

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner

v.

TELCOM VENTURES LLC,
Patent Owner

Case No. IPR2025-01233
U.S. Patent No. 9,832,708

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/de-fault/files/documents/InterimProcesses-PTABWorkloadMgmt-20250326.pdf)
2002	Order Granting Joint Stipulation to Dismiss With Prejudice Counts I, II, V, and VIII of Telcom Ventures' Complaint
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

Reference	Claim Limitation
Claim 1	
1[pre]	A method of operating a smartphone using a first air interface and a second air interface that differs from the first air interface, the method comprising:
1[a]	communicating between the smartphone and an entity using the first air interface responsive to a proximity criterion having been satisfied between the smartphone and the entity to provide information to the entity over a short-range link between the smartphone and the entity;
1[b]	refraining from communicating between the smartphone and the entity by the smartphone using the first air interface absent the proximity criterion having been satisfied between the smartphone and the entity; and
1[c]	communicating between the smartphone and a base station using the second air interface to receive a communications service from the base station via the second air interface, wherein the smartphone receives the communications service from the base station via the second air interface but does not receive the communications service from the entity via the first air interface,
1[d]	wherein the communicating between the smartphone and the entity using the first air interface responsive to the proximity criterion having been satisfied between the smartphone and the entity to provide information to the entity over the short-range link between the smartphone and the entity is performed concurrently with the communicating between the smartphone and the base station using the second air interface to receive a communications service from the base station via the second air interface.
Claim 2	
2[pre]	The method according to claim 1,
2[a]	further comprising detecting that the proximity criterion between the smartphone and the entity is satisfied.
Claim 3	
3[pre]	The method according to claim 2, wherein the detecting comprises:
3[a]	detecting that a proximity criterion of less than 10 meters in distance is satisfied between the smartphone and the entity,

Reference	Claim Limitation
3[b]	wherein the detecting is performed by the smartphone, by a device that is associated with the entity and/or by a system that is associated with the smartphone.
Claim 4	
4[pre]	The method according to claim 1,
4[a]	wherein the entity comprises a first device, wherein the information provided to the entity comprises first information, and wherein the method further comprises: selectively sending, by the smartphone, second information to a second device and receiving, by the smartphone, third information from the second device responsive to the proximity criterion having been satisfied between the smartphone and the entity,
4[b]	wherein the smartphone does not receive the communications service from the second device.
Claim 5	
5[pre]	The method according to claim 1
5[a]	wherein the communicating, over the short-range link, between the smartphone and the entity using the first air interface responsive to the proximity criterion having been satisfied is performed over a point-to-point short-range link between the smartphone and the entity using a time division duplex protocol.
Claim 6	
6[pre]	The method of claim 1,
6[a]	further comprising enabling a function by the smartphone in response to an identity, wherein the identity is communicated between the smartphone and the entity.
Claim 7	
7[pre]	The method of claim 6,
7[a]	wherein the enabling the function is performed in response to comparing the identity with one or more identities.
Claim 8	
8[pre]	The method of claim 6,
8[a]	further comprising establishing the short-range link between the smartphone and the entity in further response to the identity.
Claim 9	
9[pre]	The method of claim 1,

Reference	Claim Limitation
9[a]	further comprising providing a notification at the smartphone in response to receiving a signal from the entity.
Claim 10	
10[pre]	The method of claim 1,
10[a]	wherein the entity comprises a first device to which the smartphone provides the information over the short-range link, and
10[b]	wherein the method further comprises sending the information to a second device responsive to the proximity criterion having been satisfied between the smartphone and the entity.
Claim 11	
11[pre]	A smartphone comprising:
11[a]	a processor that is configured to control the smartphone to perform operations comprising:
11[b]	communicating between the smartphone and an entity using a first air interface responsive to a proximity criterion having been satisfied between the smartphone and the entity to provide information to the entity over a short-range link between the smartphone and the entity;
11[c]	refraining from communicating between the smartphone and the entity by the smartphone using the first air interface absent the proximity criterion having been satisfied between the smartphone and the entity; and
11[d]	communicating between the smartphone and a base station using a second air interface to receive a communications service from the base station via the second air interface, wherein the smartphone receives the communications service from the base station via the second air interface but does not receive the communications service from the entity via the first air interface,
11[e]	wherein the communicating between the smartphone and the entity using the first air interface responsive to the proximity criterion having been satisfied between the smartphone and the entity to provide information to the entity over the short-range link between the smartphone and the entity is performed concurrently with the communicating between the smartphone and the base station using the second air interface to receive a communications service from the base station via the second air interface.
Claim 12	
12[pre]	The smartphone according to claim 11,

Reference	Claim Limitation
12[a]	wherein the operations further comprise detecting that the proximity criterion between the smartphone and the entity is satisfied.
Claim 13	
13[pre]	The smartphone according to claim 12, wherein the detecting comprises:
13[a]	detecting that a proximity criterion of less than 10 meters in distance is satisfied between the smartphone and the entity,
13[b]	wherein the detecting is performed by the smartphone, by a device that is associated with the entity and/or by a system that is associated with the smartphone.
Claim 14	
14[pre]	The smartphone according to claim 11,
14[a]	wherein the entity comprises a first device, wherein the information provided to the entity comprises first information, and wherein the operations further comprise: selectively sending, by the smartphone, second information to a second device and receiving, by the smartphone, third information from the second device responsive to the proximity criterion having been satisfied between the smartphone and the entity,
14[b]	wherein the smartphone does not receive the communications service from the second device.
Claim 15	
15[pre]	The smartphone according to claim 11,
15[a]	wherein the communicating, over the short-range link, between the smartphone and the entity using the first air interface responsive to the proximity criterion having been satisfied is performed over a point-to-point short-range link between the smartphone and the entity using a time division duplex protocol.
Claim 16	
16[pre]	A method of operating a smartphone using a first air interface and a second air interface that differs from the first air interface, the method comprising:
16[a]	communicating between the smartphone and an entity using the first air interface responsive to a proximity criterion having been satisfied between the smartphone and the entity to provide information to the entity;

Reference	Claim Limitation
16[b]	refraining from communicating between the smartphone and the entity by the smartphone using the first air interface absent the proximity criterion having been satisfied between the smartphone and the entity; and
16[c]	communicating, by the smartphone, using the second air interface to receive a communications service via the second air interface, wherein the smartphone receives the communications service via the second air interface but does not receive the communications service from the entity via the first air interface,
16[d]	wherein the communicating between the smartphone and the entity using the first air interface responsive to the proximity criterion having been satisfied between the smartphone and the entity to provide information to the entity is performed concurrently with the communicating by the smartphone using the second air interface to receive the communications service via the second air interface,
16[e]	wherein the communicating between the smartphone and the entity using the first air interface responsive to the proximity criterion having been satisfied between the smartphone and the entity to provide information to the entity is performed over a point-to-point short-range link between the smartphone and the entity using a time division duplex protocol, and
16[f]	wherein the entity is not involved in providing the communications service.
Claim 17	
17[pre]	The method according to claim 16,
17[a]	wherein the communicating by the smartphone using the second air interface to receive the communications service via the second air interface comprises communicating between the smartphone and a base station using the second air interface to receive the communications service from the base station via the second air interface.
Claim 18	
18[pre]	A smartphone comprising:
18[a]	a processor that is configured to control the smartphone to perform operations comprising:

Reference	Claim Limitation
18[b]	communicating between the smartphone and an entity using a first air interface responsive to a proximity criterion having been satisfied between the smartphone and the entity to provide information to the entity;
18[c]	refraining from communicating between the smartphone and the entity by the smartphone using the first air interface absent the proximity criterion having been satisfied between the smartphone and the entity; and
18[d]	communicating, by the smartphone, using a second air interface to receive a communications service via the second air interface, wherein the smartphone receives the communications service via the second air interface but does not receive the communications service from the entity via the first air interface,
18[e]	wherein the communicating between the smartphone and the entity using the first air interface responsive to the proximity criterion having been satisfied between the smartphone and the entity to provide information to the entity is performed concurrently with the communicating by the smartphone using the second air interface to receive the communications service via the second air interface,
18[f]	wherein the communicating between the smartphone and the entity using the first air interface responsive to the proximity criterion having been satisfied between the smartphone and the entity to provide information to the entity is performed over a point-to-point short-range link between the smartphone and the entity using a time division duplex protocol, and
18[g]	wherein the entity is not involved in providing the communications service.
Claim 19	
19[pre]	The smartphone according to claim 18,
19[a]	wherein the communicating by the smartphone using the second air interface to receive the communications service via the second air interface comprises communicating between the smartphone and a base station using the second air interface to receive the communications service from the base station via the second air interface.

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 1-19 (the “Challenged Claims”) of U.S. Patent No. 9,832,708 (the “’708 Patent,” Ex. 1001). While the Petition sets forth three grounds, Petitioner relies on U.S. Patent No. 8,229,852 to Carlson (“Carlson,” Ex. 1005) in combination with other references in each of these grounds. Pet., 14. The three Grounds are summarized in the below chart:

Ground	Claims	Proposed Ground of Unpatentability
1	1-3, 5-8, 10-13, and 15-19	Obvious under pre-AIA 35 U.S.C. § 103 over Carlson ¹ in view of ISO-14443 ²
2	9	Obvious under pre-AIA 35 U.S.C. § 103 over Carlson in view of ISO-14443 and Jazayeri ³

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

² ISO/IEC 14443 (“ISO-14443,” Ex. 1016).

³ U.S. Patent Application Publication No. 2008/0155268 (“Jazayeri,” Ex. 1007).

Ground	Claims	Proposed Ground of Unpatentability
3	4 and 14	Obvious under pre-AIA 35 U.S.C. § 103 over Carlson in view of ISO-14443 and Birch ⁴

Petitioner’s combinations fail. Across all three grounds, the Petition fails to show that Carlson, alone or in combination, discloses or renders obvious performing two distinct modes of communication “concurrently.” The Petition relies on an embodiment in Carlson wherein Carlson’s device requests and receives a pseudo primary account identifier (“PPAI”) over a communications network *and then* Carlson’s device can proceed with a PPAI-based financial transaction using a short-range communication element. Carlson is clear—and Petitioner’s own expert confirms—that Carlson’s request and receipt of PPAI *must come before* the PPAI-based financial transaction because the device must have the PPAI in order to perform a PPAI-based transaction. *See* Pet., 32 (“*After* the PPAI is received, Carlson’s device communicates the PPAI to a POS terminal via NFC (first air interface) to further a financial transaction.” (emphasis added)). The request for a PPAI and the use of a PPAI in a transaction do not occur “concurrently.”

Moreover, Petitioner cannot show that the receipt of the PPAI and the use of a PPAI in a transaction occur “concurrently.” Indeed, the Petition fails to show that Carlson teaches the “performed concurrently” limitation because, at best, it only

⁴ U.S. Patent No. 7,213,742 (“Birch,” Ex. 1031).

purports to show that Carlson does **not** disclose “a mutually exclusive selection between communication paths.” *See* Pet., 32 (“Carlson does **not** teach or suggest disabling either communication mode during these processes.”). Petitioner has therefore failed to show that Carlson discloses or renders obvious two modes of communication that are “performed concurrently.”

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 challenged 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 AH*, 892 F.3d 1349, 1356 (Fed. Cir. 2018).

III. BACKGROUND

A. The ’708 Patent

Applicants filed U.S. Patent Application No. 15/251,882 on August 30, 2016, which issued as U.S. Patent No. 9,832,708 on November 28, 2017. ’708 Patent at 1. The ’708 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.*

The ’708 Patent describes mobile wireless devices and methods of using a mobile wireless device to engage in one or more communications modes, but only when certain conditions or criteria are met, such as the satisfaction of a proximity condition and a value of a parameter, e.g., a physiological parameter, satisfying a criterion. Ex. 1001, 1:17-22; 6:9-29; *see also* Ex. 2006 ¶54. In the prior art, mobile wireless devices were rigidly configured to perform a predetermined number of functions. Ex. 1001, 1:31-39; Ex. 2006 ¶54. To overcome this rigidity, the ’708

Patent provides devices and methods that “may be used to enable adaptively one or more modes/functions of a device” based upon satisfying certain criteria. *Id.*, 1:43-45; *see also* Ex. 2006 ¶54. The ’708 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.” *Id.*, 1:36-39; *see also* Ex. 2006 ¶54.

During prosecution, the Examiner issued a non-final rejection of initial proposed claims 1-8 for double patenting in light of claims 1-4 of U.S. Patent No. 9,462,411 and as obvious in light of U.S. Patent Application 2003/0220105 to Daigremont et al., and U.S. Patent Application 2007/0243872 to Gallagher et al. Ex. 1002 at 59-60; *see also* Ex. 2006 ¶57.

In response, Applicants filed a terminal disclaimer over the ’411 Patent. Ex. 1002 at 129, 131. Applicants traversed the Examiner’s obviousness rejection with respect to initial proposed claims 1-3 and 5-7, amended initial proposed claims 4 and 8, and proposed new claims 9-28. Ex. 1002 at 98-107; *see also* Ex. 2006 ¶58.

After an interview and Examiner’s Amendment (Ex. 1002 at 144; *see also* Ex. 2006 ¶60), the Examiner issued a Notice of Allowance on October 18, 2017. Ex. 1002 at 135, 140; *see also* Ex. 2006 ¶61.

B. Carlson (Ex. 1005)

U.S. Patent No. 8,229,852 to Carlson is titled “Secure Mobile Payment System.” Carlson describes 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 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 purchases 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, 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. ISO-14443 (Ex. 1016)

Petitioner relies on the first edition of ISO-14443 that Petitioner alleges was published in 2000 and 2001. Pet., 16 (citing Ex. 1033, Munford Declaration). The ISO/IEC 14443 standard has four parts. Ex. 2006 ¶63. ISO-14443 “is one of a series of International Standards describing the parameters for identification cards as defined in ISO/IEC 7810 and the use of such cards for international interchange.” ISO-14443, 4; Ex. 2006 ¶64.

D. Jazayeri (Ex. 1007)

U.S. Patent Application Publication No. 2008/0155268 to Jazayeri is directed to “[a]n architecture . . . that controls access to secure data via biometric verification.” Jazayeri, Abstract. Jazayeri discloses a “memory module that communicates with biometric data to establish a heightened level of security for controlling access to data stored in the non-volatile memory.” *Id.* “Specifically, biometric data is input and communicated to the security processor, then compared against the existing biometric templates stored in the non-volatile memory. If the

data matches, verification is sent to the external processor and the user is granted access to the secure assets.” *Id.*

Jazayeri requires a security processor. Jazayeri, ¶[0006] (“As the security processor controls access to the entire non-volatile memory space and monitors all traffic to and from the non-volatile memory components, the security processor is able to manage access to the secure assets stored in the non-volatile memory.”); *see also* Jazayeri, ¶¶[0024], [0025], [0027], [0028], [0030], Figs. 1, 2; Ex. 2006, ¶66. Jazayeri explains that “[o]nly the security processor 104 accesses the security software from the nonvolatile memory 102 and performs security functions based on the specific security software being executed.” Jazayeri, ¶[0027].

Figure 3 of Jazayeri illustrates a block diagram of Jazayeri’s security processor.

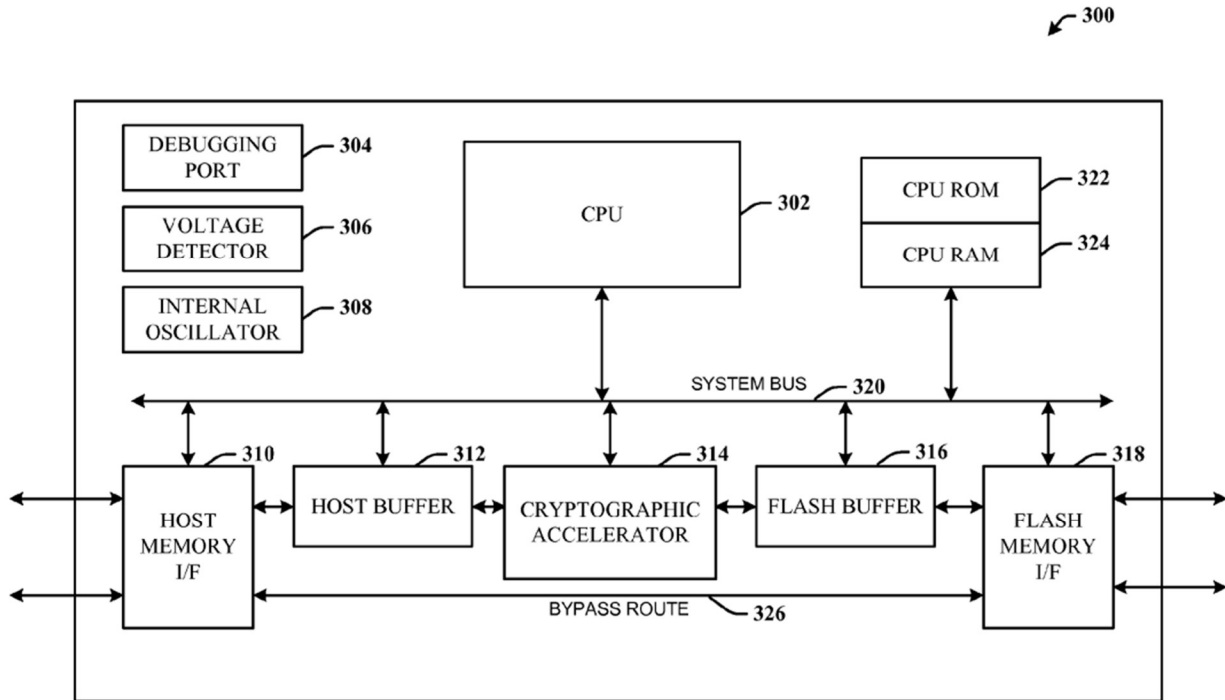


FIG. 3

Jazayeri, Fig. 3

Jazayeri's security processor comprises sophisticated hardware. Jazayeri explains that "[a] cryptographic accelerator 314 . . . performs all the cryptographic algorithms, symmetric and a-symmetric needed by the system." Jazayeri, ¶[0033].

E. Birch (Ex. 1031)

U.S. Patent. No. 7,213,742 to Birch et al. describes a system that includes a mobile device comprising a wireless communications technology that enables the device to communicate with a back-end system. Birch, Abstract. This communication with the back-end system enables the device to obtain coupons and discounts for the transaction and e-receipts post-transaction. *Id.*, 7:55-60, 13:19-35.

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 *Philips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc)). Petitioner contends that “no constructions are necessary to resolve the proposed grounds.” Pet., 6. 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.

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 '708 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 ¶42. 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., 6; Ex. 1003 ¶46. Petitioner also requires “a working knowledge of short-range communication technologies in portable wireless devices.” Pet. 6. 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. As described below, Petitioner’s combinations fail to render obvious all limitations of any of the Challenged Claims.

A. Petitioner Has Failed to Establish a Reasonable Likelihood that the Challenged Claims Would Have Been Obvious in View of Carlson (Grounds 1-3).

In Ground 1, Petitioner asserts that certain of the Challenged Claims, including independent claims 1, 11, 16, and 18, would have been obvious over Carlson in combination with ISO-14443. Pet., 14. In Grounds 2-3, Petitioner adds additional secondary references in an attempt to show that certain dependent claims would have been obvious. Pet., 48-56. In view of the deficiencies discussed below, Petitioner has failed to demonstrate a reasonable likelihood of prevailing on any of Grounds 1-3.

Carlson does not disclose and would not have rendered obvious “communicating between the smartphone and the entity using the first air interface . . . is performed concurrently with the communicating between the smartphone and the base station using the second air interface” (Grounds 1-3).

Claim limitation 1[d] requires that “communicating between the smartphone and the entity using the first air interface . . . is *performed concurrently* with the communicating between the smartphone and the base station using the second air interface.” The other independent claims of the ’708 Patent have similar limitations. *See* ’708 Patent, Cl. 11[e] (“communicating between the smartphone and the entity using the first air interface . . . is performed concurrently with the communicating between the smartphone and the base station using the second air interface”), 16[d] (“communicating between the smartphone and the entity using the first air interface . . . is performed concurrently with the communicating by the smartphone using the second air interface”), 18[e] (“communicating between the smartphone and the entity using the first air interface . . . is performed concurrently with the communicating by the smartphone using the second air interface”). All dependent claims depend from claims 1, 11, 16, or 18, and therefore include the “performed concurrently” limitation.

To meet claim limitation 1[d],⁵ the Petition identifies (1) “communicating information between the wireless device (*smartphone*) and the access device (*entity*) by providing information, in the form of the PPAI, to the *entity* using NFC” as the claimed “communicating between the smartphone and the entity” (Pet., 22, 32), and (2) “wirelessly requesting and receiving a PPAI from a payment processing network using long-range cellular communication (*second air interface*)” as the claimed “communicating between the smartphone and the base station” (Pet., 15-16, 25-26, 32). *See* Pet., 30 (incorporating discussion of limitations 1[a] and 1[c]). The Petition then suggests that these two processes are “performed concurrently” because “Carlson does not teach or suggest disabling either communication mode during these processes, and a POSITA would understand that disabling one communication mode to favor the other was not required of multi-mode devices at the time.” Pet., 32 (citing Ex. 1003, ¶115).

The Petition fails for three reasons. Carlson discloses *first* requesting and receiving a PPAI via long range communication *and then later* sending the PPAI to

⁵ For claim limitations 11[e], 16[d], and 18[e], the Petition only incorporates the discussion of claim limitation 1[d] and does not provide any additional analysis. Pet., 44-47. As a result, the Petition’s views on 11[e], 16[d], and 18[e] rise and fall with the Petition’s analysis of 1[d].

a contactless reader. A POSITA would have understood that communicating a request and receiving a PPAI via long range communication *must come before* that PPAI may be used in a financial transaction and, thus, Carlson's device does not "perform[] concurrently" the identified communications. Next, a POSITA would not have been motivated to communicate Carlson's PPAI request concurrently with Carlson's financial transaction. Finally, the Petition fails to show that Carlson teaches the "performed concurrently" limitation because, at best, the Petition only purports to show that Carlson does *not* disclose "a mutually exclusive selection between communication paths," and does not and cannot affirmatively demonstrate that the identified communications are "perform[ed] concurrently." Ex. 2006, ¶75.

First, Carlson discloses a two-step process for conducting a financial transaction using PPAI. The Petition relies exclusively on a single embodiment in Carlson where the wireless device requests and receives the PPAI from the payment processing network. *See, e.g.*, Pet., 15-16, 17, 25-27, 32. In this embodiment, Carlson discloses that, after the user selects an account to perform a transaction, "the portable wireless device may then access the communications network through the use of one or more wireless access points provided by the network." Carlson, 6:19-22. "Upon gaining access to the communications network, in this exemplary embodiment, the portable wireless device may send a request through the communications network to a payment processing network in order to retrieve a

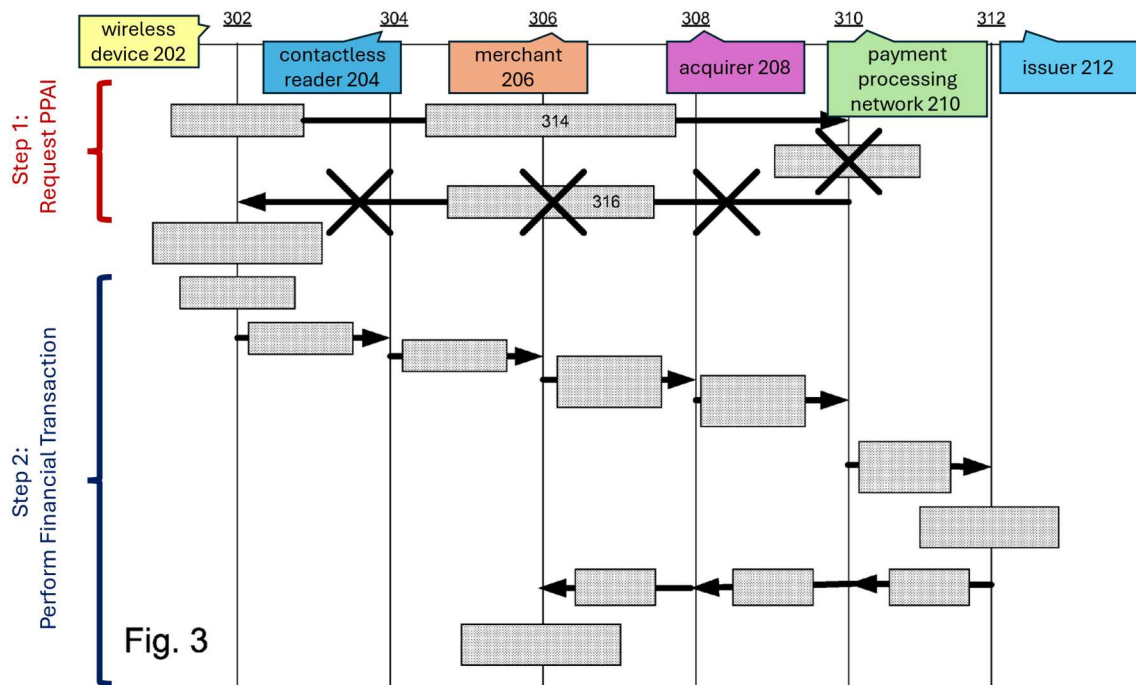
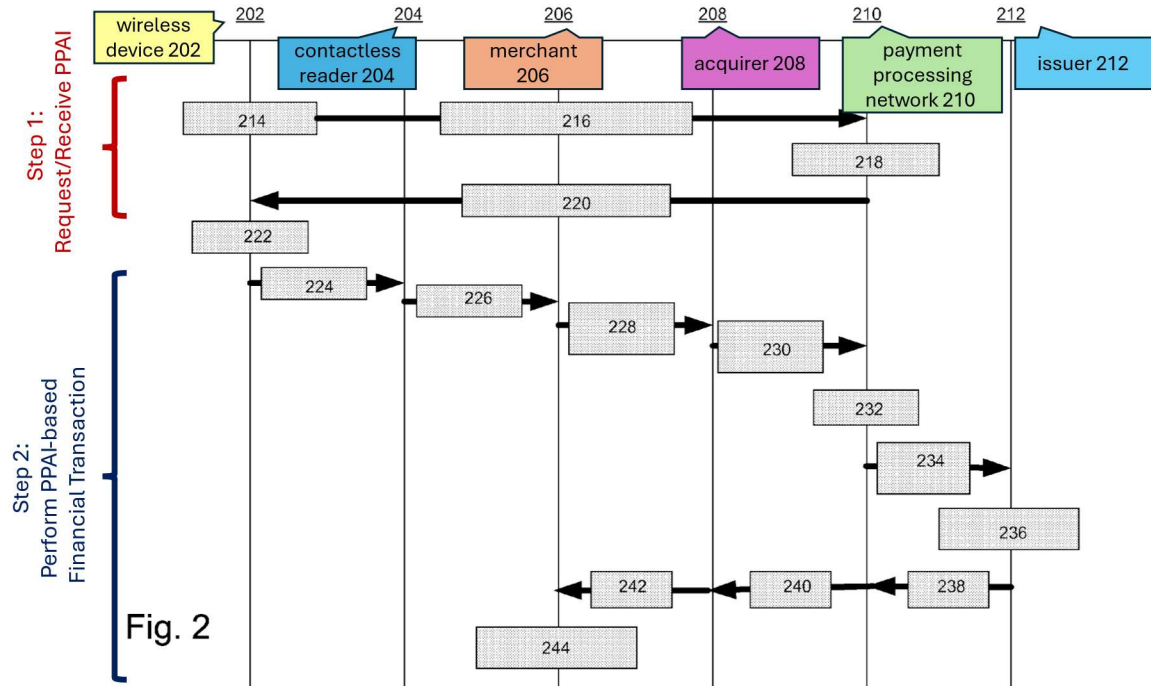
[PPAI] that corresponds to the primary account identifier that was previously selected.” Carlson, 6:32-37. Then, “[t]he payment processing network can respond to the request from the portable wireless device with a response message that contains a [PPAI]” and “[t]he response can be sent over the communications network back to the portable wireless device.” Carlson, 6:50-55. In this embodiment, it is only *after* Carlson’s device has received a PPAI over a cellular network—or failed to receive a PPAI⁶—that “the user may then proceed to use the portable wireless device to conduct a transaction.” Carlson, 7:43-47. Therefore, Carlson discloses that the request for PPAI (using a cellular network) comes before—not “performed concurrently” with—any PPAI-based financial transaction using NFC, which logically follows because a PPAI would need to be received before it could be used in a transaction. Ex. 2006, ¶76.

⁶ Carlson’s device may also move forward without the PPAI if the device fails to retrieve a PPAI in response to its request, but the request must still come *before* a non-PPAI-based financial transaction. See Carlson, 14:24-33.

Carlson's Figures 2 and 3⁷ emphasize that communicating the request for PPAI must come *before* Carlson's financial transaction. Figures 2 and 3 are described by Carlson as "message flow diagram[s] illustrating message flows." Carlson, 5:1-6, 12:13-15, 13:58-59. Carlson discloses that "the portable wireless device 202 may [] request a pseudo primary account identifier that corresponds with a primary account identifier from the payment processing network 210." Carlson, 12:34-37. "The [PPAI] may then be returned to the portable wireless device 202 through the communications network 220." Carlson, 12:56-59. It is only *after* Carlson's device receives the PPAI that the financial transaction may continue.⁸ Carlson discloses that "[t]hrough the use of the short range communications element in the portable device 202, the pseudo primary account number may be transmitted 224 to the contactless reader 204 and to the merchant 206, 226." Carlson, 13:14-18.

⁷ According to Carlson, Figure 3 "is for the most part the same as that of" Figure 2 and "[t]he difference is at the point where the portable wireless device requests 314 and receives 316 the [PPAI]." Carlson, 13:58-61.

⁸ In Figure 3, Carlson's device continues using the same message flow "with the exception that the primary account identifier is used instead of the PPAI." Carlson, 13:61-65.



Carlson, Figs. 2, 3 (annotated); Ex. 2006, ¶77.

Petitioner’s expert Mr. Lipoff confirms that the request for PPAI in Carlson *must come before* a PPAI-based financial transaction. *See, e.g.*, Ex. 1003, ¶90 (“Once the PPAI has been received at the device, the user may conduct a financial transaction” (citing Carlson, 12:56-60, 13:10-13, Figs. 1-2)), ¶107 (“Once the portable wireless device has received the [PPAI] the transaction may continue.” (quoting Carlson, 13:10-11, 12:59-61)), ¶109 (“Carlson discloses that *prior to* sending the PPAI to the access device, the wireless device wirelessly requests and receives a PPAI from a payment processing network through wireless access point 118 and communications network 116” (citing Carlson, 10:7-18, 14:60-65, Fig. 1) (emphasis added)), ¶115 (“*After* the PPAI is received, Carlson’s device communicates the PPAI to a POS terminal via NFC (*first air interface*) to further a financial transaction.” (bold emphasis added)); *see also* Pet., 9, 26, 28, 32 (citing or re-stating Mr. Lipoff’s testimony). As such, a POSITA would have understood that communicating a request and receiving a PPAI via long range communication *must come before* that PPAI may be used in a financial transaction and, thus, Carlson’s device does not “perform[] concurrently” the identified communications. Ex. 2006, ¶78.

Second, a POSITA reading Carlson would not have been motivated to communicate a request for PPAI “concurrently” with a PPAI-based financial transaction. A POSITA would have understood that it is impossible to perform a

PPAI-based transaction until *after* obtaining a PPAI. Ex. 2006, ¶79. Indeed, Carlson emphasizes that a PPAI should be obtained before conducting the financial transaction so that “the user does not experience any delay in conducting the purchase.” Carlson, 15:63-67.

The Petition fails to identify any disclosure in Carlson of communication over a long-range cellular communication network “performed concurrently” with a PPAI-based financial transaction. Although the Petition acknowledges that Carlson’s long-range cellular communication network can be used for communications other than requesting and receiving a PPAI (Pet., 28 (Limitation 1[c]) (quoting Carlson, 5:65-6:3)), Carlson never discloses or suggests that *Carlson’s device* would actually perform any communication over the cellular telephone network *concurrently* with a PPAI-based financial transaction. Carlson merely teaches that the communications network used to request and receive PPAI “may also be used for data communications, to enable the user to perform tasks such as surfing the internet, reading e-mail, or any other tasks that are associated with a general purpose data network.” Carlson, 5:65-6:3. This general disclosure is not sufficient to render the claims obvious. Ex. 2006, ¶80.

For example, Carlson never discloses using the device to “surf[] the internet” or “read[] e-mail” while concurrently performing the steps described by Carlson to complete a PPAI-based financial transaction. Indeed, reading an e-mail while also

performing Carlson's financial transaction would be impractical because Carlson requires the user to "hold the portable wireless device 202 in the vicinity 222 of the contactless reader." Carlson, 13:10-13; *see also* Ex. 2006, ¶81. In fact, Carlson's concerns with data interception and interrogation teaches away from performing potentially risky communications concurrently with a financial transaction because doing so would provide another opportunity for a bad actor to intercept sensitive information or gain access to Carlson's device. Carlson, 1:62-2:6; *see also* Ex. 2006, ¶81. Thus, even if Mr. Lipoff had identified a different communication, a POSITA would not have understood Carlson to render obvious any type of communication to be "performed concurrently" with Carlson's PPAI-based financial transaction. Ex. 2006, ¶81.

Third, the Petition plainly fails to show that Carlson teaches the "performed concurrently" limitation. Instead, the Petition purports to show what Carlson does **not** teach: "a mutually exclusive selection between communication paths." *See, e.g.*, Pet., 32 ("Carlson does **not** teach or suggest disabling either communication mode during these processes." (emphasis added)). But when determining whether a claim is obvious, the question is **not** what Carlson does **not** teach; rather, the question must be what does Carlson actually teach. Here, Carlson expressly discloses that communicating the request for PPAI must come before the PPAI-based financial

transaction, and that the communications are therefore not concurrently performed. Ex. 2006, ¶82. Thus, the Petition fails.

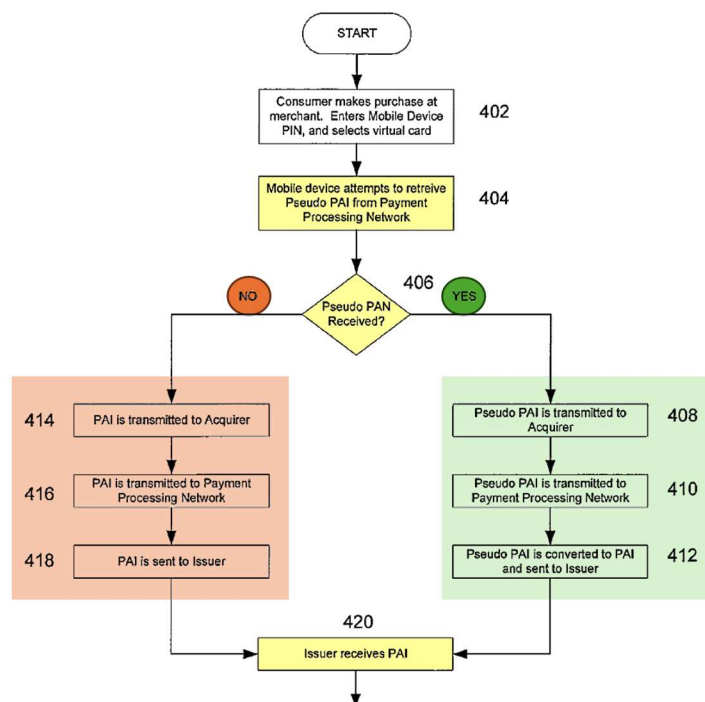
The Petition attempts, albeit incorrectly, to use the prosecution history as a sword to advocate for a particular interpretation of the claims, even while elsewhere confirming that “no constructions are necessary to resolve the proposed grounds.” Pet., 6; *see* Pet., 30-31 (concluding that “[a] POSITA would understand that disabling one air interface to utilize a second air interface, is a mutually exclusive mode selection that would **not** satisfy the concurrent requirement of limitation 1(d)” (citing Ex. 1003 at ¶113) (emphasis added)). But the Petition cannot show that Carlson discloses a limitation merely by distinguishing it from prior art cited during prosecution. Distinguishing “performed concurrently” from “mutually exclusive mode selection” during prosecution (Ex. 1002 at 111) did not clearly define “performed concurrently” to mean “anything that is not mutually exclusive mode selection,” as the Petition seems to suggest. *See Thorner v. Sony Computer Entertainment America LLC*, 669 F.3d 1362 (Fed. Cir. 2012) (“Absent a clear disavowal or contrary definition in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language.”); *see also* Ex. 2006, ¶83. Indeed, a “mutually exclusive mode selection” is just one example of a system that would not satisfy the “performed concurrently” requirement of limitation 1[d] and the other independent claims. Thus, the Petition’s arguments that distinguish Carlson

from a “mutually exclusive mode selection” fall short of showing that Carlson’s request for PPAI and PPAI-based financial transaction are “performed concurrently,” as claimed. Ex. 2006, ¶83.

The Petition also points to an unasserted reference, Sherman, as what “a POSITA would understand” about multi-mode devices. Pet., 32 (citing Ex. 1003, ¶115) (discussing Sherman, Ex. 1014). But the Petition does not provide *any* reason a POSITA would have understood Sherman’s Bluetooth-WiMAX teachings to be applicable to Carlson’s long-range communications network and NFC-based financial transaction. Ex. 2006, ¶84.

Further, Sherman is directed to solving a problem related to “the small frequency separation between [the WiMAX and Bluetooth frequency] bands.” Ex. 1014, ¶[0014]. Sherman is silent as to NFC and the ISO-14443 standard, on which the Petition relies, and Sherman’s teachings are not applicable to Carlson’s system. Ex. 2006, ¶85. Sherman also does not disclose a method for securing financial transactions, like Carlson. Carlson, 1:16-20. Worse, Petitioner never addresses Carlson’s primary concerns with risky wireless communications. Indeed, Carlson’s concerns with securing financial transactions teach away from concurrent communications because doing so would provide another opportunity for a bad actor to intercept sensitive information or gain access to Carlson’s device. Carlson, 1:62-2:6; Ex. 2006, ¶85.

Last, the Petition suggests that, because Carlson “expressly notes that a different process is employed” when the communications network is unavailable to the device, “a POSITA would understand that Carlson’s default mode keeps both air interfaces—the NFC air interface and cellular air interface—active and does not intentionally disable either interface during operation.” Pet., 32. However, the Petition mischaracterizes Carlson. Carlson does not teach a “default” and “alternative” mode. Ex. 2006, ¶86. Indeed, Carlson emphasizes that the message flows are “for the most part the same” and that these options are part of the same process. Carlson, 13:58-61. For example, Figure 4 of Carlson shows the two pathways for conducting the same financial transaction with or without the communications network.



Carlson, Fig. 4 (annotated). This teaching in Carlson undercuts any argument that communicating a request for PPAI and performing a PPAI-based transaction are “performed concurrently” because Carlson expressly discloses that the PPAI-based transaction may proceed without access to the communications network at all. Carlson, 13:46-48 (“In some cases, the communications network that may be used to request a [PPAI] number may not be available.”); *see also* Carlson, 14:34-59, Figs. 3, 4. Moreover, the Petition again fails to show that the communications are “performed concurrently” and defaults to arguing what Carlson does *not* show: “intentionally disabl[ing] either interface during operation.” Pet., 32. At minimum, the Petition is wrong that neither interface is disabled, because Carlson discloses that the short-range wireless transmission element must be enabled prior to use—and thus is necessarily disabled at some point. Carlson, 2:39-43; Ex. 2006, ¶86.

Therefore, for at least these reasons, Carlson fails to disclose or render obvious “communicating between the smartphone and the entity using the first air interface . . . is *performed concurrently* with the communicating between the smartphone and the base station using the second air interface” of independent claims 1, 11, 16, and 18, and thus all dependent claims as well. Ex. 2006, ¶87.

VII. CONCLUSION

For the foregoing reasons, institution should be denied.

Dated: November 6, 2025

Respectfully submitted,

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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 4,912 which is less than the 14,000 allowed under 37 CFR § 42.24(b)(1).

Dated: November 6, 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 6, 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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