

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

FINTIV, INC.,
Patent Owner.

IPR2023-00399
Patent 9,208,488 B2

Before MICHAEL R. ZECHER, GEORGE R. HOSKINS, and
JULIET MITCHELL DIRBA, *Administrative Patent Judges*.

DIRBA, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

On December 22, 2022, Apple Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–22 of U.S. Patent No. 9,208,488 B2 (Ex. 1001, “the ’488 patent”). Paper 2 (“Pet.”). Fintiv, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).¹

An *inter partes* review may not be instituted unless “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

Having reviewed the parties’ papers and the evidence of record, we determine that Petitioner has shown a reasonable likelihood it will prevail in establishing the unpatentability of at least one challenged claim. Accordingly, we institute an *inter partes* review.

I. BACKGROUND

A. Related Matters

The parties indicate that the ’488 patent has been asserted in *Fintiv, Inc. v. PayPal Holdings, Inc.*, 6:22-cv-00288 (W.D. Tex.). Pet. 1; Paper 4 (Patent Owner Mandatory Notices), 1.

Petitioner also identifies IPR2023-00398, in which Petitioner challenges claims 1–22 of U.S. Patent No. 10,438,196, which is related to the ’488 patent. Pet. 1. Concurrently with this Decision, we issue a decision instituting an *inter partes* review in that proceeding.

B. The Petition’s Asserted Ground

Petitioner asserts the following ground of unpatentability (Pet. 5–83):

¹ Although the Preliminary Response was filed on April 12, 2023, one day after its deadline, we accorded it a filing date of April 11, 2023. Paper 7.

Claim(s) Challenged	35 U.S.C. ² §	Reference(s)/Basis
1–22	103(a)	Dill ³ , Vadhri ⁴ , Akashika ⁵

In support, Petitioner relies on the testimony of Henry Houh, Ph. D. (Ex. 1003). Patent Owner relies on the testimony of Michael I. Shamos, Ph.D. (Ex. 2001) to support the arguments in its Preliminary Response.⁶

C. The '488 Patent

The '488 patent is titled “Using a Mobile Wallet Infrastructure to Support Multiple Mobile Wallet Providers,” and the application leading to this patent was filed on November 19, 2012, claiming priority to an application filed on November 21, 2011. Ex. 1001, codes (22), (54), (60).

The '488 patent is directed to “performing a transaction using a third party mobile wallet.” Ex. 1001, code (57). Figure 1 (reproduced below) “illustrates a monetary transaction system architecture in which embodiments [of the '488 patent] . . . may operate.” *Id.* at 2:64–65.

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. § 103 effective March 16, 2013. Because the challenged patent was filed before March 16, 2013, we refer to the pre-AIA version of § 103.

³ US 2009/0265272 A1, published Oct. 22, 2009 (Ex. 1005).

⁴ US 2010/0133334 A1, published Jun. 3, 2010 (Ex. 1006).

⁵ US 2009/0217047 A1, published Aug. 27, 2009 (Ex. 1007).

⁶ Most of Patent Owner’s citations to Exhibit 2001 refer to the wrong paragraphs of Dr. Shamos’s declaration. To provide guidance to the parties, we have attempted to locate, consider, and (as appropriate) address the paragraphs of Exhibit 2001 that are germane to the issues discussed. However, the Board is not obligated to search the record for evidence to support a party’s arguments, and the parties should assume that the Board will not do so in its final written decision.

Platform Functional Architecture

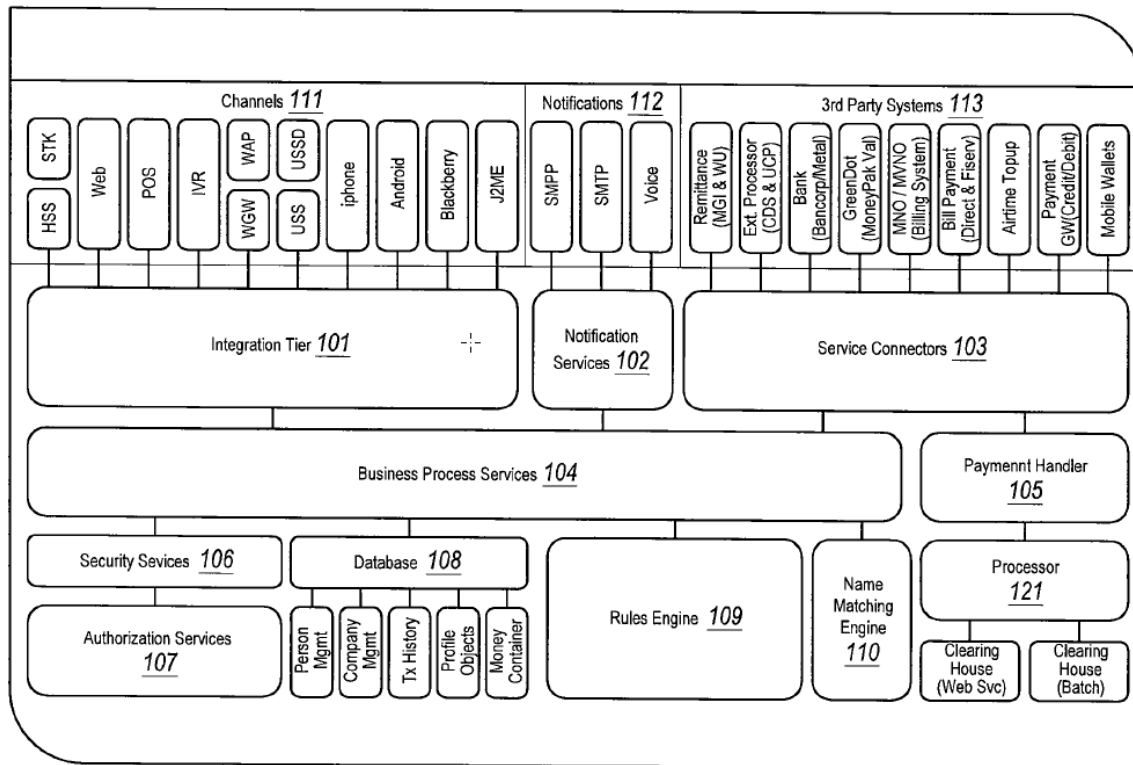


FIG. 1

As shown above, Figure 1 provides an exemplary platform functional architecture that includes (among other things) integration tier 101, notification services 102, service connectors 103, payment handler 105, security services 106, authorization services 107, database 108, rules engine 109, channels 111, notifications 112, third party systems 113, and processor 121. *Id.* at 9:45–46, Fig. 1. “Integration tier 101 is configured to manage mobile wallet sessions and maintain integrity of financial transactions,” and it can include “communication mechanisms to accept messages from channels 111.” *Id.* at 9:46–51; *see also id.* at Fig. 1 (showing various channels 111 including, for example, “Web,” “POS [point of sale],” “iphone,” and “Android”). “Notification services 102 is configured to send various notifications through different notification channels 112, such as, for

example, Short Message Peer-to-Peer (‘SSMP’) for Short Messaging Service (‘SMS’) and Simple Mail Transfer Protocol (‘SMTP’) for emails.” *Id.* at 9:57–62. “Service connectors 103 are a set of connectors configure[d] to connect to 3rd party systems 113.” *Id.* at 9:64–65. “Payment handler 105 is configured to wrap APIs⁷ of different payment processors, such as, for example, banking accounts, credit/debit cards or processor 121,” and “exposes a common API to facilitate interactions with many different kinds of payment processors.” *Id.* at 10:4–9. “Security services 106 are configured to perform subscriber authentication” (*id.* at 10:10–11), and “[a]uthorization services 107 are configured to perform client authorization, such as, for example, using a database-based Access Control List (‘ACL’) table” (*id.* at 10:11–14). Database 108 manages accounts, transaction histories, and customer profiles (*id.* at 10:15–21), and rules engine 109 “enforce[s] business constraints, such as, for example, transactions and platform license constraints” (*id.* at 10:24–26). Finally, “[t]ransaction processor 121 is configured to manage financial accounts and transactions,” and it “can be used to hold, load, withdraw and deposit funds to mobile wallet accounts.” *Id.* at 10:30–33.

D. Challenged Claims

Petitioner challenges claims 1–22 of the ’488 patent. Of these, claims 1, 11, and 22 are independent, and for purposes of this Decision, claim 1 is representative. Claim 1 recites:

[1.0] A computing system for facilitating management of a mobile wallet, including:

⁷ The ’488 patent does not appear to define “API.” We understand it to mean “Application Program Interface.” *See* Ex. 1006 ¶ 48.

[1.1] one or more processors;

[1.2] system memory;

[1.3] [A] an integration tier configured to manage mobile wallet sessions with a mobile device and [B] including web services communication mechanisms for interfacing with a mobile wallet application installed on a hardware SIM^[8] card [C] as well as with a plurality of different device types over a plurality of different communication channels, [D] the integration tier being configured to receive binary and text messages from the mobile device;

[1.4] [A] a notification services engine configured to interface with the integration tier and [B] to send Short Message Peer-to-Peer (SSMP) messages, Short Messaging Service (SMS) messages and Simple Mail Transfer Protocol (SMTP) messages over the different communication channels to different devices, [C] including the mobile device, to interface with the mobile wallet application installed on the hardware SIM card;

[1.5] [A] service connectors that are each configured to connect the computing system to a different third party system, [B] each of the service connectors being configured as a separate module for integrating a corresponding external service to the computing system;

[1.6] a payment handler that exposes a common API for interacting with different payment processors;

[1.7] a security services engine that performs subscriber authentication utilizing a database-based Access Control List (ACL);

[1.8] a rules engine configured to enforce constraints on financial transactions performed with the mobile wallet application, the mobile wallet application being associated with a mobile wallet account; and

[1.9] one or more computer-readable storage media having stored thereon computer-executable instructions that are

⁸ According to the '488 patent, SIM refers to "subscriber identity module." Ex. 1001, 6:58–67.

executable by the one or more processors to cause the computing system to perform a transaction for a customer using the mobile wallet which is owned by another entity than the customer, comprising the following:

[1.10] [A] the computing system receiving communication from an agent terminal over one of a plurality of communication channels connected to the cloud-based transaction platform, [B] the agent communication indicating that a customer desires to perform a transaction comprising a mobile wallet transaction using a third party mobile wallet, [C] the mobile wallet transaction comprising at least one of a mobile wallet transfer in which funds are transferred from the mobile wallet of the customer to a third party mobile wallet, a mobile wallet withdrawal in which funds are withdrawn from the third party mobile wallet and provided to the customer, or a mobile wallet deposit in which funds are deposited into the third party mobile wallet;

[1.11] the computing system sending the agent communication to the third party mobile wallet platform;

[1.12] [A] the computing system determining whether the mobile wallet transaction comprises the mobile wallet withdrawal and [B] when the mobile wallet transaction is determined to comprise the mobile wallet withdrawal, generating and providing a perishable withdrawal code to the consumer, which is presented to the agent terminal to facilitate processing of the mobile wallet withdrawal;

[1.13] the computing system receiving communication from the third party mobile wallet platform confirming processing of the transaction, the transaction comprising at least one of the mobile wallet transfer, the mobile wallet withdrawal or the mobile wallet deposit; and

[1.14] the computing system sending communication to the agent terminal over one of a plurality of communication channels connected to the cloud-based

transaction platform, the communication indicating confirmation of the processing of the transaction.

Ex. 1001, 23:25–24:32 (reference numbers and letters added to show reference designations used by Petitioner).

II. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to the patent owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

The legal question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness.⁹ *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966). One seeking to establish obviousness based on more than one reference also must articulate sufficient reasoning with rational underpinnings to combine teachings. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

⁹ The current record does not include allegations or evidence of objective indicia of nonobviousness.

B. Level of Ordinary Skill in the Art

Petitioner asserts that the level of ordinary skill in the art corresponds to “a bachelor’s degree in electrical engineering, computer science, or equivalent training, and approximately two years of work experience in software development with a basic knowledge of accounting.” Pet. 4.

Petitioner also asserts that an ordinary artisan “would have had a working knowledge of mobile payment systems and techniques pertinent to the ’488 patent,” and that a “[l]ack of work experience can be remedied by additional education, and vice versa.” *Id.* at 3–4 (citing Ex. 1003 ¶¶ 21–23).

At this stage, Patent Owner does not address the level of ordinary skill in the art. *See* Prelim. Resp.

For purposes of this Decision, we determine that a person of ordinary skill in the art would have had “a bachelor’s degree in electrical engineering, computer science, or equivalent training, and approximately two years of work experience in software development with a basic knowledge of accounting” and “working knowledge of mobile payment systems and techniques,” as Petitioner proposes. Pet. 3–4. We are satisfied that this definition generally comports with the level of skill necessary to understand and implement the teachings of the ’488 patent and the asserted prior art. *See* Ex. 1003 ¶ 22; Ex. 2001 ¶ 35 (agreeing with this articulation of the level of ordinary skill).

To the extent the level of ordinary skill in the art is in dispute or makes a material difference in the obviousness analysis, the parties should brief their respective positions in this regard during trial.

C. Claim Construction

We interpret claim terms using “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b). Under the principles set forth by our reviewing court, the “words of a claim ‘are generally given their ordinary and customary meaning,’” as would have been understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

Petitioner proposes a construction for a phrase found in some of the dependent claims (i.e., “debiting the third party mobile wallet by the specified amount of funds”), but asserts that no other terms or phrases require a specific construction for this proceeding. Pet. 4–5. Patent Owner presents several claim construction arguments that apply to all claims. Prelim. Resp. 7–13. We address each of these arguments to provide guidance to the parties for the upcoming trial. If either party disagrees with our analysis, it should explain its position at trial.¹⁰

1. “mobile device”

All independent claims recite a “mobile device.” Patent Owner contends that the claimed “mobile device” is a “physical device that is mobile, such as a phone or tablet.” Prelim. Resp. 8–10 (citing Ex. 1001, 11:14–16, 12:7–12; Ex. 2001 ¶ 38). According to Patent Owner, the Board

¹⁰ The parties must comply with the Board’s procedural requirements when presenting arguments. *See, e.g.*, PTAB Consolidated Trial Practice Guide 73–75 (Nov. 2019) (“TPG”), *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

should construe this term in this proceeding because “the Petition (through its mappings) has implicitly raised the possibility that a ‘mobile device’ need not be a physical device, and need not even be mobile.” *Id.* at 8–9 (citing Pet. 21, 32).

At this stage, we agree with Patent Owner’s understanding of the term “mobile device,”¹¹ but we disagree that its construction leads to a deficiency in Petitioner’s contentions concerning Dill. As Patent Owner correctly notes (Prelim. Resp. 9), the Petition refers to “mobile device 125, 130” (Pet. 32; *see also id.* at 41, 58, 75), where Dill describes mobile *wallets* 125, 130 (*e.g.*, Ex. 1005 ¶ 53, Fig. 9). But, when discussing the first instance of the term “mobile device,” the Petition contends that Dill teaches depositing funds “using the sender’s mobile device configured to run the sender’s mobile wallet 125.” Pet. 21–22; *see also id.* at 6 (arguing that Dill’s “mobile device can execute a mobile wallet application” (quoting Ex. 1005 ¶ 10; citing Ex. 1005 ¶ 5)). As a result, the most reasonable understanding of the Petition is that the words “mobile device 125, 130” (*e.g.*, *id.* at 32) refer to Dill’s description of a mobile device *executing* a mobile wallet application that maintains mobile wallet 125, 130. Consequently, we do not agree that the Petition is premised on an understanding of the term “mobile device” that is materially different from the one articulated by Patent Owner.

For completeness and to help guide the parties’ efforts during trial, and based on the present record, we agree with Patent Owner’s positions that Dill’s mobile wallets 125, 130 are not themselves *devices* per claim 1, and

¹¹ Patent Owner’s construction generally accords with the term’s plain and ordinary meaning and is supported by the Specification. *See, e.g.*, Ex. 1001, 11:14–16, 12:7–12 (identifying a phone and a tablet as examples).

that Dill’s mobile network operator 120 is not *mobile* per claim 1. *See* Prelim. Resp. 9–10.

2. *“mobile wallet application”*

Each independent claim recites a “mobile wallet application.” Patent Owner contends that the “mobile wallet application” is a “wallet application installed on a SIM card or elsewhere on a mobile device.” Prelim. Resp. 10–11.

In this proceeding, we need not address Patent Owner’s proposed construction of this term. It does not matter whether a “mobile wallet application” as a general matter must be “installed on a SIM card or elsewhere on a mobile device” (Prelim. Resp. 10) because each claim of the ’488 patent includes an additional limitation that specifically requires the “mobile wallet application” to be “installed on the hardware SIM card.” Ex. 1001, 23:43–44 (claim 1), 26:41–43 (claim 11), 29:17–19 (claim 22).

3. *“mobile wallet” and “debiting the third party mobile wallet by the specified amount of funds”*

The term “mobile wallet” appears in every claim, usually in the context of a larger term, such as “mobile wallet sessions,” “mobile wallet application,” or “third party mobile wallet.” The phrase “debiting the third party mobile wallet by the specified amount of funds” appears only in dependent claims 8–10 and 19–21.

Petitioner does not propose a construction for the term “mobile wallet,” but does construe the phrase found in the dependent claims. Pet. 4–5. Specifically, Petitioner asserts that an ordinary artisan “would have understood ‘debit the mobile wallet by the specified amount of funds’ [] include[s] ‘transferring the specified amount of funds from the stored value

on a mobile device.”” *Id.* at 5 (emphasis omitted). According to Petitioner, “‘stored value’ in mobile wallets is well-known and refers to a value stored on a mobile device (such as in secure memory).” *Id.* (citing Ex. 1003 ¶ 45). Petitioner further contends that the ’488 patent refers to this type of mobile wallet account. *Id.* at 4–5 (citing Ex. 1001, 2:32–36, 9:9–19; Ex. 1003 ¶¶ 43–45).

Patent Owner responds that Petitioner’s proposal is an indirect construction of the term “mobile wallet” that limits it to a stored value account. Prelim. Resp. 15–16 (emphasis omitted). In addition, Patent Owner argues that the Petition is deficient because Petitioner fails to show that Dill discloses this type of mobile wallet. *Id.* at 16; *see id.* at 16–18 (arguing that Dill’s mobile wallets 125, 130 instead reside within the mobile network operator).

On this record, we preliminarily determine that the term “mobile wallet” is a stored value account or prepaid access account that allows its owner to pay for goods and services. This construction is based on the Specification’s express definition of this term:

The term “mobile wallet” or “mobile wallet account” refers to a stored value account or prepaid access account (PPA) that allows the owner (or “subscriber”) to pay for goods and services on the mFS platform from his or her mobile wallet account.

Ex. 1001, 9:9–13; *see id.* at 6:30–35 (“mFS” refers to “mobile financial services”). Our construction is also consistent with the construction recently adopted by a district court. *See Fintiv, Inc. v. PayPal Holdings, Inc.*, 6:22-cv-00288, Dkt #60 (W.D. Tex.) (claim construction order; included in the record as Exhibit 3002). At this stage, we discern no need to construe the larger phrase identified by Petitioner.

We disagree with Patent Owner’s argument that the Petition is deficient (*see* Prelim. Resp. 16–18) for two reasons. First, Patent Owner’s argument is premised on a misunderstanding of the construction advanced by Petitioner. Patent Owner assumes that Petitioner seeks to *limit* the term “mobile wallet” to a stored value account on a mobile device (*see id.* at 15–16), but at most, Petitioner contends that a “mobile wallet” “*include[s]*” a stored value account on a mobile device (Pet. 5 (emphasis added)). Petitioner does not require the “mobile wallet” to be a stored value account. As a result, we do not agree that Petitioner needs to show that Dill discloses a stored value account.

Second, on this record, we determine that Petitioner has sufficiently shown that Dill discloses the claimed “mobile wallet.” *See also infra* § II.E.1.a, c, i. We observe that Patent Owner does not address the proper construction of the term “mobile wallet” or argue that Petitioner fails to make a sufficient showing for the “mobile wallet” actually required by the claims. *See* Prelim. Resp. 16–18. This is particularly notable because the district court provided its construction for the term “mobile wallet” several months before Patent Owner filed the Preliminary Response.¹² We apply our construction of the term “mobile wallet” in our analysis below.

4. “*third party mobile wallet*”

Each independent claim recites a “third party mobile wallet.” Patent Owner contends that the “third-party mobile wallet” is a “mobile wallet

¹² Although the district court issued its order on January 9, 2023, Patent Owner did not submit that order to the Board with its Preliminary Response, as instructed by our Trial Practice Guide. *See* TPG 47 (“Parties should submit a prior claim construction determination by a federal court or the ITC in an AIA proceeding as soon as that determination becomes available.”).

provided by a provider *other than* the provider of the cloud-based transaction platform.” Prelim. Resp. 12–13 (citing Ex. 1001, 7:3–7, 6:51–54, 17:51–63; Ex. 2001 ¶¶ 45–47).

We generally agree with Patent Owner’s understanding of the term “third party mobile wallet.” The Specification provides an express definition for this term:

With respect to the entire description of FIG. 6, and as explained above, the term “mobile wallet” encompasses not only mobile wallets owned or managed by the mobile wallet platform, but also third party mobile wallets owned by third party mobile wallet providers or managed by third party mobile wallet platforms. *In contrast, the term “third party mobile wallet” refers only to third party mobile wallets owned by third party mobile wallet providers or managed by third party mobile wallet platforms.* Accordingly, cloud based transaction platform 601 may manage and process transactions using mobile wallets 605, which may be mobile wallets owned by cloud-based transaction platform 601 or mobile wallets owned by a third party mobile wallet provider.

Ex. 1001, 17:51–63 (emphasis added); *see also id.* at 7:3–7 (providing corollary definition for a “third party” mobile wallet application). Thus, for purposes of this Decision, we preliminarily determine that a “third party mobile wallet” must be owned or managed by an entity different than the one that owns or manages the “computing system” recited in the claims.

Patent Owner’s proposed construction uses slightly different language than our construction: Patent Owner refers to “provid[ing]” the wallet (rather than owning or managing it) and to the “cloud-based transaction platform” (rather than the “computing system”). We have altered the construction for three reasons: (1) the Specification’s definition refers to entities that “own[]” or “manage[]” the wallets, (2) the independent claims focus on the components and operation of the “computing system,” and

(3) the independent claims refer to the “cloud-based transaction platform” only twice (and only in the context of the “plurality of communication channels connected to the cloud-based transaction platform”). Nevertheless, we understand Patent Owner’s proposed construction to be substantially the same as our construction for purposes of evaluating Patent Owner’s arguments. In particular, even if we adopted the specific language used in Patent Owner’s proposed construction, we would still determine that Petitioner sufficiently shows that Dill teaches or suggests a third party mobile wallet for the reasons provided below (*see infra* § II.E.1.j).

In sum, we preliminarily construe the term “third party mobile wallet” as a mobile wallet that is owned or managed by an entity different than the one that owns or manages the “computing system” recited in the claims. We apply this construction in our analysis of the claims; however, as we explain below, we determine that Petitioner sufficiently shows that Dill teaches or suggests a third party mobile wallet. *See infra* § II.E.1.j.

D. Summary of Asserted Prior Art References

1. Dill (Ex. 1005)

Dill generally relates to “financial transfers” and, in particular, “to financial transfers utilizing a unique identifier to facilitate flexible payment options for the transaction.” Ex. 1005 ¶ 2. Figure 9 of Dill, reproduced below, illustrates an “exemplary system for making financial transfers according to one embodiment.” *Id.* ¶ 25.

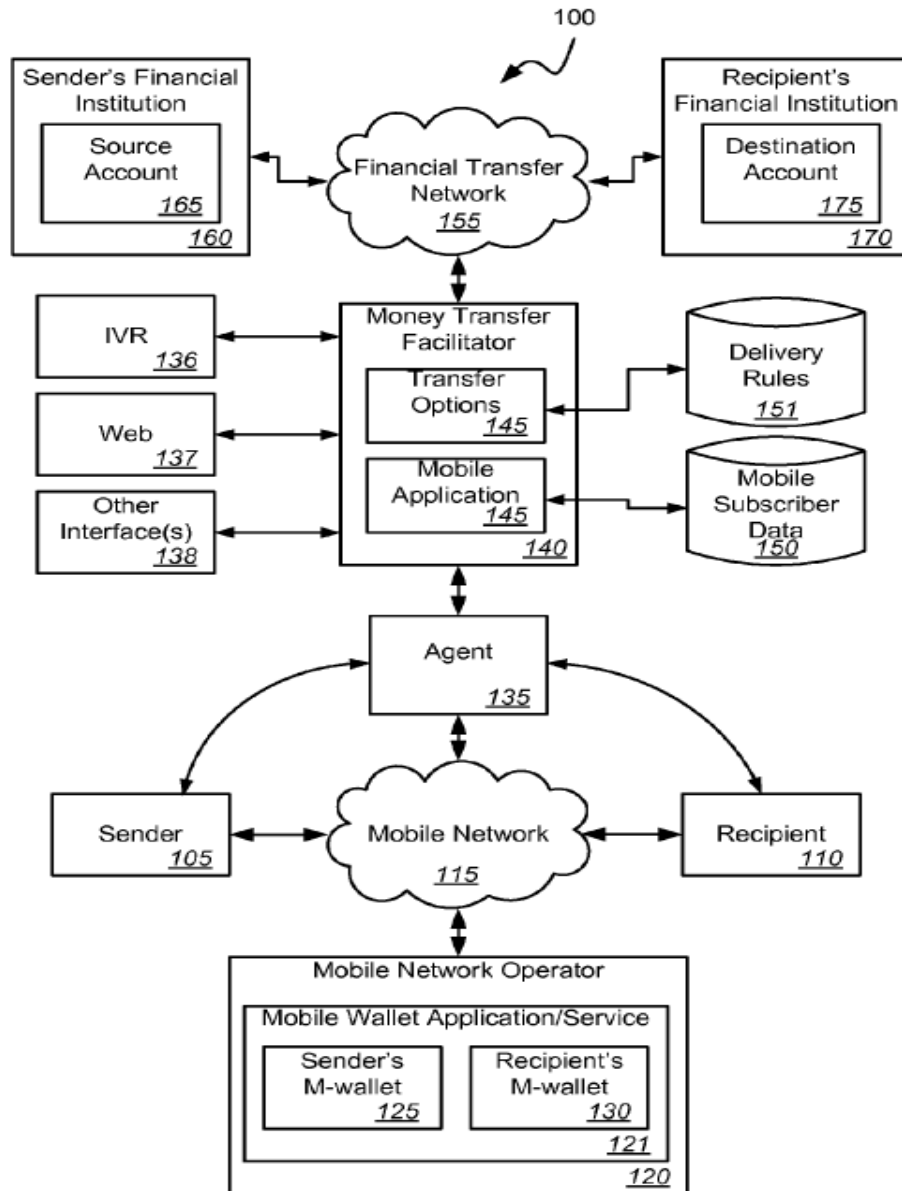


FIG. 9

Figure 9, reproduced above, illustrates system 100 that includes, among other things, sender 105 initiating a money transfer transaction (e.g., payment) to recipient 110 via mobile wallet application 121 of mobile network operator 120. *Id.* ¶¶ 49, 54; *see id.* ¶ 100 (stating that system 100 in Figure 9 “can comprise a system as described above with reference to [Figure 1] and can include some or all of the same components and may

perform some or all of the same functions”). Money transfer facilitator 140¹³ receives the money transaction information from mobile wallet application 121 via mobile network 115. *Id.* ¶ 100. Money transfer facilitator 140 is coupled to financial transfer network 155 such that it is capable of transferring money in accordance with the money transfer transaction between source account 165 in sender’s financial institution 160 and destination account 175 in recipient’s financial institution 170. *Id.* ¶ 49.

2. *Vadhri (Ex. 1006)*

Vadhri generally relates to “value holding accounts” and, in particular, “to systems and methods for accessing a value holding account” that “may hold anything considered valuable.” Ex. 1006 ¶¶ 1, 2. Figure 5 of Vadhri, reproduced below, illustrates a network diagram of “a client-server system, within which example embodiments may be deployed.” *Id.* ¶ 8.

¹³ Money transfer facilitator 140 includes two components that are both labeled using the same numerical identifier—transfer options module 145 and mobile application 145. Ex. 1005 ¶¶ 50, 101, 102, Fig. 9.

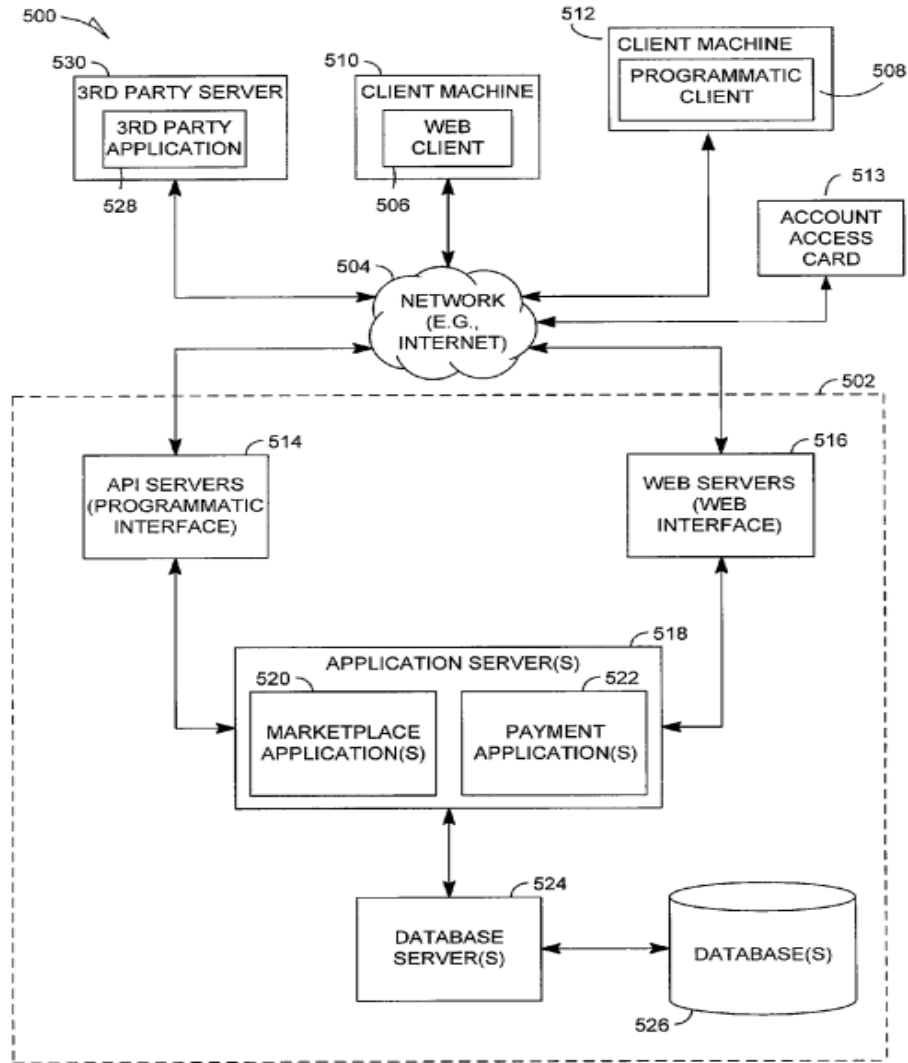


FIG. 5

Figure 5, reproduced above, illustrates client-server system 500 that includes networked system 502 that manages payment services between various applications and accounts. *Id.* ¶¶ 47–50. Networked system 502 includes, among other things, “Application Program Interface (API) server 514” that provides a “programmatic interface” between programmatic client 508 (e.g., a “seller application” such as “eBay”) executing on client machine 512 and “marketplace and payment applications 520 and 522” hosted by application server 518. *Id.* ¶¶ 48, 50, 52.

3. Akashika (Ex. 1007)

Akashika generally relates to “a service providing system, a service providing server and an information terminal device.” Ex. 1007 ¶ 3. More specifically, Akashika is directed to an access control system that promotes secure communications by protecting sensitive data such as “electronic money or important personal information.” *Id.* ¶¶ 7, 9. In one embodiment, Akashika discloses an “area management server” that includes “an access control list generation section generating an access control list.” *Id.* ¶ 17.

Figure 3 of Akashika, reproduced below, illustrates “an area management server according to [one] embodiment.” Ex. 1007 ¶ 29.

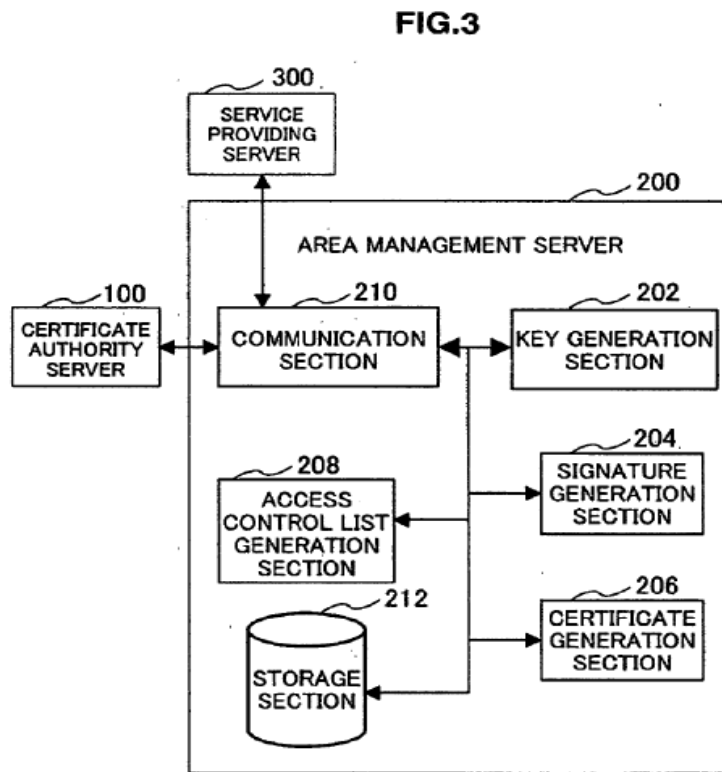


Figure 3, reproduced above, illustrates certificate authority server 100, area management server 200, and service providing server 300. *Id.* ¶¶ 51, 52, 57, 58. Area management server 200 includes, among other things, “access

control list generation section 208 [that] generates an access control list” identifying “the scope of . . . access right[s]” to client device 400 (not reproduced in Figure 3 above). *Id.* ¶ 60. The access control list identifies “[t]he access right[s]” (e.g., “read permission, write permission, restriction on frequency of access”) permitted for a secure area. *Id.* ¶ 62.

E. Obviousness Ground Based on Dill, Vadhri, and Akashika

Petitioner contends that the subject matter of claims 1–22 would have been obvious over Dill, Vadhri, and Akashika. Pet. 5–83. Patent Owner argues that Petitioner’s showing with respect to independent claims 1, 11, and 22 is insufficient, particularly in Petitioner’s reliance on Dill. Prelim. Resp. 15–35.

We have considered the parties’ arguments and the evidence presented at this stage, and we address them in the context of representative claim 1. For the reasons explained below, we determine that Petitioner has met the standard for institution by demonstrating a reasonable likelihood that it will prevail in showing that the subject matter of claim 1 would have been obvious over the combination of Dill, Vadhri, and Akashika. As a result, we institute *inter partes* review.

1. Independent Claim 1

a) Element 1.0

The preamble of claim 1 is: “A computing system for facilitating management of a mobile wallet, including” Ex. 1001, 23:25–26 (element 1.0). Petitioner contends that, to the extent the preamble is limiting, Dill discloses it. Pet. 16–17. According to Petitioner, Figure 9 of Dill illustrates system 100 that includes money transfer facilitator 140,

which manages financial transactions that use mobile wallets 125, 130. *Id.* (citing Ex. 1005 ¶¶ 5, 59, 100, Fig. 9; Ex. 1003 ¶¶ 70–76).

At this stage, Petitioner has made a sufficient showing that Dill teaches the claim’s preamble.¹⁴ Patent Owner’s Preliminary Response does not allege any deficiencies in this portion of the Petition.

b) Elements 1.1 & 1.2

Claim 1 recites “one or more processors” (Ex. 1001, 23:27 (element 1.1)) and “system memory” (*id.* at 23:28 (element 1.2)). For these elements, Petitioner points to Dill’s central processing units 210 (as the claimed “processors”) and storage devices 240 and/or working memory 280 (as the claimed “system memory”). Pet. 17–19 (citing Ex. 1005 ¶¶ 59–61, Fig. 2; Ex. 1003 ¶¶ 77–85).

At this stage, Petitioner has made a sufficient showing that Dill teaches elements 1.1 and 1.2. Patent Owner’s Preliminary Response does not allege any deficiencies in this portion of the Petition.

c) Elements 1.3A–1.3D

Claim 1 recites:

[1.3A] an integration tier configured to manage mobile wallet sessions with a mobile device and [1.3B] including web services communication mechanisms for interfacing with a mobile wallet application installed on a hardware SIM card [1.3C] as well as with a plurality of different device types over a plurality of different communication channels, [1.3D] the

¹⁴ We need not determine whether the preamble is limiting because Petitioner has sufficiently shown that Dill discloses this aspect of the claim. *See Vivid Techs.*, 200 F.3d at 803.

integration tier being configured to receive binary and text messages from the mobile device.

Ex. 1001, 23:29–36 (reference designations added). Petitioner relies on Dill for these claimed elements. Pet. 19–27.

As for element 1.3A, Petitioner contends that Dill’s transfer options module 145 teaches the “integration tier” required by the claim. Pet. 19–21 (citing Ex. 1005 ¶¶ 100–101, Fig. 9; Ex. 1003 ¶¶ 86–88; Ex. 1001, 9:45–63, Fig. 1). According to Petitioner, an ordinary artisan would have understood that Dill’s transfer options module 145 manages transactions with mobile wallets 125, 130, and “Dill specifically teaches transactions . . . using the sender’s mobile device configured to run the sender’s mobile wallet 125.” *Id.* at 21–22 (citing Ex. 1005 ¶¶ 51, 53, 55, 57, 77, 100–101, Figs. 5, 9; Ex. 1003 ¶¶ 88–91).

As for element 1.3B, Petitioner contends that Dill states that transfer options module 145 “facilitates communications between mobile wallets 125, 130 within a mobile wallet application 121” and can interface with a sender and recipient via web interface 137 (as well as other channels). Pet. 22–23 (citing Ex. 1005 ¶¶ 15, 47, 33, 51, 54, 101, 104, Fig. 9). Petitioner further contends that “Dill’s mobile wallet application is installed on a hardware SIM card,” and “SIM cards are commonly used to execute code for mobile transactions in mobile devices.” *Id.* at 23–24 (citing Ex. 1005 ¶ 106, claim 13;¹⁵ Ex. 1003 ¶¶ 95–98; Ex. 1010 ¶¶ 27–28).

As for element 1.3C, Petitioner contends that Dill’s “transfer options module 145 is ‘communicatively coupled with the one or more interfaces 136–138’ to various devices,” which teaches the claimed “communication

¹⁵ Although Petitioner cites to claim 1 of Dill, Petitioner quotes from Dill’s claim 13. We have corrected this typographical error.

channels.” Pet. 24–25 (citing Ex. 1005 ¶ 101, Fig. 9; Ex. 1003 ¶¶ 99–103). Petitioner also contends that mobile network 115 is another “communication channel[.]” *Id.* at 25 (Ex. 1005 ¶ 52).

As for element 1.3D, Petitioner contends that an ordinary artisan would have understood that transfer options module 145 is configured to receive binary messages from the mobile device because transfer options module 145 receives information from web interface 137. Pet. 26 (citing Ex. 1005 ¶¶ 33, 35, 101; Ex. 1003 ¶¶ 106–107). Petitioner further contends that an ordinary artisan would have understood that transfer options module 145 is configured to receive text messages from a mobile device. *Id.* at 27 (citing Ex. 1005 ¶ 104; Ex. 1003 ¶¶ 108–109); *see also id.* at 26 (citing Ex. 1005 ¶ 32; Ex. 1003 ¶¶ 104–105).

Patent Owner argues that Petitioner fails to show that Dill’s transfer options module 145 is “configured to manage mobile wallet sessions with a mobile device,” as required by element 1.3A. Prelim. Resp. 26–35. In addition, Patent Owner also argues that Petitioner fails to show that Dill’s mobile wallet application is “installed on a hardware SIM card,” as required by element 1.3B. *Id.* at 18–21.

At this stage, Petitioner has made a sufficient showing that Dill teaches, suggests, or renders obvious elements 1.3A–1.3D. We have considered Patent Owner’s arguments, but we determine the issues raised are best resolved at trial with the benefit of a full record. For the benefit of the parties, we address each of Patent Owner’s arguments in turn.

For element 1.3A, Patent Owner argues that Petitioner fails to sufficiently show that Dill’s transfer options module 145 is “configured to manage mobile wallet sessions with a mobile device,” as required. Prelim. Resp. 26–35. On this record, we do not agree. Dill’s transfer options

module 145 sends and receives transaction details between mobile wallets 125 and 130 within mobile wallet application 121, whereby each transaction corresponds to a mobile wallet session tied to the unique transaction identifier assigned by mobile network operator 120. Ex. 1005 ¶¶ 100–102, 105. Accordingly, at this stage, we are persuaded that Petitioner presents sufficient evidence that would support a finding that Dill’s transfer options module 145 is operable to manage mobile wallet sessions.

Patent Owner argues that an ordinary artisan would have understood a “financial transaction” to be different than a “session” (Prelim. Resp. 27 (citing Ex. 2001 ¶¶ 59, 63)), but even assuming this is true, Patent Owner’s argument is unavailing. The question is not whether the prior art is coextensive with the claim limitation, but rather whether the former teaches or suggests the latter. Dr. Shamos testifies that “an outcome of a ‘session’ may be that one or more ‘transactions’ occur,” and that “multiple transactions can occur during a session” (Ex. 2001 ¶ 63), which indicates that a session may be associated with a single transaction, and it is unclear whether (or why) Patent Owner contends that managing a transaction in such a situation would not qualify as managing the session. If Patent Owner elects to advance this argument at trial, a construction of the term “session” (or the phrase “manage mobile wallet sessions”) would be beneficial to identify (and substantiate) the distinction sought to be drawn.

In addition, Patent Owner argues that Petitioner fails to clearly map the claimed “mobile device.” Prelim. Resp. 28. As we have explained above (*supra* § II.C.1), we understand the Petition to contend that Dill discloses a mobile device executing a mobile wallet application that maintains a mobile wallet. *See, e.g.*, Pet. 6, 21–22. Contrary to Patent Owner’s understanding (*see* Prelim. Resp. 28; *see also id.* at 29–32), we do

not understand the Petition to contend that Dill's interfaces 136–138 teach the claimed “mobile device.” Rather, we understand the Petition to map the mobile device(s) of sender 105 and/or recipient 110 to the claimed “mobile device,” as Patent Owner also addresses. *See id.* at 32–35.

Patent Owner's argument that an ordinary artisan “would understand that Mobile Network Operator 115 [sic 120] (rather than transfer options module 145) would be the entity that managed the session” (Prelim. Resp. 32–34 (citing Ex. 2001 ¶¶ 61–63)) is unavailing. Patent Owner assumes that, if the mobile network operator 120 has *some* role in the management of the mobile wallet transaction, then transfer options module 145 *cannot* manage the transaction, but this assumption is unsubstantiated. Indeed, Dr. Shamos testifies that “the session with the mobile device of a sender 105 is managed by Mobile Operator Network 120” (Ex. 2001 ¶¶ 66–67), but he does not explain why this means that transfer options module 145 would not be configured to manage mobile wallet sessions with a mobile device.¹⁶

Finally, Patent Owner argues that Petitioner fails to show that Dill's mobile wallet application 121 is “installed on a hardware SIM card,” as required by element 1.3B. Prelim. Resp. 18–21. According to Patent

¹⁶ Patent Owner also argues that Dill's transfer options module 145 is analogous (at most) to payment handler 105 in the '488 patent. *See* Prelim. Resp. 34. This argument misses the mark. It does not matter which component from the Specification is most similar to Dill's transfer options module 145; rather, it matters whether Dill's transfer options module 145 meets the requirements imposed by the claim. Patent Owner does not explain, and based on the present record we do not discern, any reason why the role of Dill's transfer options module 145 within Dill's overall system does not correspond to *managing* mobile wallet sessions, as recited in claim 1.

Owner, “Dill’s mobile wallet application 121 is an application that is maintained by the mobile network operator 120, and is not even installed on the mobile device associated with sender (105) or receiver (110),” and “since Dill’s mobile wallet application 121 is not on a mobile device, it is clear that mobile wallet application 121 is not installed on a hardware SIM card on a mobile device as claimed.” *Id.* at 19–20 (emphasis omitted) (citing Ex. 2001 ¶ 53); *see also id.* at 20–21 (arguing that Dill’s other computer systems do not include a SIM card) (citing Ex. 2001 ¶ 54).

This argument is unavailing at this stage. Dill states that the mobile wallet application can be executed by the mobile device. *See* Ex. 1005 ¶¶ 10 (“The mobile device can execute a mobile wallet application.”), 94 (referencing “a cell phone or other mobile device executing the mobile wallet application 121”), claim 13 (reciting “a mobile device communicatively coupled with the mobile communications network and executing a mobile wallet application”) (*cited in* Pet. 6, 23, 32). Neither Patent Owner nor Dr. Shamos addresses these disclosures in Dill. *See* Prelim. Resp. 18–21; Ex. 2001 ¶¶ 56–58. Thus, we disagree with the premise of Patent Owner’s argument.

d) Elements 1.4A–1.4C

Claim 1 recites:

[1.4A] a notification services engine configured to interface with the integration tier and [1.4B] to send Short Message Peer-to-Peer (SSMP) messages, Short Messaging Service (SMS) messages and Simple Mail Transfer Protocol (SMTP) messages over the different communication channels to different devices, [1.4C] including the mobile device, to interface with the mobile wallet application installed on the hardware SIM card.

Ex. 1001, 23:37–44 (reference designations added). Petitioner relies on Dill for these elements. Pet. 27–32.

In particular, Petitioner contends that Dill’s “mobile application 145 and/or transfer options module 145” teaches the claimed “notification services engine” and interfaces with Dill’s transfer options module 145. Pet. 27–28 (citing Ex. 1005 ¶¶ 37, 69, 90, 100–101, Fig. 9; Ex. 1003 ¶¶ 111–115).¹⁷ According to Petitioner, Dill teaches that mobile application 145 notifies recipient 110 of the transaction over one of the communication channels, and notification messages can be SMS or SMTP messages. *Id.* at 29–30 (citing Ex. 1005 ¶¶ 50, 67, 69, 101, 104, Fig. 9; Ex. 1003 ¶¶ 116–120). Petitioner also contends that an ordinary artisan would have understood “SSMP” to be a typo that refers to “SMPP” (an industry standard protocol) and would have found it obvious to use this protocol to deliver messages. *Id.* at 30–31 (citing Ex. 1003 ¶¶ 121–123; Ex. 1014 ¶ 79; Ex. 1015 ¶ 4). Finally, Petitioner contends that these messages are sent to the mobile device in order to interface with the mobile wallet application installed thereon. *Id.* at 31–32 (citing Ex. 1005 ¶¶ 10, 82, 84, 94, 101, 106; Ex. 1003 ¶¶ 124–127).

At this stage, Petitioner has made a sufficient showing that Dill teaches, suggests, or renders obvious elements 1.4A–1.4C. Patent Owner’s

¹⁷ On this record, we question whether the Petition has shown that Dill’s transfer options module 145 teaches the claimed “notification services engine” required by element 1.4A. *See* Pet. 27–28; Ex. 1003 ¶¶ 111–115. Petitioner relies on transfer options module 145 to teach the claimed “integration tier.” *E.g.* Pet. 22. The claim requires “a notification services engine configured to interface with the integration tier” (Ex. 1001, 23:37–38), and Petitioner does not appear to substantiate a contention that Dill’s transfer options module 145 interfaces with itself (*see* Pet. 27–28).

Preliminary Response does not allege any deficiencies in this portion of the Petition.

e) Elements 1.5A & 1.5B

Claim 1 recites:

[1.5A] service connectors that are each configured to connect the computing system to a different third party system, [1.5B] each of the service connectors being configured as a separate module for integrating a corresponding external service to the computing system.

Ex. 1001, 23:45–49 (reference designations added). Petitioner contends that Dill discloses these elements. Pet. 32–35.

According to Petitioner, financial institutions 160, 170 and/or other third-party systems (“such as eBay, PayPal, [and] Western Union”) teach the claimed “different third party system[s],” and an ordinary artisan would have understood these to be connected to Dill’s money transfer facilitator 140 via “service connectors” because money transfer facilitator 140 can effect a transfer to these entities. Pet. 32–34 (citing Ex. 1005 ¶¶ 49, 59, 90; Ex. 1003 ¶¶ 128–133). Petitioner also contends that an ordinary artisan would have understood each service connector to be a separate module. *Id.* at 34–35 (citing Ex. 1005 ¶ 90, Fig. 9; Ex. 1003 ¶¶ 134–135).

At this stage, Petitioner has made a sufficient showing that Dill teaches elements 1.5A and 1.5B. Patent Owner’s Preliminary Response does not allege any deficiencies in this portion of the Petition.

f) Element 1.6

Claim 1 recites: “a payment handler that exposes a common API for interacting with different payment processors.” Ex. 1001, 23:50–51

(element 1.6). For this element, Petitioner relies on the combination of Dill and Vadhri. Pet. 35–37.

Petitioner contends that Vadhri’s API server 514 teaches the claimed “payment handler.” Pet. 36 (citing Ex. 1006 ¶¶ 52, 56; Ex. 1003 ¶¶ 139, 140); *see also id.* at 12–13 (citing Ex. 1003 ¶ 60). In addition, Petitioner contends that it would have been obvious to incorporate Vadhri’s API server into Dill’s system. *Id.* at 36–37; *see also id.* at 12–13. In particular, Petitioner states that “Dill recognizes the need for ‘flexible payment options for the transactions’ between different parties,” as Dill’s money transfer facilitator 140 interacts with various payment systems, and Vadhri teaches that its API server allows for increased flexibility. *Id.* at 35–37 (quoting Ex. 1005 ¶ 4; citing *id.* ¶ 49; Ex. 1006 ¶ 52; Ex. 1003 ¶¶ 136–137, 140–141); *see also id.* at 12–13 (citing Ex. 1003 ¶¶ 58, 61). Petitioner also states that “the use of APIs in payment systems was well known,” and an ordinary artisan would have understood that an API would have facilitated adding payment options. *Id.* at 35–36 (citing Ex. 1003 ¶ 138; Ex. 1008, 417); *see also id.* at 12–13 (citing Ex. 1003 ¶¶ 59, 61). Petitioner further states that the combination would have yielded “the predictable result of increased access for clients and an increase in available payment options.” *Id.* at 37 (citing Ex. 1003 ¶ 141); *see also id.* at 13 (citing Ex. 1003 ¶ 61).

At this stage, Petitioner has made a sufficient showing that it would have been obvious to combine Dill and Vadhri as proposed, and that the combination teaches element 1.6. Patent Owner’s Preliminary Response does not allege any deficiencies in this portion of the Petition.

g) Element 1.7

Claim 1 recites: “a security services engine that performs subscriber authentication utilizing a database-based Access Control List (ACL).”

Ex. 1001, 23:52–54 (element 1.7). For element 1.7, Petitioner relies on the combination of Dill and Akashika. Pet. 37–40.

Petitioner contends that Akashika’s management server 200 with its access control list generation section 208 teaches the claimed “security services engine.” Pet. 38–39 (citing Ex. 1007 ¶¶ 5, 10, 17, 62, 70, Fig. 3; Ex. 1003 ¶¶ 148–149). Petitioner further contends that it would have been obvious to incorporate these aspects of Akashika into Dill’s money transfer facilitator 140. *Id.* at 37–40; *see also id.* at 14–15. In particular, Petitioner states that an ordinary artisan would have understood that financial transfer systems require security, as shown by Dill, and that an access control list (ACL) provides security, as shown by Akashika. *Id.* at 37–38 (citing Ex. 1005 ¶¶ 6, 35; Ex. 1006 ¶ 56; Ex. 1007 ¶¶ 5, 7, 10; Ex. 1003 ¶¶ 144–146); *see also id.* at 14–15 (citing Ex. 1005 ¶¶ 4–7, 102–104; Ex. 1007 ¶ 7; Ex. 1003 ¶ 65). Petitioner also states that “the use of ACLs to control access to sensitive systems was well-known.” *Id.* at 38 (citing Ex. 1009 ¶¶ 185–186; Ex. 1003 ¶ 147); *see also id.* at 15 (citing Ex. 1003 ¶ 66). Petitioner further contends that Akashika’s ACL prevents unauthorized access and is “merely an extension of the rules already defined by Dill’s money transfer facilitator [140].” *Id.* at 39–40 (citing Ex. 1005 ¶¶ 102–105; Ex. 1007 ¶¶ 17, 117; Ex. 1003 ¶¶ 149–151); *see also id.* at 15 (citing Ex. 1003 ¶¶ 66, 68).

At this stage, Petitioner has made a sufficient showing that it would have been obvious to combine Dill and Akashika as proposed, and the combination teaches element 1.7. Patent Owner’s Preliminary Response does not allege any deficiencies in this portion of the Petition.

h) Element 1.8

Claim 1 recites: “a rules engine configured to enforce constraints on financial transactions performed with the mobile wallet application, the mobile wallet application being associated with a mobile wallet account.” Ex. 1001, 23:55–58 (element 1.8). Petitioner contends that Dill discloses element 1.8 because transfer options module 145 implements delivery rules 151 (such as money transfer facilitator defined rules) on financial transactions performed with mobile wallet application 121 (which is associated with mobile wallets 125, 130). Pet. 40–41 (citing Ex. 1005 ¶¶ 50, 87, 102, 104; Ex. 1003 ¶¶ 153–159).

At this stage, Petitioner has made a sufficient showing that Dill teaches element 1.8. Patent Owner’s Preliminary Response does not allege any deficiencies in this portion of the Petition.

i) Element 1.9

Claim 1 recites: “one or more computer-readable storage media having stored thereon computer-executable instructions that are executable by the one or more processors to cause the computing system to perform a transaction for a customer using the mobile wallet which is owned by another entity than the customer.” Ex. 1001, 23:59–65 (element 1.9). Petitioner contends that Dill teaches element 1.9. Pet. 42–43.

In particular, Petitioner contends that Dill discloses “computer-readable storage media” executable to perform operations that facilitate transactions between mobile wallets 125, 130. Pet. 42 (citing Ex. 1005 ¶¶ 53, 59–65, Fig. 2; Ex. 1003 ¶¶ 161–165); *see also id.* at 17–19 (addressing elements 1.1 and 1.2). Petitioner also contends that Dill’s transactions use a mobile wallet owned by an entity other than the customer,

pointing to mobile wallet service 121 and Dill’s teaching that mobile wallets need not be enrolled in the same mobile wallet service. *Id.* at 43 (citing Ex. 1005 ¶¶ 53, 57; Ex. 1003 ¶ 166).

At this stage, Petitioner has made a sufficient showing that Dill teaches element 1.9. Patent Owner’s Preliminary Response does not allege any deficiencies in this portion of the Petition.

j) Elements 1.10A–1.10C

Claim 1 recites:

[1.10A] the computing system receiving communication from an agent terminal over one of a plurality of communication channels connected to the cloud-based transaction platform, [1.10B] the agent communication indicating that a customer desires to perform a transaction comprising a mobile wallet transaction using a third party mobile wallet, [1.10C] the mobile wallet transaction comprising at least one of a mobile wallet transfer in which funds are transferred from the mobile wallet of the customer to a third party mobile wallet, a mobile wallet withdrawal in which funds are withdrawn from the third party mobile wallet and provided to the customer, or a mobile wallet deposit in which funds are deposited into the third party mobile wallet.

Ex. 1001, 23:66–24:12 (reference designations added). Petitioner relies on Dill and Vadhri for these elements. Pet. 43–48.

As for element 1.10A, Petitioner contends that Dill’s money transfer facilitator 140 receives communications from agent 135 (the claimed “agent terminal”) over a communications channel. Pet. 43–45 (citing Ex. 1005 ¶¶ 32, 51–52, 70, 90, Fig. 9; Ex. 1003 ¶¶ 168–173). Petitioner further contends that an ordinary artisan would have been motivated “to incorporate the cloud computing environment of Vadhri to Dill’s financial system to achieve the well-known benefits of cloud computing as this would

predictably result in a more flexible system.” *Id.* at 45–46 (citing Ex. 1006 ¶ 89; Ex. 1005 ¶ 4; Ex. 1003 ¶¶ 174–176; Ex. 1010 ¶¶ 67–69); *see also id.* at 13–14 (citing Ex. 1003 ¶¶ 62, 63, 68; Ex. 1010 ¶ 214; Ex. 1005 ¶¶ 60–61).

As for element 1.10B, Petitioner contends that Dill teaches that such a communication includes a transaction request involving mobile wallets 125, 130 “which may be externally controlled and maintained.” Pet. 46–47 (citing Ex. 1005 ¶¶ 57, 65, 69–70; Ex. 1003 ¶¶ 178–182).

As for element 1.10C, Petitioner contends that “Dill’s money transfer facilitator 140 is configured to conduct transactions between mobile wallets 125, 130 which may b[e] external mobile wallets enrolled under another entity,” and “[t]hese transactions may be ‘mobile-to-cash,’ ‘cash-to-mobile,’ and ‘mobile-to-mobile.’” Pet. 48 (citing Ex. 1005 ¶¶ 57, 65, Figs. 3–8; Ex. 1003 ¶¶ 183–185). Petitioner also contends that “it was well-known in the art to use a mobile wallet on a mobile device to withdraw funds from an account of the mobile device user.” *Id.* (citing Ex. 1003 ¶¶ 186–187; Ex. 1012, 5:44–55, Fig. 3).

Patent Owner contends that Petitioner fails to show that Dill describes a “third party mobile wallet,” as required by element 1.10B. Prelim. Resp. 22–26. According to Patent Owner, Dill teaches that the sender’s and recipient’s mobile wallets (i.e., mobile wallets 125, 130) are both part of the same mobile wallet service, and “Dill is wholly silent with regard to [mobile] wallets enrolled under another entity as alleged by the Petitioner.” *Id.* at 22–23 (citing Ex. 1005 ¶ 53, Fig. 1).

At this stage, Petitioner has made a sufficient showing that it would have been obvious to combine Dill and Vadhri as proposed, and that the Dill-Vadhri combination teaches elements 1.10A–1.10C. We have considered Patent Owner’s arguments, but we determine the issues raised are

best resolved at trial with the benefit of a full record. For the benefit of the parties, we address each of Patent Owner’s arguments in turn.

On this record, we disagree with Patent Owner’s assertion that Dill only teaches mobile wallets 125, 130 that are part of the same mobile wallet service 121 and maintained by the same network operator 120. *See* Prelim. Resp. 22–25. To the contrary, Dill expressly states that mobile wallets 125, 130 may be associated with different network operators. Ex. 1005 ¶ 52 (“In some cases, the mobile network and mobile network operator of the sender 105 may be different from the mobile network and mobile network operator of the recipient 110.”). In addition, Dill appears to describe transactions between wallets 125, 130 that are associated with different mobile wallet systems:

It need not be a closed-loop system that allows mobile remittances only for customers who are enrolled in the same mobile wallet system but rather allows entities that are unrelated to allow their enrolled customers to send a mobile money transaction to a customer either enrolled under another entity or not enrolled

Ex. 1005 ¶ 57 (*cited in* Pet. 47–48); *see, e.g., id.* ¶¶ 34 (determining whether the “recipient is a mobile subscriber for a mobile network operator with whom money transfer facilitator has a relationship and is enrolled in the operator’s mobile wallet”), 36 (“If the mobile network operator for the recipient has a relationship with the money transfer facilitator, a determination can be made as to whether the recipient is enrolled in a mobile wallet service of the mobile network operator.”).

Patent Owner’s arguments regarding sender 105 and recipient 110 being “unrelated” (*see* Prelim. Resp. 24) and its arguments regarding an unenrolled recipient (*see id.* at 25–26) are inapposite. We understand

Petitioner to rely upon Dill’s disclosure that a sender may send a transaction to a recipient “enrolled under another entity” (Ex. 1005 ¶ 57; *see also id.* ¶ 38 (*quoted in* Prelim. Resp. 25–26)) and, in the alternative, to rely upon Dill’s disclosure that mobile wallets can be associated with a mobile network operator different than the provider of Dill’s financial transfer system. *See* Pet. 47–48. Patent Owner does not squarely address these contentions or the portions of Dill (quoted above) that appear to support them.

k) Element 1.11

Claim 1 recites: “the computing system sending the agent communication to the third party mobile wallet platform.” Ex. 1001, 24:13–14 (element 1.11). Petitioner contends that Dill teaches element 1.11 because Dill’s system determines a destination for transferring funds by communicating the request with mobile wallet 130, which may be enrolled in an internal or external mobile wallet service. Pet. 49 (citing Ex. 1005 ¶¶ 54–55; Ex. 1003 ¶¶ 188–189).

At this stage, Petitioner has made a sufficient showing that Dill teaches element 1.11. Patent Owner’s Preliminary Response does not allege any deficiencies in this portion of the Petition.

l) Elements 1.12A & 1.12B

Claim 1 recites:

[1.12A] the computing system determining whether the mobile wallet transaction comprises the mobile wallet withdrawal and [1.12B] when the mobile wallet transaction is determined to comprise the mobile wallet withdrawal, generating and providing a perishable withdrawal code to the consumer, which

is presented to the agent terminal to facilitate processing of the mobile wallet withdrawal.

Ex. 1001, 24:15–22 (reference designations added). Petitioner relies on Dill and Vadhri for these elements. Pet. 49–52.

As for element 1.12A, Petitioner contends that Dill’s money transfer facilitator 140 receives a transfer request (e.g., a “mobile-to-mobile” transaction) and determines whether the funds are ready for transfer from the mobile wallet. Pet. 49–50 (citing Ex. 1005 ¶¶ 57–58, 67–69; Ex. 1003 ¶¶ 191–193).

As for element 1.12B, Petitioner contends that Dill’s money transfer facilitator 140 generates an assigned transaction identifier and provides it to mobile wallet application 121 in response to the transaction request. Pet. 50 (citing Ex. 1005 ¶¶ 67, 69, Fig. 3 (step 325); Ex. 1003 ¶¶ 194–196). Also, Petitioner contends that Vadhri’s temporary account code 103 teaches a “perishable withdrawal code” “because it is [a] securely generated account code that is used to increase security for various types of transactions including withdrawals and has a specified expiration.” *Id.* at 51 (citing Ex. 1006 ¶¶ 22–23, 27, 46; Ex. 1003 ¶¶ 197–200). Petitioner further contends that an ordinary artisan would have been motivated to include Vadhri’s temporary account code as Dill’s transaction identifier “for additional security by limiting the amount of time that the code is available.” *Id.* (citing Ex. 1006 ¶ 15; Ex. 1003 ¶ 201). In addition, Petitioner asserts that an ordinary artisan would have understood that, in the proposed combination, the temporary account code would be presented to the agent terminal to facilitate processing of the withdrawal. *Id.* at 51–52 (citing Ex. 1005 ¶¶ 65, 91; Ex. 1003 ¶ 202).

At this stage, Petitioner has made a sufficient showing that the Dill-Vadhri combination teaches elements 1.12A and 1.12B. Patent Owner's Preliminary Response does not allege any deficiencies in this portion of the Petition.

m) Element 1.13

Claim 1 recites: “the computing system receiving communication from the third party mobile wallet platform confirming processing of the transaction, the transaction comprising at least one of the mobile wallet transfer, the mobile wallet withdrawal or the mobile wallet deposit.” Ex. 1001, 24:23–27 (element 1.13). Petitioner relies on Dill for this element. Pet. 52. In particular, Petitioner contends that “Dill teaches that notification for a transaction may be sent to various parties, including messages from the mobile wallet 130 to the money transfer facilitator 140.” Pet. 52 (citing Ex. 1005 ¶¶ 57–58, 75–76, 90; Ex. 1003 ¶¶ 204–206).

At this stage, Petitioner has made a sufficient showing that Dill teaches element 1.13. Patent Owner's Preliminary Response does not allege any deficiencies in this portion of the Petition.

n) Element 1.14

Claim 1 recites: “the computing system sending communication to the agent terminal over one of a plurality of communication channels connected to the cloud-based transaction platform, the communication indicating confirmation of the processing of the transaction.” Ex. 1001, 24:28–32 (element 1.14). Petitioner relies the Dill-Vadhri combination for this element. Pet. 52–55.

Petitioner contends that Dill teaches sending a communication (e.g., a confirmation of the transaction) to the agent terminal over communication interfaces 136–138 (e.g., via a website) or other communication channels. Pet. 52–55 (citing Ex. 1005 ¶¶ 37, 51–52, 59, 70, 90, 98, 101; Ex. 1003 ¶¶ 208–211, 213–220). Petitioner also contends that, as discussed in connection with element 1.10A, it would have been obvious to incorporate the cloud computing environment of Vadhri in Dill’s financial system. *Id.* at 53 (citing Ex. 1005 ¶ 5; Ex. 1003 ¶ 212).

At this stage, Petitioner has made a sufficient showing that the Dill-Vadhri combination teaches element 1.14. Patent Owner’s Preliminary Response does not allege any deficiencies in this portion of the Petition.

o) Conclusion

For the reasons provided above, Petitioner has shown sufficiently (for purposes of institution) that Dill, Vadhri, and Akashika, in combination, teach or suggest each limitation of independent claim 1, and that an ordinary artisan would have been motivated to combine these references in the manner proposed by Petitioner. We have considered Patent Owner’s arguments, but those arguments are unavailing at this stage for the reasons explained above.

Accordingly, we are persuaded that Petitioner has shown a reasonable likelihood that it would prevail in establishing that the subject matter of claim 1 would have been obvious over Dill, Vadhri, and Akashika. As a result, we institute an *inter partes* review.

2. *Independent Claims 11 & 22 and
Dependent Claims 2–10 & 12–21*

Petitioner contends that the subject matter of independent claims 11 and 22 and dependent claims 2–10 and 12–21 would have been obvious over Dill, Vadhri, and Akashika. *See* Pet. 56–83. Petitioner offers analysis and evidence in support of its contentions. *See id.*

Other than its arguments presented regarding claim 1, Patent Owner does not address separately Petitioner’s arguments, analysis, or evidence for these remaining claims. *See* Prelim. Resp. Patent Owner’s arguments presented regarding claim 1, however, are unavailing at this stage of the proceeding for the reasons explained above. *See supra* § II.E.1.

III. CONCLUSION

As explained above, we determine that Petitioner has established a reasonable likelihood of prevailing in its challenge to at least one claim of the ’488 patent. Thus, we institute an *inter partes* review of all challenged claims on the sole ground asserted in the Petition.

Our factual findings, conclusions of law, and determinations at this stage of the proceeding are preliminary, and based on the evidentiary record developed thus far. Our final decision as to the patentability of challenged claims will be based on the record developed during trial, including any response timely filed by Patent Owner. Any arguments for patentability that are not raised by Patent Owner in a timely-filed response may be deemed forfeited.

IV. ORDER

It is:

ORDERED that an *inter partes* review is instituted on all of the challenged claims, i.e., claims 1–22 of the '488 patent, on the sole ground of unpatentability specified in the Petition (which is identified in the Table in Section I.B of this Decision); and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '488 patent shall commence on the entry date of this Decision, and notice is hereby given of the institution of a trial.

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Patent 9,208,488 B2

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