UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,

Petitioner

v.

TELCOM VENTURES LLC,

Patent Owner

Case No. IPR2025-01408
U.S. Patent No. 9,832,708

PATENT OWNER'S PRELIMINARY RESPONSE

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

CASES

STATUTES

OTHER AUTHORITIES

TABLE OF EXHIBITS

Exhibit Number	Description
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	Telcom Ventures' Local Patent Rule 3.1 and 3.2 Disclosures, Served November 21, 2024
2003	Telcom Ventures' Subpoena to Google, Served July 18, 2025
2004	Stipulated Protective Order for Non-Party Google, Dated September 11, 2025
2005	Third Amended Docket Control Order
2006	Order Denying Motion to Stay Proceedings, Dated August 27, 2025
2007	Paul Hasting's Notices of Appearance in the Samsung Litigation
2008	Declaration of William C. Easttom II (Chuck Easttom)
2009	Curriculum Vitae of William C. Easttom II (Chuck Easttom)
2010	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/
2011	Liu et al., "Near-Field Communications: A Comprehensive Survey," IEEE (June 2025)
2012	"The Creation of the NFC Forum and its Vision" (2011) https://cs.stanford.edu/people/eroberts/courses/cs181/projects/2010-11/NFCChips/nfcforum.html
2013	McHugh & Yarmey, "Near Field Communication: Introduction and Implication," ERIC (2012)
2014	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 Google LLC ("Google" 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). The Petition sets forth just two Grounds with regard to the independent claims, claims 1, 11, 16, and 18.[1] Pet., 4. The Grounds are summarized in the below chart:

Ground	Claims	Proposed Ground of Unpatentability
1	1-3, 5-9, 11-13, 15, 17, and 19	Obvious under pre-AIA 35 U.S.C. § 103 over *Barnett*[2] in view of *Byrne*[3]

[1] Petitioner's Ground 1 addresses only independent claims 1 and 11 (and certain dependent claims). Petitioner's Ground 2 addresses only independent claims 16 and 18. Petitioner's Ground 3 adds U.S. Patent No. 7,434,723 to *White* et al. ("*White*") (Ex. 1007) to the *Barnett*-*Byrne* combination, but does so only to challenge dependent claims 4, 10, and 14—not any of the independent claims. Pet., 4.

[2] U.S. Patent Application Publication No. 2009/0170483 A1 to *Barnett* et al. ("*Barnett*") (Ex. 1005).

[3] U.S. Patent Publication No. 2008/0207269 to *Byrne* et al. ("*Byrne*") (Ex. 1015).

Ground	Claims	Proposed Ground of Unpatentability
2	16 and 18	Obvious under pre-AIA 35 U.S.C. § 103 over *Barnett*
3	4, 10, and 14	Obvious under pre-AIA 35 U.S.C. § 103 over *Barnett* in view of *Byrne* and *White*

Petitioner's combinations fail. Across all three Grounds, the Petition fails to show that *Barnett*, alone or in combination, discloses or would have rendered obvious "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," a requirement of all four independent claims (1, 11, 16, and 18), and thus all claims. Rather than establish that *Barnett*'s disclosed mobile device would ***refrain*** from communicating, Petitioner improperly equates the effective range of near field communication ("NFC") with the requirements of this limitation. Moreover, Petitioner cannot show that the proposed *Barnett-Byrne* combination discloses or would have rendered obvious that communication using two air interfaces was "performed concurrently," which is a requirement of all four independent claims, and thus all claims.

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

It is Petitioner's burden to demonstrate unpatentability by a preponderance of the evidence. The Petition must establish, with particularity, the grounds and evidence that support invalidating the patented claims. 35 U.S.C. § 312(a)(3). Petitioner "must 'specify where each element of the claim is found in the [relied upon] prior art patents.'" *In-Depth Geophysical, Inc. v. ConocoPhillips Co.*, IPR2019-00850, Paper 56, 27 (P.T.A.B. Sept. 3, 2020) (quoting 37 C.F.R. § 42.104(b)(4)). The Petition must both "clearly point out the differences between the claimed invention and [the prior art]" and "explain why a person of ordinary skill in the art would have found the claimed subject matter obvious in spite of those differences." *Synopsys, Inc. v. Mentor Graphics Corp.*, IPR2012-00041, Paper 16, 14 (P.T.A.B. Feb. 22, 2013). Petitioner must recite where each challenged limitation is found in the reference(s) and explain why a person of ordinary skill in the art ("POSITA") would have modified the primary reference. *Microsoft Corp. v. Secure Web Conf. Corp.*, IPR2014-00745, Paper 12, 11-13 (P.T.A.B. Sept. 29, 2014).

In addition, the Board may institute based only on what the Petition actually presents and not what the Petition could have reasonably contained. *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d at 1381. The Board cannot "deviate from the grounds in the petition and raise its own" theories of invalidity. *Sirona Dental Sys. GmbH v. Institut Straumann AH*, 892 F.3d 1349, 1356 (Fed. Cir. 2018).

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 mobile wireless devices to engage in one or more communication 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. 2008, ¶59. In the prior art, mobile wireless devices were rigidly configured to perform a predetermined number of functions. Ex. 1001, 1:31-39; Ex. 2008, ¶59. 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. 2008, ¶59. 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. 2008, ¶59.

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. 1004 at 59-60; *see also* Ex. 2008, ¶62.

In response, Applicants filed a terminal disclaimer over the '411 Patent. Ex. 1004 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. 1004 at 98-107; *see also* Ex. 2008, ¶63.

After an interview and Examiner's Amendment (Ex. 1004 at 144; *see also* Ex. 2008, ¶65), the Examiner issued a Notice of Allowance on October 18, 2017. Ex. 1004 at 135, 140; *see also* Ex. 2008, ¶66.

B. *Barnett* (Ex. 1005)

United States Patent Application No. 2009/0170483 to *Barnett*, et al. is titled "System and Method for Transmitting Information Using a Mobile Phone."

Barnett is a fully self-sustained system that is narrowly limited to an efficient means of providing a customer information while they are shopping in a store. *See Barnett*, ¶[0001] ("The invention relates generally to a system and method of communicating shopping information between a consumer and a retailer. In particular, the invention relates to a system for enabling a consumer to obtain shopping information from a retailer, and the retailer to obtain information from the consumer, using a communication device, such as a mobile phone.”). Figure 1 (reproduced below) illustrates this system. *Barnett* explains that, for example, “[t]he information transmitted to the retailer may include a shopping list of goods or services desired by the consumer. In return, the retailer may provide the home computer system 12 and portable communications device will information regarding the desired goods or services.” *Id.*, ¶[0011].

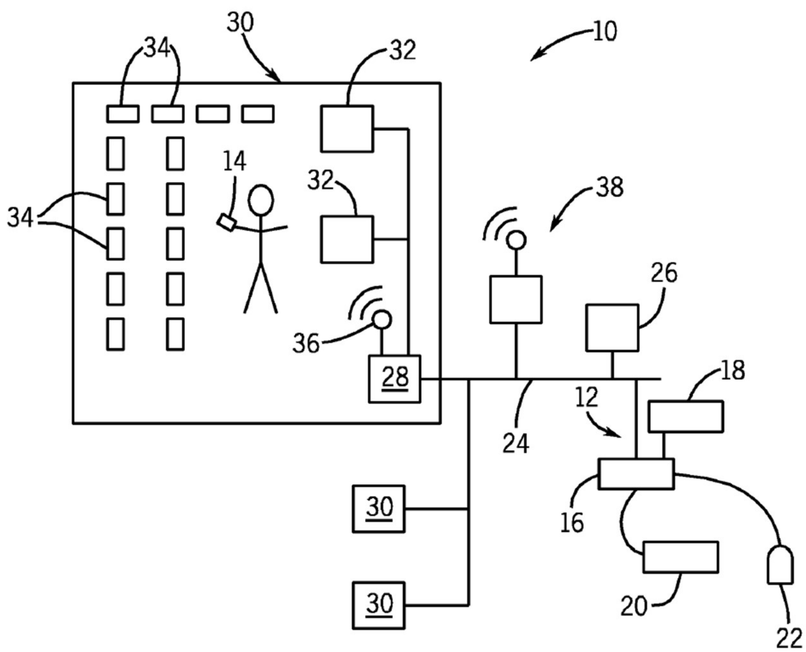

FIG. 1

Barnett, Fig. 1.

Barnett also discloses how the store’s infrastructure is self-sustained, explaining that “[w]ithin the store 30 are a series of displays 32 that are connected to the store computing system 28. In this embodiment, the displays 32 are NFC-enabled displays that can interact with a NFC-enabled mobile phone 14 using device-to-device communication" (*Barnett*, ¶[0021]) and that "[s]tand-alone NFC-enabled devices 34 that have been programmed with specific information are located around the store 30. In this embodiment, the stand-alone NFC-enabled devices 34 are used to identify products to NFC-enabled devices." *Barnett*, ¶[0023].

Barnett discloses an infrastructure for reducing the time the customer spends in the store by streamlining the exchange of communication about the products to the customer. *See Barnett*, ¶¶[0002] ("a consumer may go to a store to purchase an item and find on arriving at the store that the item is not in stock. In addition, even if the item is in stock, considerable time may be wasted looking for the item in the store. Locating a store employee to ask the employee a question about a product can also be very time-consuming. There are many other examples of problems that a consumer can experience when shopping that lead to considerable amounts of time being wasted."); [0042] ("Generally the time that the consumer spends in a store may be used more efficiently. For example, the consumer knows immediately whether or not an item is in stock at a nearby store. In addition, there is less need to find a person at the store to obtain additional information.").

C. *Byrne* (Ex. 1015)

United States Patent Publication No. 2008/0207269 to *Byrne* et al. is titled "Basestation for Cellular Communications System." *Byrne* is directed to "[a] basestation for use in a cellular telecommunications system, and in particular to a basestation for use as a femtocell basestation." *Byrne*, ¶[0011]. *Byrne* discloses that a "microcell basestation[] provide[s] coverage to the whole of the intended service area including the location of the femtocell basestation 18 and the location of the mobile phone 22 while it is in the coverage area of the femtocell basestation 18. However, the network is configured such that, when a mobile device that is allowed to be registered with the femotcell basestation 18 is within the coverage area of the femtocell basestation 18, then it will preferentially establish a connection with the femtocell basestation 18 rather than with the microlayer basestation 16." *Byrne*, ¶[0022].

D. *White* (Ex. 1007)

United States Patent No. 7,434,723 to *White*, et al. is titled "Mobile Payment Authorization System and Method." *White* "is directed to a payment approval system, and more particularly, but not by way of limitation, to a system and method for mobile payment approval." *White*, 1:20-25. Specifically, *White* provides embodiments for systems and methods for "completing a pending purchase" and "payment approval." *White*, 1:38-2:8.

Figure 1 (reproduced below) provides an exemplary architecture for an embodiment of *White*'s system.

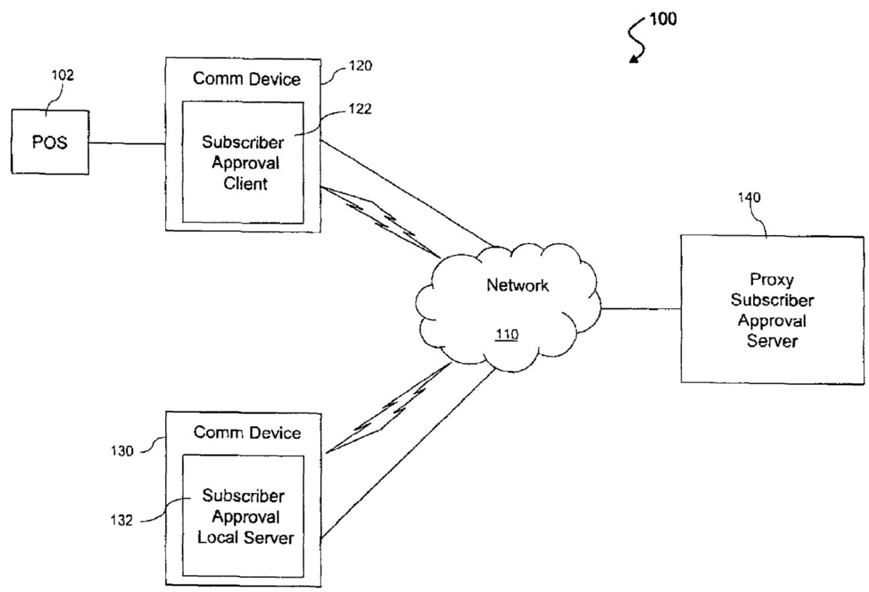

Figure 1

White, Fig. 1.

Regarding communicating with the second communication device 130 in Fig. 1, *White* explains that "[t]he first communication device 120 communicates with the second communication device 130 through the network 110" (*White*, 4:17-19) and that these devices can be "computer-based entities, such as personal digital assistants (PDAs), mobile phones, personal computers (PC), laptop computers, or traditional wireless or wire-line telephones." *White*, 4:12-15.

IV. CLAIM CONSTRUCTION

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

Petitioner contends that "the Board need not construe any terms of the challenged claims to resolve the underlying controversy, as any reasonable construction reads on the prior art." Pet., 8-9. Patent Owner agrees that the Board should apply the plain and ordinary meaning of the terms in the Challenged Claims. Patent Owner does not waive its right to raise additional issues of claim construction in any litigation, nor does it waive any argument in any litigation that claim terms are not indefinite or are otherwise valid. The failure of the Petition to render obvious the Challenged Claims is clear in view of the arguments below without construing any specific claim term.

V. LEVEL OF ORDINARY SKILL IN THE ART

Each of the arguments below is considered from the standpoint of a POSITA in the field of the '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. 2008, ¶49. This is different from Petitioner's proposal, which calls for "an undergraduate degree in electrical engineering, computer engineering, computer science or a related field along with two years of work experience in the field of mobile communication applications." Pet., 5;

Ex. 1002, ¶20. Patent Owner disagrees that a POSITA should be required to have at least two years of experience in mobile communication applications. Ex. 2008, ¶50. Petitioner has not described or explained the scope or meaning of "the field of mobile communication applications." *Id.* 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's Ground 1 Fails Because the Claims Would Not Have Been Obvious in View of *Barnett* and *Byrne.*

Petitioner argues in Ground 1 that *Barnett* in view of *Byrne* discloses or "suggests" the limitations of claims 1-3, 5-9, 11-13, 15, 17, and 19. Pet., 4. Petitioner's arguments fail. Ex. 2008, ¶¶78-81.

First, *Barnett*[4] does not disclose claim limitation 1[b], which claims "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." Ex. 2008, ¶79, § XIIA.1.

[4] For claim limitation 1[b], Petitioner relies on *Barnett* alone and not the *Barnett*-*Byrne* combination. Pet., 17.

Second, the *Barnett-Byrne* combination does not disclose or suggest claim limitation 1[d], which claims "wherein the communicating between the smartphone and the entity using a 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." Ex. 2008, ¶80, § XIIA.2.

1) Barnett Does Not Disclose and Would Not Have Rendered Obvious "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" (Grounds 1 and 2).

Claim limitation 1[b] recites "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." Claim limitation 11[c] similarly recites "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." Petitioner incorporates the analysis of claim limitation 1[b] for claim limitation

11[c].[5] Pet., 41. All four independent claims of the ’708 Patent have similar claim limitations, and therefore all claims require “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.” Ex. 2008, ¶82.

First, this Ground fails because it is unclear if Petitioner contends that *Barnett*[6] discloses or renders obvious this limitation. Petitioner first states that “Barnett discloses this limitation.” Pet., 17. However, in the same paragraph, Petitioner states that “a POSITA would have understood that the phone and display refrain from communicating with each other over NFC if the proximity criterion is not satisfied because NFC communication is not possible at all if the proximity criterion is not satisfied . . . .” *Id.* In either case, *Barnett* does not disclose and would not have rendered obvious this limitation. Ex. 2008, ¶83.

---

[5] Although addressed in Ground 2, claim limitations 16[b] and 18[c] recite similar claim language, and Petitioner addresses both by stating that “Barnett discloses this limitation for the same reasons as discussed for limitation [1.b].” Pet., 46 (addressing claim limitation 16[b]), 49 (addressing claim limitation 18[c]).

[6] For claim limitation 1[b], Petitioner relies on *Barnett* alone and not the *Barnett-Byrne* combination. Pet., 17-18.

Specifically, for claim limitation 1[b], Petitioner states that "Barnett's system and method is configured not to communicate ('refraining from communicating') between the mobile phone and display by the mobile phone using the NFC link ('first air interface') unless the mobile phone is within a certain distance of the display ('absent the proximity criterion having been satisfied between the smartphone and the entity')." Pet., 17-18 (underlining in original). This is incorrect. Ex. 2008, ¶84. *Barnett* does not disclose and would not have rendered obvious "refraining from communicating."

Petitioner points to *Barnett* ¶[0013] in support of its contention regarding claim limitation 1[b]. Pet., 17. In *Barnett* ¶[0013], *Barnett* states that "NFC is a short-range high frequency wireless communication technology which enables the exchange of data between devices over about a short distance, such as a decimeter." *Barnett*, ¶[0013]. *Barnett* goes on to state that "[t]he technology is an extension of a proximity-card communications standard, i.e., a contact-less card or radio-frequency identification (RFID) standard that combines the interface of a smartcard and a reader into a single device." *Id. Barnett* then states that "unlike smart cards which must be powered by an external RF field, an NFC-enabled mobile phone has its own battery." *Id. Barnett* thus contemplates that the disclosed "NFC-enabled" mobile phone is capable of communicating using NFC without contact with an external RF field. Ex. 2008, ¶85. *Barnett* further discloses that in its system "the product identifiers 34 are an RFID device, such as a contact-less smart card." *Barnett*, ¶[0023]. A POSITA would have understood that in order to communicate with a contact-less smart card, *Barnett*'s disclosed mobile device would have constantly enabled NFC in its mobile device so that it is able to periodically and persistently poll for NFC targets by emitting short bursts of radio frequency (RF) energy. Ex. 2008, ¶85; Ex. 2010, p. 6 ("The second mode is the passive mode. In this mode, an active device can read data from an NFC tag. For instance, a smartphone can be used as a keycard to access entry into office buildings. When the smartphone is brought into proximity to the NFC tag, it generates a carrier field which the NFC tag modulates. The electromagnetic field that is produced by the smartphone supplies the tag with the electricity it needs to function . . . .").

Further, *Barnett* discloses a complex in-store system in which the NFC-enabled device has an established and persistent "NFC link" when in the store. *Barnett*, ¶[0025]. This connection must be continuously enabled so that it can be used to infer "the location of the other device, e.g., the mobile phone" and the "location information can be used to direct the consumer and can be used by the retailer to analyze traffic flows through the store." *Barnett*, ¶[0025]. Similarly, the *Barnett* system is not restricted to using NFC at the point of sale, but discloses using NFC to "enable a consumer to obtain information regarding the availability, location, and/or price of the goods or services provided in the shopping list by using either the NFC capability of the mobile phone . . . to receive information from the retailer within a retail stores." *Barnett*, ¶[0016]; *see also* Ex. 2008, ¶86. This again confirms that *Barnett* relies on a continuously active NFC device, and continuous efforts by the mobile device to establish the NFC link, to enable its overall shopping system. Ex. 2008, ¶86.

Rather than establish that *Barnett* affirmatively discloses refraining from NFC communication, Petitioner essentially equates the effective range of NFC with the affirmative requirement that the two parties, the smartphone and the entity, "refrain[] from communicating." Pet., 17. But Petitioner has not established that *Barnett*'s "NFC-enabled" mobile phone, which is battery powered,[7] would ***refrain*** from communicating with other NFC-capable entities, especially in the context of *Barnett*'s NFC-augmented shopping experience whereby a mobile phone has its NFC capabilities continuously activated so as to benefit from the in-store experience. Ex. 2008, ¶87. At most Petitioner has established that various NFC technologies may have effective ranges that would limit the effectiveness of an NFC communication

[7] Other technologies, such as RFID, can require an external power source to be active (e.g., a point of sale). NFC is distinct in that an NFC antenna is powered by a mobile device and would remain powered and active regardless of whether it was proximate to an external source (e.g., point of sale) or not. Ex. 2008, ¶87 n.4.

link, but effective range is not a problem in *Barnett* because everywhere in the store is within an effective NFC range. *See Barnett*, ¶[0025]. As such, Petitioner does not establish that a powered on and active NFC radio would "refrain[] from communicating" at all. Ex. 2008, ¶87. Thus, *Barnett* fails to disclose, and would not have rendered obvious, this claim limitation.

For this reason, Ground 1 fails to disclose and would not have rendered obvious claim limitations 1[b] and 11[c]. As a result, Ground 1 does not disclose and would not have rendered obvious independent claims 1 and 11, and all dependent claims. Ex. 2008, ¶88. Further, because Petitioner relies solely on its analysis of claim limitation 1[b] in the Ground 2 analysis of claim limitations 16[b] (Pet., 46) and 18[c] (Pet., 49), Ground 2 fails to disclose and would not have rendered obvious independent claims 16 and 18, and all dependent claims. Ex. 2008, ¶88. Ground 3, which is directed only to dependent claims 4, 10, and 14, does not alter this analysis or conclusion.

2) *Barnett-Byrne Does Not Disclose and Would Not Have Rendered Obvious "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" (Grounds 1 and 2).

Claim limitations 1[d] and 11[e] require "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." Petitioner incorporates its analysis of claim limitation 1[d] for claim limitation 11[e].[8] Pet., 42. All four independent claims of the '708 Patent have a similar

[8] Claim limitations 16[d] and 18[e] similarly require "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." Petitioner addresses both in Ground 2 by incorporating the analysis of claim limitation 1[d]. Pet., 47 (addressing claim limitation 16[d]), 49 (addressing claim limitation 18[e] by reference to claim limitation 16[d], which incorporates claim limitation 1[d]).

requirement, and therefore all claims require "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 a communications service [] via the second air interface."

Petitioner states that the "*Barnett-Byrne* combination discloses and/or suggests this limitation." Pet., 24. Petitioner identifies "NFC communication between a phone and NFC-enabled check-out display" as disclosing or suggesting communicating between the smartphone and the entity. Pet., 24. Petitioner identifies communicating between a phone and a cellular base station using a cellular communication system as disclosing or suggesting communicating using the second air interface. Pet., 25. Petitioner then goes on to state that in *Barnett*, "the functions associated with using the phone as a contact-less credit card (e.g., NFC ('first air interface')) and the functions associated with using the phone as a cell phone (e.g., cellular communication ('second air interface')) would have been combined into a unified package, such that the above-described 'communicating . . . using the first interface' [sic] and 'communicating . . . using the second air interface' would have been 'performed concurrently.'" Pet., 26 (underlining in original). However, as set forth below, *Barnett* does not disclose communicating using the identified first and second air interfaces ***concurrently***. Ex. 2008, ¶90.

Petitioner then states that "[t]o the extent *Barnett* does not explicitly disclose that the above NFC communication and cellular communication are '<u>performed concurrently</u>' a POSITA would have been motivated and found it obvious in view of *Barnett* to implement the *Barnett-Byrne* system/method in this manner." Pet., 26 (underlining in original). As set forth below, a person of ordinary skill in the art would not have been motivated to modify *Barnett* to render this limitation obvious. Ex. 2008, ¶91.

Petitioner's citations to *Barnett*, on pages 25 and 26 of the Petition, set forth that *Barnett*'s mobile device has the capability to communicate with various communication networks. Ex. 2008, ¶92. However, neither the identified citations nor any other part of *Barnett* discloses the use of those communication networks ***concurrently*** by a given device. Ex. 2008, ¶92. And many of Petitioner's citations miss the mark entirely, failing to even discuss use of multiple communication networks, much less multiple networks concurrently. For example, Petitioner points to *Barnett* ¶[0014], which states that "[t]he NFC protocol enables the mobile phone 14 to operate in several modes. One mode allows the phone to act as a passive tag, allowing a NFC terminal to read the information stored in the mobile phone 14." Pet., 26. But the "several modes" discussed here are not multiple modes of communication, but instead are a variety of protocols for NFC, which Petitioner identified as a single air interface. Pet., 26; *see also* Ex. 2008, ¶92. Similarly, Petitioner cites to *Barnett* ¶[0032]. Pet., 26. *Barnett* ¶[0032] discusses using a phone as a credit card and explicitly contemplates programming a device with credit card information, or store preference information, in advance of entering a store, so that the consumer can rely on NFC and further so that "the consumer does not have to scroll through menus or follow any other time consuming process simply to configure the mobile phone 14 each time they make a purchase." Ex. 2008, ¶92.

Further, *Barnett* explicitly discloses using NFC and other short-range capabilities of a mobile device as an ***alternative*** to cellular communication. Ex. 2008, ¶93. *Barnett* states that its disclosed "system 10 is adapted to provide information to a consumer's mobile phone 14 within a store without requiring the consumer to incur a mobile phone usage charge. That is, instead of using the data connection on a cellular carrier, the consumer uses a Wi-Fi network inside the store that has a connection to the Internet." *Barnett*, ¶[0016]. When discussing the various communication networks that a given device might use, *Barnett* goes on to state that a "Bluetooth-enabled mobile phone would enable a consumer to access a retailer's communication system using short-range radio frequency, rather than using the mobile phones [sic] cell phone capabilities, and charges." *Barnett*, ¶[0017]. *Barnett* even discloses that when using the mobile device for NFC, "[t]he mobile phone 14 may be programmed to be in an operating mode to learn about the current store using the NFC display 32." *Barnett*, ¶[0031]. *Barnett* thus contemplates a specific mode of operation when engaged in NFC and does not disclose that cellular connectivity is also possible or desired when the device is engaged in this mode. Ex. 2008, ¶93. For these reasons, *Barnett* does not disclose using multiple air interfaces concurrently, as claimed. Ex. 2008, ¶93.

Petitioner is also incorrect that a POSITA would have been motivated to modify the *Barnett-Byrne* system in the manner proposed. Petitioner, without support, alleges that a POSITA "would have understood that allowing the phone to continue to receive phone calls, even while NFC is in use, would have improved user experience." Pet., 27. Petitioner does not provide any detail or support regarding the alleged "safety and convenience concerns" that allegedly would have motivated a POSITA, and Petitioner does not explain how a user allegedly would have benefitted from talking on the phone while also browsing in-store information generated based on proximity. Ex. 2008, ¶94. Further, Petitioner's discussion of permitting continued cellular connectivity to provide "flexibility to access the internet via cellular service in the event the in-store Wi-Fi network is down" (Pet., 28) does not establish that a user would have engaged in such cellular service while also concurrently utilizing the identified first air interface, NFC, as it instead contemplates using two air interfaces, cellular and Wi-Fi, as alternatives. Ex. 2008, ¶94.

In contrast to Petitioner's unsupported conclusions, a POSITA would have understood that there are advantages to single-mode communication, without concurrent use of air interfaces. Ex. 2008, ¶95. For example, a POSITA would have understood, particularly in light of *Barnett*'s disclosures, that single-mode communication would let the user avoid charges associated with unnecessary use of redundant cellular connectivity, when short-range communication modes are available. *Barnett*, ¶¶[0016], [0017]; *see also* Ex. 2008, ¶95. If the device is engaged in back-up cellular communications, then the charges would still be incurred. Additionally, a POSITA would have understood, and Petitioner admits (Pet., 27), that cellular service can be unavailable. Ex. 2008, ¶95.

Moreover, *Barnett*'s system is designed to be used inside of stores, an environment that was known to have limited cellular reception. *See Barnett*, ¶[0005] ("A technique is provided for providing information to a customer within a store."). Continuous efforts by a device to connect to a cellular network, while that device was indoors, can drain the device's battery and detract from *Barnett*'s in-store experience. Ex. 2008, ¶96. Exclusively relying on an available short-range communications mode, such as the storewide NFC disclosed in *Barnett*, would have avoided needless efforts to connect to a potentially weak and redundant cellular network, thus preserving battery life. Ex. 2008, ¶96. Limiting a device to a single communication mode at a time also decreases the risk of signal interference or disruption, hacking, and/or other privacy intrusions. Ex. 2008, ¶96. All of these concerns would have been important to a POSITA when utilizing a mobile device during, for example, a financial transaction. Ex. 2008, ¶96.

For this reason, Ground 1 fails to disclose and would not have rendered obvious claim limitations 1[d] and 11[e], and as a result, Ground 1 does not disclose and would not have rendered obvious independent claims 1 and 11, and all dependent claims. Ex. 2008, ¶97. Further, because Petitioner relies solely on its analysis of claim limitation 1[d] in the Ground 2 analysis of claim limitations 16[d] (Pet., 47) and 18[e] (Pet., 49), Ground 2 fails to disclose and would not have rendered obvious independent claims 16 and 18, and all dependent claims. Ex. 2008, ¶97. Ground 3, which is directed only to dependent claims 4, 10, and 14, does not alter this analysis or conclusion.

B. Petitioner's Ground 2 Fails Because the Claims Would Not Have Been Obvious in View of *Barnett*.

Independent claims 16 and 18 are addressed in Ground 2, and Petitioner alleges that *Barnett* alone would have rendered obvious those claims. Pet., 4. Although Petitioner addresses claims 16 and 18 in separate Ground 2, Petitioner relies on its Ground 1 assertions for claim limitations 16[b] and 18[c]. That is, Petitioner addresses claim limitations 16[b] and 18[c] by stating that "Barnett discloses this limitation for the same reasons as discussed for limitation [1.b].” Pet., 46 (addressing claim limitation 16[b]) 49 (addressing claim limitation 18[c]). For the reasons set forth above in § VI.A.1 with respect to limitation 1[b], Ground 2 fails to disclose and would not have rendered obvious claim limitations 16[b] and 18[c]. Ex. 2008, ¶¶99-100.

Additionally, Petitioner relies on its Ground 1 assertions for claim limitations 16[d] and 18[e]. That is, Petitioner addresses claim limitations 16[d] and 18[e] by incorporating its analysis of claim limitation 1[d]. Pet., 47 (addressing claim limitation 16[d]), 49 (addressing claim limitation 18[e] by reference to claim limitation 16[d]). For the reasons set forth in § VI.A.2 with respect to limitation 1[d], Ground 2 fails to disclose and would not have rendered obvious claim limitations 16[d] and 18[e]. Ex. 2008, ¶¶101-102.

VII. CONCLUSION

For the foregoing reasons, institution should be denied.

Dated: November 14, 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 5,495 which is less than the 14,000 allowed under 37 CFR § 42.24(b)(1).

Dated: November 14, 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 2008 – 2014** were served in their entirety on November 14, 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:

Naveen Modi
naveenmodi@paulhastings.com

Daniel Zeilberger
danielzeilberger@paulhastings.com

Quadeer Ahmed
quadeerahmed@paulhastings.com

Alexa Lowman
alexalowman@paulhastings.com

Maksim Mints
maksimmints@paulhastings.com

Service email
PH-Google-Telcom-IPR@paulhastings.com

Date: November 14, 2025

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