (ii) generated by the device itself (*Carlson*, 7:16-19). There is no embodiment in *Carlson* where the “particular transaction or particular limited set of transactions” “requires requesting and

¹³ Petitioner’s error stems from its erroneous belief that the PPAI must be requested.

receiving the PPAI” as the Petition suggests. *See* Pet., 27. The request for PPAI therefore does not disclose “information requesting an authorization” to perform a particular financial transaction. Ex. 2006, ¶100.

For at least these reasons, both *Carlson* in view of *Jazayeri* and *Carlson* in view of *Murakami* fail to disclose or render obvious “requesting an authorization [from a second device] an authorization to establish a function to conduct a financial transaction” to perform a particular financial transaction” of independent claims 1 and 5, and thus all dependent claims as well. Ex. 2006, ¶¶101-02.

B. Grounds 1-8 Would Not Have Rendered Obvious “responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion, requesting [from a second device] an authorization to establish a function to conduct a financial transaction.” (Grounds 1-8).

Even if Petitioner had established that the Grounds would have rendered “requesting [from a second device] an authorization to establish a function to conduct a financial transaction” obvious, Petitioner fails to establish that “requesting [from a second device] an authorization to establish a function to conduct a financial transaction” is performed “*responsive to* having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion.”

Claim limitations 1[d] and 5[d] additionally require that “requesting [from a second device] an authorization to establish a function to conduct a financial

transaction” is performed “*responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion.*” All eight Grounds rely on *Carlson*’s request for a PPAI to meet the “requesting [from a second device] an authorization” limitation. Pet., 26-28 (Grounds 1-4); *see also* Pet., 77 (incorporating analysis of *Carlson* into Grounds 5-8). As discussed above in Section VI.A, *Carlson*’s request for a PPAI is not performed responsive to unlocking the phone because the request can be pushed or generated without unlocking the phone.

Furthermore, in Grounds 5-8, Petitioner argues that modifying *Carlson* pursuant to *Murakami*’s biometric sensor and authentication process would have rendered this limitation obvious. But a POSITA would not have been motivated to combine *Carlson* with *Murakami* due to the added delay resulting from *Murakami*’s authentication process. Accordingly, for these reasons, the Grounds fail to disclose or render obvious “*responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion*, requesting [from a second device] an authorization to establish a function to conduct a financial transaction.”

1. ***Carlson’s Request for a PPAI Would Not Have Rendered Obvious “responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion, requesting [from a second device] an authorization to establish a function to conduct a financial transaction.” (Grounds 1-8)***

The claims require that “requesting [from a second device] an authorization to establish a function to conduct a financial transaction” is performed “*responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion.*” The Petition argues that when the device is unlocked, “the portable wireless device 202 may then *request a pseudo primary account identifier [(‘PPAI’)]*.” Pet., 27 (quoting *Carlson*, 12:34-37) (emphasis in original). At the same time, the Petition relies on a single embodiment in *Carlson* where the PPAI is requested by *Carlson’s* device, and the Petition identifies *Carlson’s* request for PPAI as the “requesting an authorization.” But the Petition fails to show that *Carlson’s* requesting of a PPAI (the alleged “requesting an authorization”) is performed *responsive to* unlocking the device (the alleged “responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion”).

In the very embodiment on which Petitioner relies, *Carlson* emphasizes that the device does not need to be unlocked for *Carlson’s* device to request a PPAI. *Carlson*, 7:7-11 (“[A] request for a [PPAI] need not occur only after a user has

enabled the device and selected an account.”). Specifically, *Carlson* explains that “[a] request for a [PPAI] may occur **at any time**, such as when the device is turned on, when the device is idle, periodically, or through any other such criteria.” *Carlson*, 7:10-14 (emphasis added); *see also Carlson*, 6:59-61 (explaining that a PPAI can “expire after a certain number of transactions or after a certain time period”). A POSITA would therefore understand that *Carlson*’s wireless device is **always** capable of requesting a PPAI—or at the very least, is independent of *Carlson*’s device being unlocked. Thus, *Carlson*’s request for PPAI is **not** necessarily performed responsive to unlocking the device. Ex. 2006, ¶107. This furthers *Carlson*’s stated objective of creating a “transparent” user experience such that the user “need not know that the pseudo account identifier is ever retrieved.” *Carlson*, 15:63-16:3. Additionally, and as described above, there are many other ways a PPAI could be received or generated without any request from the device itself, and thus without unlocking the device. Specifically, *Carlson* teaches that the PPAI may never be requested but instead may be either pushed to the device by the network (*Carlson*, 7:3-6) or even generated by the device itself (*Carlson*, 7:17-18). These alternative embodiments do not require unlocking the device, nor do they require requesting a PPAI. *See Carlson*, 7:3-6 (“The pseudo account identifier may not be requested at all, but rather is pushed to the portable wireless device **at any time**, such as when the device is turned on, when the device is idle, periodically, or through other such

criteria.” (emphasis added)).

Carlson therefore does not disclose, nor would it have rendered obvious, the use of a security measure such as a physiological parameter to request a PPAI. Ex. 2006, ¶107. Accordingly, a POSITA would not understand that the combination of *Carlson* and *Jazayeri* would have rendered obvious “responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion, requesting [from a second device] an authorization to establish a function to conduct a financial transaction.” Ex. 2006, ¶107.

2. There Would Not Have Been a Motivation to Combine *Carlson*’s Device with the Biometric Authentication Device of *Murakami* to Render Obvious “responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion, requesting [from a second device] an authorization to establish a function to conduct a financial transaction.” (Grounds 5-8)

The Petition states that “[i]n Grounds 5-8, in place of *Jazayeri*, the proposed combination involves modifying *Carlson* pursuant to *Murakami*’s biometric sensor and authentication process.” Pet., 77. But Grounds 5-8 still rely on *Carlson* to disclose the “responsive to” element of this limitation. *See id.* (incorporating analysis of *Carlson* into Grounds 5-8). For the reasons explained above, Grounds 5-8 fail due to their reliance on *Carlson* to disclose the limitation. Additionally, these Grounds also fail because a POSITA would not have been motivated to combine *Carlson* with

Murakami to render this limitation obvious.

The Petition argues that “*Carlson* modified to unlock its device pursuant to the biometric authentication process described by *Murakami* teaches the claimed *physiological parameter* limitations.” Pet., 79 (emphasis added). However, as discussed above, *Carlson* does not require that its device be unlocked to enable its request for PPAI. *Carlson*, 7:7-11 (“[A] request for a [PPAI] need not occur only after a user has enabled the device and selected an account.”). Because *Carlson*’s wireless device is always capable of requesting a PPAI, *Carlson*’s request for a PPAI is not necessarily enabled responsively to unlocking the device. Thus, unlocking the device using the biometric authentication process described by *Murakami* does not render obvious “responsive to having sensed the physiological parameter and responsive to having determined that the physiological parameter sensed satisfies the criterion, requesting [from a second device] an authorization to establish a function to conduct a financial transaction.” Ex. 2006, ¶108.

Additionally, a POSITA would not have been motivated to modify *Carlson* with *Murakami*’s biometric sensor and authentication process. Petitioner relies on *Murakami*’s sensor “used to measure a heartbeat waveform, a dynamic variable determined by measuring a user’s heartbeat.” Pet., 78-79 (citing *Murakami* 32:30-33:6). Specifically, the Petition relies on an embodiment wherein a waveform is monitored, and “25 features are extracted out of a waveform to create a list of 25

parameters, each parameter requesting a different unique feature for a particular person's heartbeat waveform." *Murakami*, 32:20-22. *Murakami* teaches "tak[ing] more than one reading of the biometric for purposes of individualization." *Murakami*, 32:31-33:1. "In one preferred embodiment 30 heartbeats were taken and monitored to do the individualization for each person being identified. In another preferred embodiment, a hundred heartbeats were used. In capturing a good sample, it is preferred to take as many samples as is possible." *Murakami*, 33:1-4. *Murakami* even acknowledges that "taking a large number of sample waveforms takes time and using an extended period of time to individualize the waveform may be impractical." *Murakami*, 33:4-6. As a result, a POSITA would have understood that *Murakami*'s biometric sensor provides updated security but at the expense of a significant amount of the user's time. Ex. 2006, ¶109. A POSITA would not have been motivated to implement *Murakami*'s biometric sensor for everyday use or for functionalities that require little or no delay. Ex. 2006, ¶109.

As discussed above in Section VI.B.1, the PPAI request in *Carlson* is supposed to be "transparent" to the user. *Carlson*, 15:67-16:3. Therefore, a POSITA would have understood that *Carlson* teaches away from using *Murakami*'s biometric sensor for its PPAI request because the *Murakami* sensor would be inconvenient and cause unwanted delay. Ex. 2006, ¶110. A POSITA would have understood that the added security from the heartbeat sensor of *Murakami* would not be beneficial in

Carlson's system because *Carlson* emphasizes that the user should not “experience any delay in conducting [a] purchase.” *Carlson*, 15:63-67. Therefore, a POSITA would not have been motivated to implement *Murakami*'s biometric sensor in *Carlson*'s device because of the delay introduced. Ex. 2006, ¶110.

For at least these reasons, all eight Grounds do not disclose or render obvious this limitation. Ex. 2006, ¶111.

C. *Carlson*'s Request for a PPAI Would Not Have Rendered Obvious “responsive to the requesting, receiving [from the second device] the authorization” and “responsive to receiving the authorization.”

Claim limitation 1[d] (“*requesting an authorization*”) provides antecedent basis for limitations 1[e] (“responsive to *the requesting*, receiving *the authorization*”) and 1[f] (“responsive to *receiving the authorization*”). Similarly, claim limitation 5[d] (“*requesting from a second device an authorization*”) provides antecedent basis for limitation 5[e] (“responsive to *the requesting, receiving from the second device the authorization*”) and 5[f] (“responsive to *receiving the authorization*”). All dependent claims depend from one of the two independent claims that include these limitations.

The Petition alleges that *Carlson* teaches limitation 1[e], stating that “once the portable wireless device has received the *[PPAI]*, the transaction may continue.” Pet., 28 (quoting *Carlson*, 13:10-11) (emphasis in original); *see also id.*, 59 (addressing limitation 5[e] and stating “[s]ee *supra* Claim 1(e)”). Similarly, the

Petition alleges that *Carlson* teaches limitation 1[f], stating that “confirming receipt of the PPAI at step 406 **establishes the function to conduct the financial transaction** using the PPAI. Pet., 30; *see also id.*, 59 (addressing limitation 5[f] and stating “[s]ee *supra* Claim 1(f)”). But as explained above, *Carlson*’s PPAI is not an authorization and does not establish the capability to conduct a financial transaction. *See supra* Section VI.A; Ex. 2006, ¶113.

The PPAI of *Carlson* does not disclose and would not have rendered obvious “**requesting [from a second device] an authorization**” in limitations 1[d] and 5[d]. Ex. 2006, ¶114. Therefore, for Grounds 1-4 the proposed combinations fail to disclose or render obvious limitations 1[e] (“responsive to **the requesting, receiving the authorization**”), 1[f] (“responsive to **receiving the authorization**”), 5[e] (“responsive to **the requesting, receiving from the second device the authorization**”) and 5[f] (“responsive to **receiving the authorization**”), and thus all dependent claims as well. Ex. 2006, ¶114.

Regarding Grounds 5-8, the Petition states that “Grounds 5-8 differ from Grounds 1-4 only in the proposed modifications to *Carlson* pertaining to the biometric sensor and authentication process.” Ex. 1003, ¶208. Accordingly, Grounds 5-8 also do not disclose and would not have rendered obvious “an authorization” via *Carlson*’s request for a PPAI. Ex. 2006, ¶114. Grounds 5-8 therefore fail to disclose or render obvious limitations 1[e] (“responsive to **the requesting, receiving the**

authorization”), 1[f] (“responsive to *receiving the authorization*”), 5[e] (“responsive to *the requesting, receiving from the second device the authorization*”) and 5[f] (“responsive to *receiving the authorization*”), and thus all dependent claims as well. Ex. 2006, ¶115.

VII. CONCLUSION

For the foregoing reasons, institution should be denied.

Dated: November 7, 2025

Respectfully submitted,

By: / Christopher TL Douglas /
Christopher TL Douglas, Reg. No. 56,950

CERTIFICATION UNDER 37 C.F.R. §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 Preliminary Response to Petition totals 7,134, which is less than the 14,000 allowed under 37 CFR § 42.24(b)(1).

Dated: November 7, 2025

By: / Christopher TL Douglas /
Christopher TL Douglas

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §42.6(e), the undersigned hereby certifies that true and correct copies of the above-captioned **PATENT OWNER'S PRELIMINARY RESPONSE and Exhibits 2006 – 2012** were served in their entirety on November 7, 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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