

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*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 318

On July 10, 2023, we instituted an *inter partes* review of claims 1–22 of U.S. Patent No. 9,208,488 B2 (Ex. 1001, “the ’488 patent”). Paper 9 (“Inst. Dec.”). Having considered the full record at trial, and for the reasons explained below, we determine that Petitioner has not shown that any of claims 1–22 of the ’488 patent are unpatentable.

I. BACKGROUND

A. *History of this Proceeding*

On December 22, 2022, Apple Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–22 of the ’488 patent (Paper 2; “Pet.”), and Petitioner submitted a declaration from Henry Houh, Ph.D. in support (*see* Ex. 1003). Fintiv, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 6; “Prelim. Resp.”) along with a declaration from Michael I. Shamos, Ph.D. (*see* Ex. 2001). On that record, we determined that Petitioner had demonstrated a reasonable likelihood that it would prevail in establishing the unpatentability of at least one challenged claim, and we instituted an *inter partes* review of all challenged claims on all asserted grounds. Inst. Dec. 40–41.

During trial, Patent Owner filed a Response (Paper 18, “PO Resp.”), Petitioner filed a Reply (Paper 22, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 24, “PO Sur-reply”). With its Response, Patent Owner submitted a supplemental declaration from Dr. Shamos (*see* Ex. 2003), a declaration of Kai Johnson (*see* Ex. 2016), and the deposition transcript of Dr. Houh (*see* Ex. 2026). With its Reply, Petitioner submitted a supplemental declaration from Dr. Houh (*see* Ex. 1021), as well as the deposition transcript of Dr. Shamos (*see* Ex. 1022) and Mr. Johnson (*see* Ex. 1023). With its Sur-Reply, Patent Owner submitted the transcript of a

second deposition of Dr. Houh (*see* Ex. 2027). There are no pending motions, and neither party moved to exclude any evidence.

An oral hearing was held on April 10, 2024, and a transcript of the hearing is included in the record. Paper 30 (“Tr.”).

B. 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 B2, which is related to the ’488 patent. Pet. 1. Concurrently with this Decision, we issue a final written decision in that proceeding.

C. The Ground

We instituted trial on the following ground of unpatentability:

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

¹ 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. Ex. 1001, code (22).

² US 2009/0265272 A1, published Oct. 22, 2009 (Ex. 1005).

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

⁴ US 2009/0217047 A1, published Aug. 27, 2009 (Ex. 1007).

D. 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.

Platform Functional Architecture

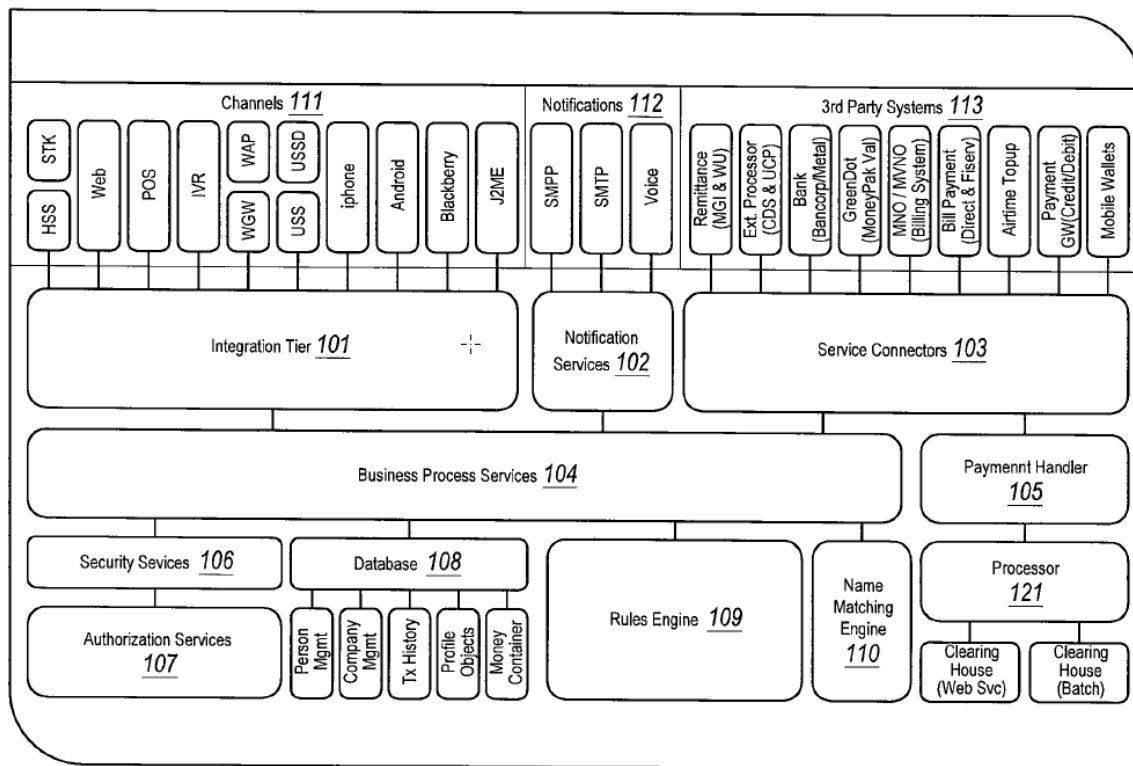


FIG. 1

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’)^[5] 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 APIs^[6] 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

⁵ Figure 1 appears to refer to this as “SMPP.” *See* Ex. 1001, Fig. 1.

⁶ The ’488 patent does not appear to define “API,” but we understand it to refer to an application program (or programming) interface. *See* Ex. 1006 ¶ 48; *accord* Inst. Dec. 5 n.7; Ex. 1003 ¶ 59; Ex. 1022, 54:17–19.

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.

E. Challenged Claims

Petitioner challenges all 22 claims of the ’488 patent. Of these, claims 1, 11, and 22 are independent. Claim 1 is illustrative:

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

[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^[7] 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

⁷ According to the ’488 patent, SIM refers to “subscriber identity module.” Ex. 1001, 6:58–67.

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 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

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are “such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). 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 obviousness or nonobviousness.⁸ *Graham v. John Deere Co. of Kansas 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*, 550 U.S. at 418.

In an *inter partes* review, the petitioner has the burden of proving unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e); *see also Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (stating that petitioner’s burden of persuasion “never shifts to the patentee”).

B. Level of Ordinary Skill in the Art

Our reviewing court has explained that “the level of skill in the art is a prism or lens through which a judge, jury, or the Board views the prior art and the claimed invention.” *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (citing *Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999)). “This reference point prevents these factfinders from using their own insight or, worse yet, hindsight, to gauge obviousness.” *Id.* In finding the level of ordinary skill in the art, we may consider various factors, including: “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Best Med. Int’l, Inc. v. Elekta Inc.*, 46 F.4th 1346, 1353 (Fed. Cir. 2022) (quoting

⁸ The record does not include allegations or evidence of objective indicia of obviousness or nonobviousness.

Daiichi Sankyo Co. v. Apotex, Inc., 501 F.3d 1254, 1256 (Fed. Cir. 2007)).
“The patent’s purpose can also be informative.” *Id.* (citation omitted).

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).

In the Institution Decision, we determined 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.
Inst. Dec. 9 (quoting Pet. 3–4). We stated 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.” *Id.* (citing Ex. 1003 ¶ 22; Ex. 2001 ¶ 35).

In its Response, Patent Owner “adopts the Board’s determination of the level of ordinary skill in the art.” PO Resp. 6. But, according to Patent Owner, a “working knowledge of ‘mobile payment systems and techniques’ should specifically include a working knowledge of ‘mobile wallets’” (*id.* at 6–7), which Dr. Houh lacks (*id.* at 7–10). From this, Patent Owner argues that Dr. Houh’s testimony should be afforded “little weight.” *Id.* at 10. Petitioner responds that Patent Owner’s argument “ignores Dr. Houh’s

testimony” and “is outside the accepted definition of a [person of ordinary skill in the art] in this case.” Pet. Reply 27–28 (citing Ex. 1003 ¶¶ 18–19). Petitioner also argues that “Patent Owner’s expert admitted that knowledge of mobile payment systems . . . includes knowledge of a mobile wallet.” *Id.* at 28 (citing Ex. 1022, 21:5–7).

Having considered the full record at trial, we maintain our preliminary finding regarding the level of ordinary skill in the art. *See* Inst. Dec. 9. In particular, based on the teachings of the ’488 patent and the asserted prior art, we are persuaded that an ordinarily skilled artisan would have had a working knowledge of “mobile payment systems and techniques” generally. The parties appear to agree with this level of skill. *See* PO Resp. 6; Pet. Reply 27–28; *cf.* Ex. 2003 ¶ 16 (providing a “clarif[ication]” of what the adopted level “entails”).⁹

Although the parties dispute whether Dr. Houh qualifies as an ordinarily skilled artisan (*see* PO Resp. 6–10; Pet. Reply 27–28), we need not resolve this argument. Even assuming that Dr. Houh possesses, at a minimum, ordinary skill in the art—as we have done in this Decision—we determine that Petitioner still fails to show that any of the challenged claims are unpatentable.

⁹ To the extent Patent Owner advocates a *different* level of ordinary skill in the art, we decline to adopt it. Patent Owner does not clearly identify what additional knowledge regarding mobile wallets is allegedly required, and Patent Owner does not sufficiently explain why this additional knowledge is required. *See* PO Resp. 6–7; *see also* Ex. 1022, 21:5–8 (Dr. Shamos testifying that knowledge of mobile payment systems generally includes knowledge of mobile wallets). Claim 1 is directed to a method for *managing* a mobile wallet, rather than the particulars of a mobile wallet itself.

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)).

The parties present various claim construction arguments. *See* Pet. 4–5; PO Resp. 10–29; Pet. Reply 1–9; PO Sur-reply 1–12. For purposes of this Decision, we do not need to reach most of these issues. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). As explained below, this Decision turns on whether Dill discloses elements 1.3A–C (Ex. 1001, 23:29–34) and similar limitations recited in the other independent claims (*see infra* § II.D). For that analysis, we need only provide a limited discussion of two of the parties’ claim construction arguments.

1. “hardware SIM card”

Each independent claim recites a “hardware SIM card.” *E.g.*, Ex. 1001, 23:32–33. Patent Owner proposes to construe this term as a “secure, tamper-resistant chip on a mobile device that is separate from the mobile device’s main memory that enables the mobile device to access the cellular network.” PO Resp. 16–19 (citing Ex. 2003 ¶¶ 30–33; Ex. 1001,

7:1–3, 9:26–44, 12:7–16; Ex. 2021, 4–7;¹⁰ Ex. 2022, 27, 52; Ex. 2023; Ex. 2024; Ex. 2025, 3). Petitioner responds that Patent Owner’s proposed construction of “hardware SIM card” is wrong because the intrinsic record does not define the term and does not support the limitations proposed by Patent Owner. Pet. Reply 7–9 (citing Ex. 1021 ¶¶ 32–35). Petitioner instead contends that an ordinarily skilled artisan “would have understood ‘hardware SIM card’ to mean a SIM card implemented in hardware.” *Id.* at 9 (citing Ex. 1021 ¶ 36). Patent Owner replies that the term “SIM card” is a term of art, and that Petitioner does not substantively respond to Patent Owner’s evidence on that point. PO Sur-reply 22 (citing Ex. 1021 ¶¶ 32–36; Ex. 2003 ¶¶ 30–33; Exs. 2021–2025).

We determine that we do not need to provide an explicit construction for the term “hardware SIM card” because the important points are undisputed. In particular, the parties agree that a “hardware SIM card” is a SIM card implemented in hardware rather than software. *See* Pet. Reply 9 (citing Ex. 1021 ¶ 36); Tr. 40:25–41:2 (Patent Owner’s counsel explaining that the language in its proposed construction was “to differentiate it from a software SIM card”); *see also* PO Resp. 16, 19 (asserting that the term refers to a specific type of hardware, namely a “chip” or a “smart card”) (citing Ex. 2003 ¶¶ 32–33). The parties also agree that an ordinarily skilled artisan would have known that a “SIM card” is a component in a mobile device involved in identifying and authenticating a user to a mobile network. *See* Tr. 30:23–31:3 (Petitioner’s counsel stating “a SIM card, just as known in the art . . . would allow the user to be able to access the mobile network”

¹⁰ Each page in Exhibit 2021 includes at least two page numbers. For clarity, we refer to the page number of the exhibit (shown in the bottom right corner), and we have adjusted Patent Owner’s citation accordingly.

given “the user’s identification information on it”), 39:24–40:2 (Patent Owner’s counsel stating that “I think everyone is in agreement that the critical aspect of what makes a SIM card a SIM card is that it can authenticate a mobile device to a wireless network”).

The evidence supports the parties’ understanding. The word “SIM” is an acronym for “subscriber identity module” (*see, e.g.*, Ex. 1001, 6:58–67; Ex. 2021, 5), and the record shows that a SIM is a specific component in a mobile device that is involved in identifying and authenticating a user to a mobile network (*see* Ex. 2003 ¶¶ 30–31; *see also e.g.*, Ex. 2021, 7 (stating that a SIM’s “primary function” is “to authenticate the subscriber to the network”); Ex. 2025, 3 (describing the SIM)).¹¹

Consequently, we determine that an ordinarily skilled artisan would have understood a “hardware SIM card” to be a hardware component in a mobile device that is involved in identifying and authenticating a user to a mobile network. We do not need to further construe the term, or determine whether the additional requirements proposed by Patent Owner are appropriate, because Petitioner fails to show that the prior art teaches or suggests the claimed “hardware SIM card,” as explained below. *See infra* § II.D.2.a (analyzing the parties’ substantive contentions).

¹¹ We do not cite to the testimony of Petitioner’s expert (Dr. Houh) because he does not address the meaning of “SIM” or “SIM card”; instead, he testifies that the ’488 patent does not define the term and notes his disagreement with Patent Owner’s proposed construction. *See* Ex. 1021 ¶¶ 32–36.

2. *“web services communication mechanisms for interfacing with a mobile wallet application . . . as well as a plurality of different device types over a plurality of different communication channels”*

Each independent claim requires the integration tier to include “web services communication mechanisms for interfacing with a mobile wallet application . . . as well as with a plurality of different device types over a plurality of different communication channels.” *E.g.*, Ex. 1001, 23:29–34. Patent Owner argues that “[t]his limitation requires that the ‘different communication channels’ (i) interface with the ‘web services communication mechanisms,’ and (ii) connect the integration tier to different device types outside of the integration tier.” PO Resp. 11–12 (emphasis omitted). Petitioner responds that “no specific construction is required” and argues that Patent Owner’s construction seeks to import limitations into the claim. Pet. Reply 5–7. Specifically, Petitioner contends that claim 1 does “not exclude communication channels that may not interface with the ‘web services communication mechanisms.’” *Id.* at 7 (citing Ex. 1021 ¶ 29). Patent Owner replies that the limitation itself “specifies that the ‘web services communication mechanisms’ included in the integration tier interface with a ‘plurality of different communication channels.’” PO Sur-reply 10.

We determine that this phrase requires no specific construction. *See* Pet. Reply 7 (“[N]o specific construction is required.”). The claim clearly specifies that the claimed “web services communication mechanisms” must serve as an interface between the integration tier and (1) the claimed mobile wallet application and, separately, (2) “a plurality of different device types over a plurality of different communication channels.” For purposes of this Decision, we assume that this interface may be direct or indirect. *See id.* at 6

(asserting that “communication channels that interface, even indirectly, with the ‘web services communication mechanisms’ still interface with the ‘web services communication mechanisms’”).

To the extent Petitioner argues that the “web services communication mechanisms” need not serve as such an interface (*see* Pet. Reply 5–7), Petitioner fails to sufficiently explain or substantiate this argument. Moreover, to the degree Petitioner asserts that there need be no association between the claimed “web services communication mechanisms” and the claimed “plurality of different communication channels” (*see id.*), Petitioner fails to sufficiently explain or substantiate this argument as well. In particular, we disagree with Petitioner’s and Dr. Houh’s apparent premise that the “plurality of different communication channels” may include *any* communication channel that leads to the integration tier, whether or not the web services communication mechanisms interfaces with anything over it. *See* Pet. Reply 6–7; Ex. 1021 ¶¶ 24–29. It is true, as Petitioner and Dr. Houh point out (*see id.*), that claim 1 is open to other communication channels being present in the computing system, due to the open-ended “including” transition term following the preamble. Ex. 1001, 23:26; *cf. Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997) (“[T]he open-ended term ‘comprising’ . . . is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim[.]”). However, the claim requires that the computing system must at least *include*, as an essential element of claim 1, “web services communication mechanisms for interfacing with a mobile wallet application . . . as well as with a plurality of different device types over a plurality of different communication channels.” Ex. 1001, 23:30–34.

We do not need to further address the meaning of this limitation because Petitioner fails to show that the prior art teaches or suggests it, as explained below. *See infra* § II.D.2.b (analyzing the parties’ substantive contentions).

D. 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 disputes Petitioner’s showing for the independent claims. PO Resp. 30–56.

For the reasons explained below, we determine that Petitioner fails to show that any of the challenged claims would have been obvious over Dill, Vadhri, and Akashika. For clarity and simplicity, we address only the dispositive limitations in independent claim 1, which are also present in the other challenged claims. For those limitations, Petitioner relies on Dill alone. *See* Pet. 19–25 (no reference to Vadhri or Akashika).

1. Summary of 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.

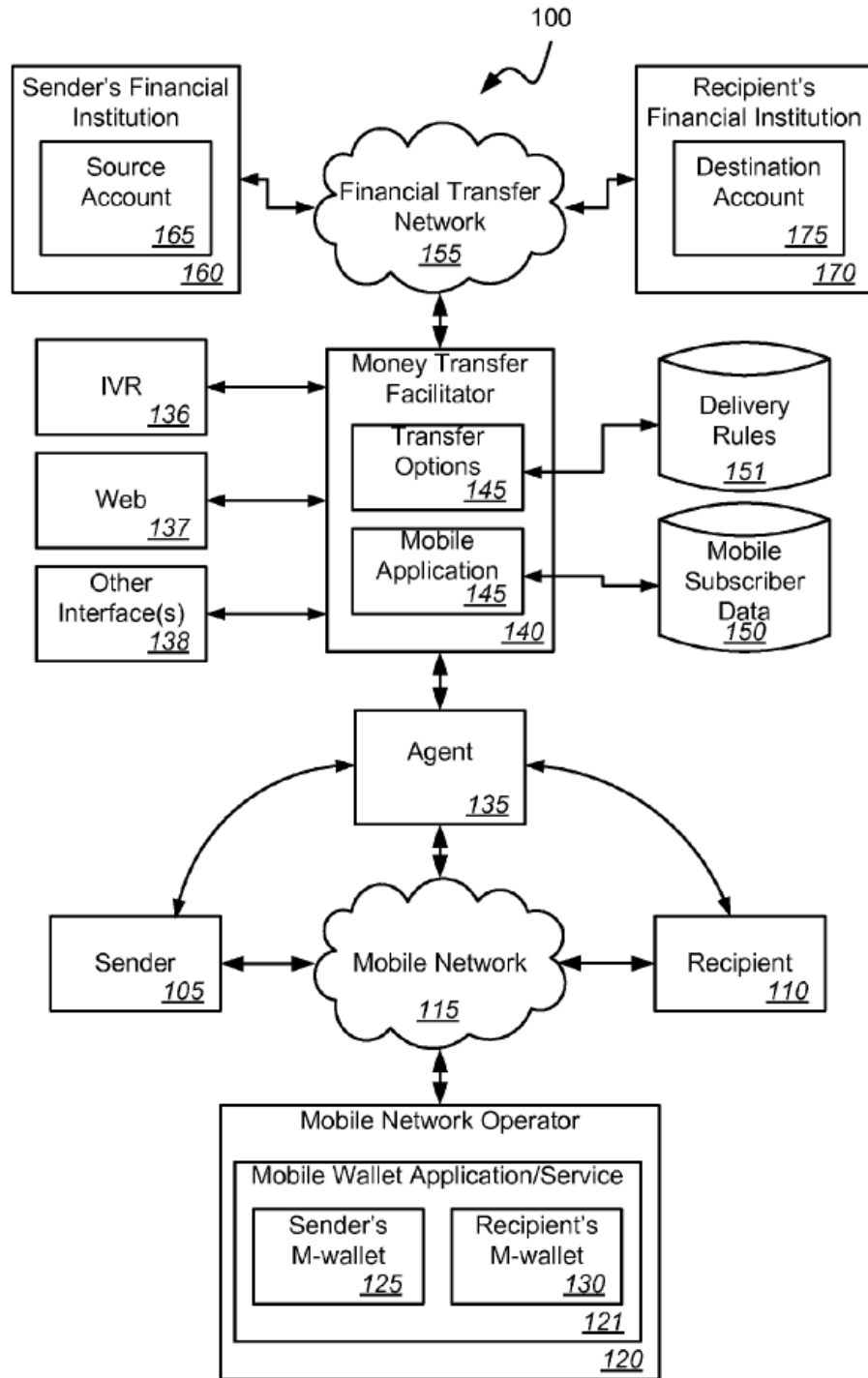


FIG. 9

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 140¹² may receive money transaction information from mobile wallet application 121 via mobile network 115 and agent system 135. Ex. 1005 ¶¶ 100–101. System 140 “can additionally or alternatively comprise one or more interfaces 136–138 for conducting money transfer transactions,” including Interactive Voice Response (IVR) interface 136, web interface 137, and other interfaces 138. *Id.* ¶ 101. Thus, “transfer options module 145 can be adapted to receive transaction information for a money transfer transaction from a sender 105 through at least one or [sic ‘of’] the interfaces 136–138, provide a notification of the transaction to a recipient of the transaction, and select one or more delivery options for completing the money transfer transaction.” *Id.*

Money transfer facilitator 140 is further 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. Ex. 1005 ¶ 49.

2. *Independent Claim 1*

Claim 1 recites:

[1.3A] an integration tier configured to manage mobile wallet sessions with a mobile device and [1.3B] including web

¹² 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.

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.

Ex. 1001, 23:29–34 (Petitioner’s reference designations added). Petitioner relies on Dill alone for these claim limitations. *See* Pet. 19–25.

Patent Owner argues, *inter alia*, that Petitioner fails to show claim 1 is unpatentable because Dill fails to teach (a) a mobile wallet application installed on a hardware SIM card, as required by element 1.3B (PO Resp. 30–35), and (b) an integration tier including “web services communication mechanisms for interfacing with a mobile wallet application . . . as well as with a plurality of different device types over a plurality of different communication channels,” as required by elements 1.3A–C (*id.* at 42–44).

For the reasons explained below, we agree with Patent Owner that Petitioner fails to make a sufficient showing for either of these requirements of the claim. As a result, Petitioner fails to show that claim 1 would have been obvious over Dill, Vadhri, and Akashika.

a) A Mobile Wallet Application Installed on a Hardware SIM Card

Element 1.3B recites “a mobile wallet application installed on a hardware SIM card” (Ex. 1001, 23:32–33), and Petitioner contends that Dill teaches this claim limitation (Pet. 23–24). Specifically, in the Petition, Petitioner asserts:

Dill’s mobile wallet application is installed on a hardware SIM card. Dill teaches “a mobile device communicatively coupled with the mobile communications network and executing a mobile wallet application.” Dill’s software instructions (including mobile wallet application) may

be implemented on any type of “machine-readable mediums suitable for storing electronic instructions” which a POSITA would have understood to include a hardware SIM card. As evidenced by Bykov, SIM cards are commonly used to execute code for mobile transactions in mobile devices. Thus, Dill teaches [1.3B].

Id. (alteration in original) (quoting Ex. 1005, claim 13;¹³ citing Ex. 1005 ¶ 106; Ex. 1003 ¶¶ 95–97; Ex. 1013 ¶¶ 27–28).

Patent Owner argues that neither Dill nor Bykov teaches a mobile wallet application installed on a hardware SIM card. PO Resp. 30–35. According to Patent Owner, “Dill never mentions a hardware SIM card,” and Petitioner’s reliance on Dill’s “boilerplate, catch-all phrase” that merely refers to “other types of machine-readable mediums” is insufficient. *Id.* at 32 (quoting Ex. 1005 ¶ 106; citing Ex. 2003 ¶ 38); *see id.* at 32–33 (citing cases in support). Patent Owner also argues that Bykov teaches a card “in SIM form,” rather than an actual SIM card, because Bykov’s card does not “identify the cellphone or a cellular network (or otherwise enable the cellphone to access the cellular network).” *Id.* at 33–35 (quoting Ex. 1013 ¶ 27; citing Ex. 1013 ¶¶ 2, 19, 21, 26, 33, 41, 48; Ex. 2003 ¶¶ 42–43).

Petitioner replies that the Petition showed that an ordinarily skilled artisan would have understood Dill’s machine-readable media “to include a hardware SIM card based on conventional teachings as represented by Bykov” and, therefore, “would understand that Dill teaches that the mobile wallet applications . . . would be installed on a hardware SIM card.” Pet. Reply 20–21 (citing Pet. 23–24; Ex. 1005 ¶ 106; Ex. 1013 ¶ 28; Ex. 1003 ¶¶ 96–97). According to Petitioner, Dr. Shamos (Patent Owner’s expert)

¹³ Petitioner cites to claim 1 of Dill, but quotes claim 13. We have corrected this typographical error. *Accord* Inst. Dec. 23 n.15.

“agrees that if a mobile device executes a mobile wallet over a cellular network, the mobile device has a SIM card for the mobile wallet.” *Id.* at 22 (citing Ex. 1022, 29:4–7, 40:9–10). Finally, Petitioner asserts that Patent Owner’s argument regarding Bykov is wrong because Patent Owner misunderstands both the requirements of claim 1 and the contentions in the Petition. *Id.* at 22–23 (citing PO Resp. 34).

In its Sur-reply, Patent Owner submits that Petitioner failed to address many of Patent Owner’s arguments, and it disagrees with Petitioner’s characterization of Dr. Shamos’s testimony. PO Sur-reply 23–24 (citing Ex. 1022, 29: 4–7; Pet. Reply 22; PO Resp. 30, 34–35).

Having considered the parties’ arguments and evidence, we find that Petitioner has *not* shown, by a preponderance of the evidence, that Dill discloses “a mobile wallet application installed on a hardware SIM card,” as required by element 1.3B. *See* Pet. 23–24. In particular, even assuming that Dill teaches installing a mobile wallet application *somewhere* on a mobile device (*see* Pet. 23),¹⁴ Dill does not teach installing it on *a hardware SIM card*,¹⁵ as specifically required by the claim.

Petitioner relies upon paragraph 106 of Dill (*see* Pet. 23), but that paragraph does not disclose this claim limitation (*see* Ex. 1005 ¶ 106). In relevant part, that paragraph of Dill simply states:

¹⁴ Patent Owner disagrees with this premise, arguing that Dill does not disclose a mobile device that includes a mobile wallet application. *See* PO Resp. 52–56. We need not resolve that dispute because, even assuming Petitioner’s premise (as we have done in this Decision), Petitioner still fails to show that the claims are unpatentable.

¹⁵ As noted above, a “hardware SIM card” is a hardware component in a mobile device that is involved in identifying and authenticating a user to a mobile network. *See supra* § II.C.1 (addressing meaning of term).

It should also be appreciated that *the methods described above* may be performed by hardware components or *may be embodied in sequences of machine-executable instructions*, which may be used to cause a machine such as a general-purpose or special-purpose processor or logic circuits programmed with the instructions to perform the methods. *These machine-executable instructions may be stored on one or more machine readable mediums, such as CD-ROMs or other type of optical disks, floppy diskettes, ROMs, RAMs, EPROMs, EEPROMs, magnetic or optical cards, flash memory, or other types of machine-readable mediums suitable for storing electronic instructions.* Alternatively, the methods may be performed by a combination of hardware and software.

Ex. 1005 ¶ 106 (emphases added). This teaches storing instructions on “other types of machine-readable mediums,” but it fails to teach storing instructions on a hardware SIM card, much less storing Dill’s mobile wallet application there. In short, Dill is silent with respect to this issue, and silence is not disclosure.

Notably, Petitioner does not contend (or show) that a mobile wallet application installed on a mobile device would *necessarily* be installed on a hardware SIM card. *See* Pet. 23–24; Ex. 1003 ¶¶ 95–97. Indeed, the record indicates that a mobile wallet application installed on a mobile device *could* instead be installed on a different component. *See, e.g.,* Ex. 1001, 7:1–3, 9:33–35 (identifying device memory as alternate component); Ex. 2021, 5 (describing SIM as the “smaller of two computer chips inside a GSM mobile handset”); *cf.* Pet. Reply 9 (distinguishing between hardware SIM cards and software ones). Thus, Petitioner fails to show that this claim limitation is inherent in Dill. *See PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014) (explaining that inherency requires a showing that “the limitation at issue necessarily must be present”).

Petitioner’s argument appears to be that Dill discloses the claim limitation because an ordinarily skilled artisan would have understood the machine-readable media in a mobile device to *include* a hardware SIM card (see Tr. 31:5–20, 35:15–21); however, this argument is not persuasive. Disclosure of a genus (i.e., machine-readable mediums) is not necessarily disclosure of a species (i.e., a hardware SIM card). See *Wasica Finance GmbH v. Continental Automotive Sys., Inc.*, 853 F.3d 1272, 1285–86 (Fed. Cir. 2017) (“It is well established that disclosure of a genus in the prior art is not necessarily a disclosure of every species that is a member of that genus.”) (*cited in* PO Resp. 33). Petitioner does not persuasively explain why Dill’s broad genus should be considered a disclosure of the species recited in the claim. See Pet. 23–24; Pet. Reply 20–23. Thus, even if we assumed that an ordinarily skilled artisan would have understood a hardware SIM card to be a type of machine-readable media in a mobile device, we still would not agree that Dill discloses installing instructions on a hardware SIM card.

Petitioner relies on Bykov as evidence that “SIM cards are commonly used to execute code for mobile transactions in mobile devices” (Pet. 23–24 (citing Ex. 1013 ¶¶ 27–28)), but this is unavailing for two reasons. First, we disagree with Petitioner’s apparent assertion that Bykov discloses a SIM card that executes code for financial transactions. The Bykov paragraphs cited by Petitioner state:

[T]he personal information exchange module may be in SIM form, which is accepted by a majority of cellular phones today.

...

In the example of a payment module, a module provided by a financial institution may execute sensitive code and store sensitive financial data with its appropriate security measures.

A user may obtain this module from their financial institution and plug into a SIM card slot (if the module is in SIM form) of their cellular phone and use the phone for financial transactions transparent to the main functionality of the phone.

Ex. 1013 ¶¶ 27–28. This passage of Bykov describes a module *in SIM form*, it does not state that its module *is a SIM card*. We credit Dr. Shamos’s testimony that an ordinarily skilled artisan would *not* have understood Bykov’s module to be a SIM card (*see* Ex. 2003 ¶ 42 (*cited in* PO Resp. 34)) because Dr. Shamos provides a detailed and logical explanation supported by citations to Bykov (*see id.* ¶¶ 39–43). Petitioner also does not appear to dispute this testimony. *See* Pet. Reply 22–23.¹⁶ Thus, we find that Bykov fails to describe installing a mobile wallet application (or any other financial software) on a SIM card.

Second, even if Petitioner’s assessment of Bykov were correct, a disclosure of this concept *in Bykov* does not show that *Dill discloses* it. Petitioner does not allege a combination of Dill and Bykov, or contend that Dill alone renders this claim limitation obvious. *See* Pet. 23–24; Pet. Reply 20–23. Moreover, even if Petitioner’s arguments could be read as

¹⁶ Petitioner’s argument that “claim 1 does not recite the use of a SIM card for a financial institution card over a cellular network” (Pet. Reply 22) is inapposite. We agree that the claim does not require a “financial institution card” or include other limitations regarding the SIM card’s use, but the claim does require a SIM card. The crux of Patent Owner’s argument is that Bykov’s “SIM form” module is not a SIM card. *See* PO Resp. 33–35.

including such a contention,¹⁷ we would still determine that Petitioner fails to prove its case. Petitioner does not identify (nor do we discern) a rationale to show that this claim limitation would have been obvious over Dill alone or in combination with Bykov. Stated differently, even if an ordinarily skilled artisan *could* have implemented Dill in this manner, Petitioner does not explain why an ordinary artisan *would have been motivated* to do so. *See, e.g., Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.”) (citing *InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014)). In other words, even if we agreed that it was known to install instructions for a financial application on a SIM card, we would still determine that Petitioner fails to persuasively show that it would have been obvious to implement Dill in this manner because Petitioner articulates no rationale for doing so. *See Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 888 (Fed. Cir. 2024) (“It does not suffice to simply be known. A reason for combining must exist.”).

¹⁷ Because Petitioner failed to advance such a contention, Petitioner cannot prevail on this theory. *See Koninklijke Philips N.V. v. Google LLC*, 948 F.3d 1330, 1335 (Fed. Cir. 2020) (“We hold that the Board erred by instituting inter partes review based on a combination of prior art references not advanced in Google’s petition.”); *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (The “petitioner’s contentions . . . define the scope of the litigation all the way from institution through to conclusion.” (quoting *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1357 (2018))). However, we address this theory to explain why it would not have been persuasive even if it is deemed to have been raised.

In addition, Petitioner’s reliance on Dr. Houh’s testimony (*see* Pet. 23–24) is unavailing. Although Dr. Houh agrees with the arguments in the Petition and includes quotes from the cited portions of Dill and Bykov (*see* Ex. 1002 ¶¶ 95–97), he provides no additional analysis or explanation beyond what was provided in the Petition. As a result, his testimony suffers the same deficiencies as the Petition. Also, we do not credit his conclusion that Dill includes the requisite disclosure (*see id.* ¶ 97) because he fails to provide sufficient supporting explanation or evidence (*see* 37 C.F.R. § 42.65(a)).

Finally, we note that Petitioner misrepresents Dr. Shamos’s testimony by stating that Dr. Shamos “agrees that if a mobile device executes a mobile wallet over a cellular network, the mobile device has a SIM card *for the mobile wallet.*” Pet. Reply 22 (emphasis added) (citing Ex. 1022, 29:4–7, 40:9–10). In the cited testimony, Dr. Shamos agrees that mobile devices have SIM cards, but he does not address where a mobile wallet application would be installed. Ex. 1022, 29:4–7, 40:9–10. Thus, contrary to Petitioner’s argument, we determine that Dr. Shamos’s testimony does not support Petitioner’s position.

Accordingly, we determine that Petitioner fails show that Dill teaches (or otherwise renders obvious) “a mobile wallet application installed on a hardware SIM card,” as required by claim 1.

*b) Web Services Communication Mechanisms for
Interfacing with a Mobile Wallet Application as
Well as with a Plurality of Device Types Over a
Plurality of Different Communication Channels*

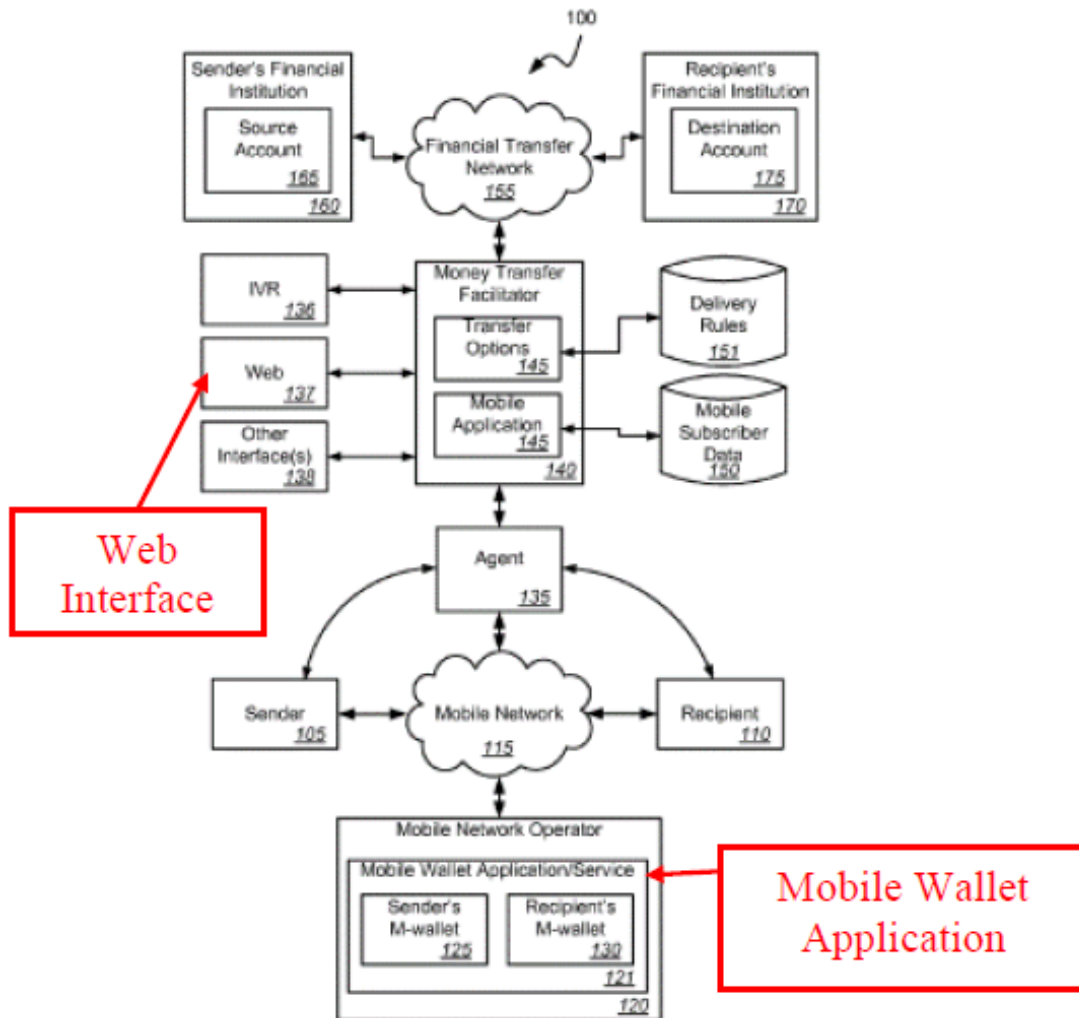
Elements 1.3A–C of claim 1 recite:

an integration tier . . . including web services communication mechanisms for interfacing with a mobile wallet application . . . as well as with a plurality of different device types over a plurality of different communication channels.

Ex. 1001, 23:29–34 (referred to as “the Integration Tier Limitation”).

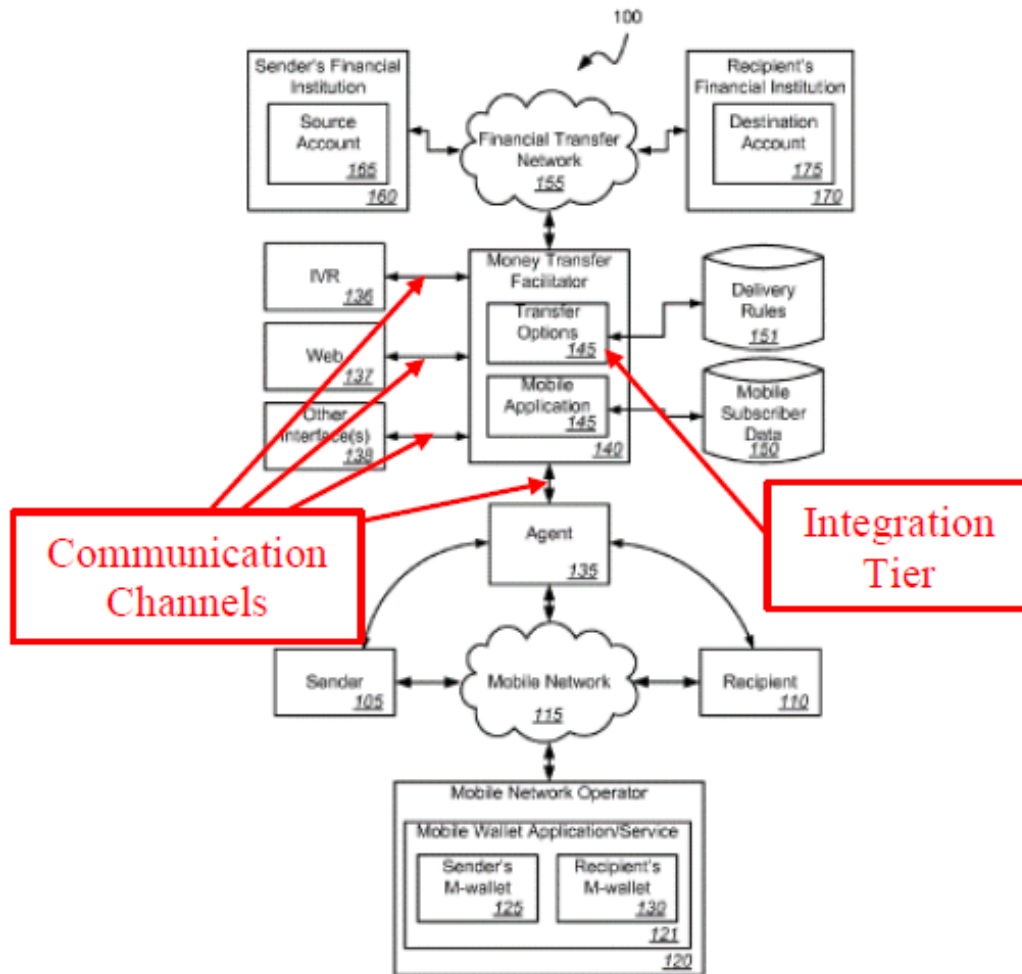
Parties’ Arguments

As noted above, Petitioner relies solely on Dill to disclose this limitation. *See* Pet. 19–25. Petitioner maps: (1) Dill’s transfer options module 145 to the claimed “integration tier,” (2) Dill’s web interface 137 to the claimed “web services communication mechanisms,” and (3) Dill’s IVR interface 136, web interface 137, and other interfaces 138 to the claimed “plurality of different device types.” *E.g., id.* at 22–23, 25; Pet. Reply 11–13; *see also* Tr. 14:7–17:7. In addition, for the claimed “communication channels,” Petitioner points to (1) the arrows between money transfer facilitator 140 (which includes transfer options module 145) and (a) IVR interface 136, (b) web interface 137, (c) other interfaces 138, and (d) agent 135, and (2) mobile network 115. Pet. 25; Pet. Reply 12. Petitioner illustrates its mapping by providing several annotations of Figure 9, two of which are reproduced below.



APPL-1005, Fig. 9 (annotated).

Pet. 23.



APPL-1005, Fig. 9 (annotated).

Id. at 25. As shown above, Petitioner annotates Dill's Figure 9 to identify web interface 137 as "Web Interface," mobile wallet application/service 121 as "Mobile Wallet Application," transfer options module 145 as "Integration Tier," and the arrows connecting money transfer facilitator 140 with IVR interface 136, web interface 137, other interfaces 138, and agent 135 as "Communication Channels."

For element 1.3C, which recites interfacing "with a plurality of different device types over a plurality of different communication channels," Petitioner contends that Dill's "transfer options module 145 is 'communicatively coupled with the one or more interfaces 136-138' to

various devices and ‘receive[s] transaction information’ including ‘provid[ing] a notification of the transaction to a recipient of the transaction, and select[ing] one or more delivery options for completing the money transfer transaction.’” Pet. 24 (alterations in original) (quoting Ex. 1005 ¶ 101; citing Ex. 1003 ¶¶ 99–100); *see also id.* at 21–22 (describing operations of transfer options module 145) (citing Ex. 1005 ¶¶ 51, 53, 55, 57, 77, 101, Figs. 5, 9; Ex. 1003 ¶¶ 88–90), 22–23 (describing web interface 137 and transactions initiated from a web site) (citing Ex. 1005 ¶¶ 15, 33, 47, 51, 54, 101, 104; Ex. 1003 ¶¶ 92–94), 25 (citing Ex. 1005 ¶ 52; Ex. 1003 ¶¶ 101–102).

Patent Owner argues that Petitioner’s mapping fails to meet the requirements of the Integration Tier Limitation. PO Resp. 42–44. Patent Owner argues that Petitioner fails to show that the communication channels identified by Petitioner “constitute ‘communication channels’ over which ‘web services communication mechanisms’ interface with devices.” *Id.* at 43–44 (emphasis omitted) (citing Ex. 2003 ¶ 54). Patent Owner further argues “[t]he only communication channel even arguably identified in the Petition over which ‘web services communication mechanisms’ interface with devices is the communication channel between” web interface 137 and money transfer facilitator system 140. *Id.* (footnote and emphasis omitted). However, according to Patent Owner, the Integration Tier Limitation requires “more than a single communication channel to interface with the ‘web services communication mechanisms,’” because the limitation “require[s] the ‘web services communication mechanisms’ to interface with different device types over a plurality of different communication channels.” *Id.* (citing Ex. 2003 ¶¶ 38, 55).

Petitioner responds that Dill's transfer options module 145 uses web interface 137 to facilitate "money transfer transactions [that] are initiated 'from a web site of the money transfer facilitator' as well as other channels." Pet. Reply 11–12 (alteration in original) (quoting Pet. 24–25; citing Ex. 1005 ¶ 101). Petitioner further asserts:

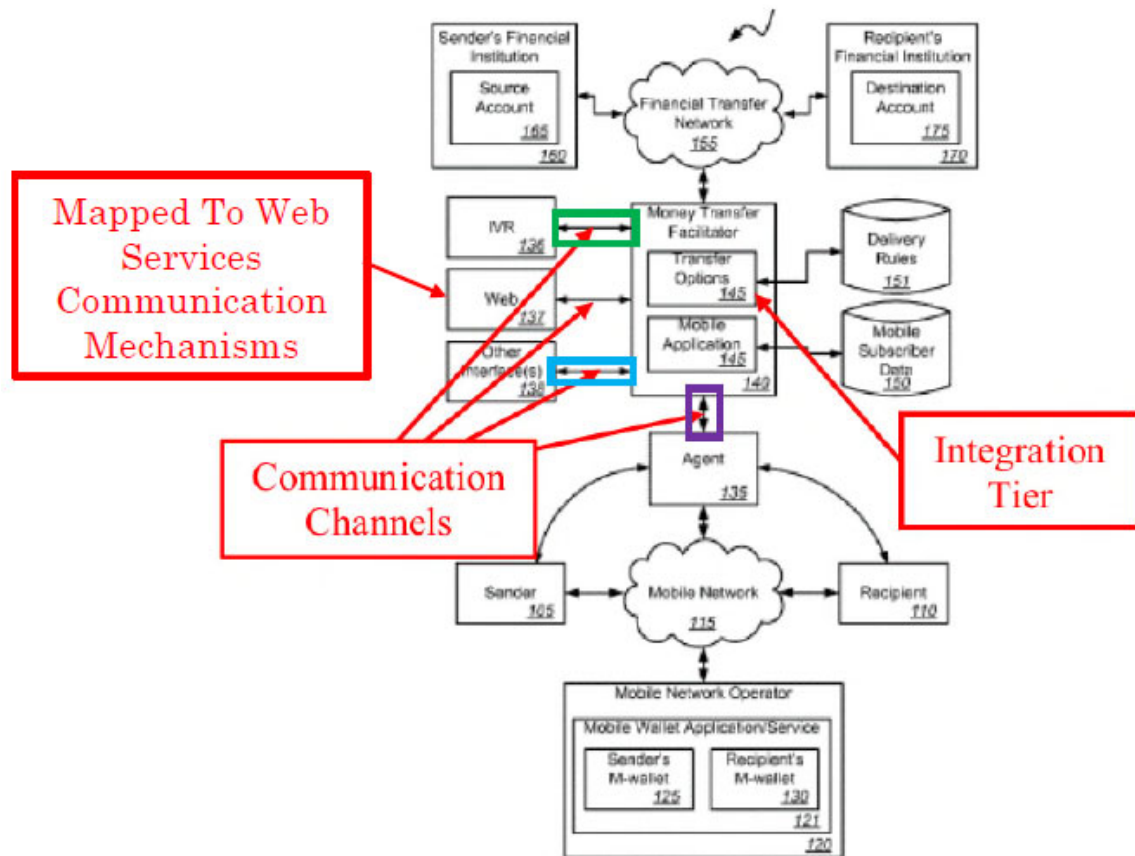
The Petition provides two examples of how transfer options module 145, interfacing with web interface 137, further interfaces with a plurality of different device types over a plurality of different communication channels. First, Dill's transfer options module 145 is "coupled" with an IVR system 136 and other interfaces 138, which are the claimed "plurality of different device types." The two-headed arrows between these devices and transfer options module 145 are the claimed "plurality of different communication channels." Second, Dill's transfer options module 145 utilizes mobile network 115, which is another one of a plurality of different communication channels. This additional communication channel is used to interface with a user's mobile device configured to run Dill's mobile wallet 125.

Id. at 12 (citing Pet. 21–22, 25, 31–32; Ex. 1005 ¶¶ 10, 52, 94, Fig. 9).

Petitioner also asserts that Patent Owner's argument is "based on a misunderstanding of the Petition," and Petitioner clarifies that it mapped Dill's IVR interface 136 and other interfaces 138 to the claimed "different device types" rather than to the claimed "web services communication mechanisms." *Id.* at 13 (citing Pet. 25).

In response, Patent Owner argues that Petitioner fails to show that Dill discloses that web interface 137 interfaces with IVR interface 136, other interfaces 138, or agent 135 over the identified communication channels, as would be required to satisfy the claim limitation under Petitioner's mapping. PO Sur-reply 13–16. Patent Owner provides an annotated version of Dill's

Figure 9 to illustrate Petitioner's contentions and its responsive argument (*id.* at 14), and we reproduce Patent Owner's annotation below.



Id. As shown above, Patent Owner's annotation of Figure 9 includes Petitioner's annotation of financial transfer system 100, with red boxes and arrows to identify the "Integration Tier" and "Communication Channels" of claim 1. *Compare id.*, with Pet. 25 (showing Petitioner's annotation).

Patent Owner's annotation also includes: (1) another red box and arrow to identify where Petitioner has "Mapped [the] Web Services Communication Mechanisms" of claim 1 to web interface 137, and (2) green, blue, and purple boxes to identify several of the alleged communication channels.

Patent Owner asserts that Petitioner fails to explain how Dill's web interface 137 directly or indirectly interfaces or communicates with the communication channels associated with Dill's IVR interface 136 (annotated

in green above), other interfaces 138 (annotated in blue above), or agent system 135 (annotated in purple above). PO Sur-reply 14–15 (citing Pet. Reply 12). Patent Owner also asserts that there is “no disclosure in Dill” of these concepts. *Id.* at 14–16 (citing Ex. 1005 ¶¶ 10, 94). Finally, Patent Owner reiterates that “[t]he only communication channel even arguably identified in the Petition over which ‘web services communication mechanisms ‘interface with devices [sic] is the communication channel between” web interface 137 and money transfer facilitator system 140, which is insufficient to satisfy the Integration Tier Limitation because it requires “more than a single communication channel to interface with the ‘web services communication mechanisms.’” *Id.* at 16.

Analysis

Having considered the parties’ arguments and evidence, we find that Petitioner has *not* shown, by a preponderance of the evidence, that Dill discloses an integration tier including “web services communication mechanisms for interfacing with a mobile wallet application . . . as well as with a plurality of different device types over a plurality of different communication channels,” as required by the Integration Tier Limitation. *See* Pet. 19–25.

As noted above, Petitioner asserts that: (1) Dill’s transfer options module 145 discloses the claimed “integration tier,” and (2) Dill’s web interface 137 discloses the claimed “web services communication mechanisms.” *E.g.*, Pet. 22–23; Pet. Reply 11. Thus, in order to prevail,

Petitioner needs to show Dill discloses¹⁸ that web interface 137 (directly or indirectly) interfaces “with a mobile wallet application . . . as well as with a plurality of different device types over a plurality of different communication channels.” *See supra* § II.C.2 (addressing claim construction). As a result, even if we assume that Dill’s web interface 137 interfaces with both a mobile wallet application on the mobile device and other devices over the channel associated with web interface 137 (i.e., the arrows connecting web interface 137 to money transfer facilitator 140),¹⁹ Petitioner still needs to show that Dill’s web interface 137 interfaces with at least one device over at least one second communication channel. Petitioner points to several potential second “communication channels”: (1) the arrows between money transfer facilitator 140 (which includes transfer options module 145) and (a) IVR interface 136, (b) other interfaces 138, and (c) agent 135, and (2) mobile network 115. *E.g.*, Pet. 25; Pet. Reply 12. However, Petitioner fails to show Dill teaches that web interface 137 interfaces with any devices over any of these alleged “communication channels,” as would be required by Petitioner’s mapping.

¹⁸ Petitioner must show a disclosure in Dill because neither the Petition nor the Reply contend that Dill suggests or renders obvious these claimed aspects. *See* Pet. 19–25; Pet. Reply 11–13. Moreover, even if Petitioner’s briefing could be interpreted as including such a contention, it would not have been persuasive because Petitioner does not identify (nor do we discern) a rationale to show that this limitation would have been obvious over Dill.

¹⁹ Patent Owner disagrees with this premise (*see* PO Resp. 46–49), but we need not resolve that dispute because, even assuming Petitioner’s premise (as we have done in this Decision), Petitioner still fails to show that the claims are unpatentable.

In the Petition, Petitioner never clearly (or persuasively) addresses this requirement of the claim. Petitioner does contend that transfer options module 145 is coupled to various devices via interfaces 136–138 and exchanges transaction information (*see* Pet. 24–25; *see also* Pet. Reply 12), but that contention misses the mark. The salient question is whether Dill’s *web interface 137* (i.e., the claimed “web services communication mechanisms”) interfaces with the different device types over the channels, not whether *transfer options module 145* (i.e., the claimed “integration tier”) does so.²⁰

We have considered the portions of Dill cited by Petitioner (*see* Pet. 21–25), and we find that they do not include the requisite disclosure. Dill’s money transfer facilitator 140 includes: interfaces for conducting money transfer transactions, and transfer options module 145 for receiving transaction information through those interfaces. *E.g.*, Ex. 1005 ¶¶ 15, 46; *see also id.* at Fig. 9 (illustrating money transfer facilitator 140 and transfer options module 145). Dill states that the interfaces include web interface 137, IVR interface 136, agent 135, and other interface(s) 138 (*id.* ¶¶ 15, 47, 101; *see also id.* at Fig. 9), and Dill also teaches that money transfer facilitator 140 can receive transaction information via mobile network 115 (*e.g.*, *id.* ¶¶ 10, 52, 100). Similarly, Dill explains that a sender can initiate “a

²⁰ The relevant portion of the Petition uses a section heading that omits (with an ellipsis) the claim language that ties the “plurality of different communication channels” back to the “web services communication mechanisms.” *See* Pet. 24 (“[an integration tier configured to manage mobile wallet sessions and] . . . a plurality of different device types over a plurality of different communication channels” (alterations in original; emphasis omitted)). There is nothing inherently wrong with doing so, but Petitioner appears to have overlooked this aspect of the claim when crafting its Petition.

money transfer transaction” through any of a variety of channels, such as “a web site of the money transfer facilitator,” a retail agent location, a telephone service, a kiosk, or an ATM. *Id.* ¶ 33; *see also id.* ¶¶ 35, 51, 54, 71, 92, 104. In addition, Dill states that recipients can use interfaces 136–138 to specify delivery options (*id.* ¶¶ 102–104), and Dill states that recipients can be notified by a message sent via email, voice message, or web page notification (*id.* ¶ 34).

As a result, we agree with Petitioner that Dill teaches that money transfer transactions can be initiated via web interface 137 or via one of the other interfaces (*see* Pet. 22–23), but we do not agree that Dill teaches (or suggests) that *web interface 137 interfaces with any device over any of the channels associated with IVR interface 136, agent 135, other interface(s) 138, or mobile network 115*, as required by Petitioner’s mapping. Instead, Dill indicates that web interface 137 is an alternative to the other described interfaces and channels. *See, e.g.,* Ex. 1005 ¶¶ 35, 54, 100–101; *cf. id.* ¶¶ 33 (noting that different channels can be used when a transaction is staged by the sender and completed at a later time), 51 (noting that sender and recipient can use different channels).

In its Reply, Petitioner appears to argue that Dill teaches that *web interface 137* facilitates transactions initiated from a web site as well as those initiated from *other channels* (*see* Pet. Reply 11–12 (citing Pet. 22; Ex. 1005 ¶ 101)), but we disagree. Dill’s transfer options module 145 receives transaction information from various channels, including the one associated with web interface 137 (*see, e.g.,* Ex. 1005 ¶ 101), but Dill does not teach that web interface 137 is involved in transactions involving other channels, such as those associated with IVR interface 136 or other interfaces 138.

During oral argument, we questioned Petitioner’s counsel concerning these aspects of the Integration Tier Limitation. *See* Tr. 22:17–30:15. In response, Petitioner focused on the fact “there are multiple different ways in which *the integration tier, which is 145*, can communicate with the various communication channels.” *Id.* at 23:1–25:16. However, as explained above, this argument misses the mark because the question is whether *web interface 137* interfaces with another device over one of the alleged communication channels, not whether *transfer options module 145* does so.

Petitioner also argued that “the web interface [137] can communicate with many different channels” such as “*communication channels going from the money transfer facilitator [140] to the agent [135]*,” to “the other interfaces [138],” and to “the interactive voice response [136],” so “there’s a communication channel to the other interfaces.” Tr. 25:8–13 (emphasis added), 26:7–13. In support, Petitioner pointed to paragraphs 33, 51, 54, 90, and 101 of Dill, but none of these support Petitioner’s argument.²¹ In particular, we find no disclosure in paragraphs 33, 51, 54, or 101 of Dill to suggest that web interface 137 communicates with any of channels associated with agent system 135, other interfaces 138, or IVR interface 136 (as we explained above).

Petitioner’s reliance on paragraph 90 is similarly unavailing. In paragraph 90, Dill states that, “while described herein with reference to mobile devices, embodiments of the present invention are not limit[ed] to use with any type of device, wired or wireless, or any channel of

²¹ During oral argument, Petitioner conceded that Figure 9 does not include the requisite disclosure. *See* Tr. 25:8–10 (stating that “what’s not shown” in Figure 9 of Dill “is that you have multiple different channels going into” web interface 137 “on the lefthand side” of the figure).

communication,” and “the sender, the recipient, or both can use any of a variety of channels to initiate a transfer, receive notification of the transfer, and/or direct funds in the transfer.” Ex. 1005 ¶ 90. This fails to disclose whether web interface 137 interfaces (or communicates) with any device over any of the alleged other communication channels (i.e., those associated with IVR interface 136, agent 135, other interface(s) 138, or mobile network 115).

During the oral argument, Petitioner also appeared to raise a new argument. Petitioner argued Dill’s paragraph 90 reflects that “different devices can communicate in different ways . . . over a channel that’s appropriate to that specific either sender or recipient.” Tr. 25:2–7. Petitioner then asserted that each of sender’s mobile wallet 125, recipient’s mobile wallet 130, and agent system 135 “can communicate through the web,” so “Dill is very clear that there are a number of ways to get into the [w]eb interface 137” and thereby interface with transfer options module 145. *Id.* at 26:13–30:15, 34:9–35:2. In particular, Petitioner suggested that communication between transfer options module 145 and sender’s mobile wallet 125 via web interface 137 might be a first “channel,” and communication between transfer options module 145 and recipient’s mobile wallet 130 via web interface 137 might be a second “channel,” thereby satisfying the claim requirement for a plurality of such channels. *See* Tr. 26:22–27:25, 28:10–15, 29:4–18, 30:4–14.

However, such an argument is procedurally improper because it was not made in the Petition or in the Reply. *See* Pet. 19–27 (Petitioner’s initial argument for how Dill discloses the Integration Tier Limitation); Pet. Reply 11–13 (Petitioner’s reply argument for how Dill discloses the Integration Tier Limitation); *see also* Tr. 47:20–48:6 (Patent Owner’s

counsel stating this argument “wasn’t proffered in the Petition” and “just isn’t in [the] record currently”). Instead, Petitioner’s papers relied on Dill disclosing the “plurality” of channels as corresponding to various arrows connecting transfer options module 145 to each of web interface 137, IVR interface 136, other interfaces 138, agent system 135, and mobile network 115. *See, e.g.*, Pet. 25 (annotating Dill’s Figure 9 to identify the “Communication Channels”); Pet. Reply 11–13. Petitioner did not argue prior to the oral argument that Dill’s system includes a *plurality of different, web-based* communication channels between transfer options module 145 and mobile wallets 125 and 130 that all pass through web interface 137, as was suggested during the oral argument.²² “During an oral hearing, a party . . . may only present arguments relied upon in the papers previously submitted.” Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019)²³ 85–86; Paper 27 (Hearing Order), 2–3; *see Dell Inc. v. Acceleron, LLC*, 884 F.3d 1364, 1369 (Fed. Cir. 2018) (holding the Board is obligated under its own regulations to dismiss untimely argument “raised for the first time during oral argument”).

²² The Petition does state that Dill also teaches its “system is configured for transactions through a ‘web site’ and a ‘web page’ as well as notifications through ‘web page notification.’” Pet. 26 (quoting Ex. 1005 ¶¶ 33–34). However, we do not understand that statement to make the argument suggested during oral argument. Moreover, this statement was made to establish that the integration tier is configured to receive binary and text messages from a mobile device (*see id.* at 26–27 (arguing element 1.3D)), not that the web services communication mechanisms interface with devices over a plurality of different communication channels (*see id.* at 24–25 (arguing element 1.3C)).

²³ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

In addition, Petitioner fails to make a sufficient showing for the Integration Tier Limitation because Petitioner fails to establish that Dill's transfer options module 145 includes web interface 137 for interfacing with *a plurality of different device types*, as required. In particular, Petitioner contends that Dill's IVR interface 136, web interface 137, and other interfaces 138 teach the claimed "plurality of different device types" (*e.g.*, Pet. 25; Pet. Reply 12–13), but even if these can be considered "device types," Dill does not disclose that web interface 137 interfaces with a plurality of them. As we have explained above, Dill fails to disclose that web interface 137 interfaces with IVR interface 136 or other interfaces 138. Moreover, to the extent Petitioner contends that the "user's mobile device" teaches one or more "device types" (Pet. Reply 13), Petitioner does not adequately explain why mobile devices are considered "different device types" as claimed. Ex. 1001, 23:33 (emphasis added); *see* Pet. 21–22, 24–25. Also, Petitioner does not explain why a mobile device is a "*different device type[]*," as claimed, when the claim requires interfacing with "a mobile wallet application installed on a hardware SIM card" (which is on a mobile device) and "a plurality of different devices types." Thus, we find Petitioner has failed to establish by a preponderance of the evidence that Dill's transfer options module 145 includes web interface 137 for interfacing with a plurality of different device types, as is also required by the Integration Tier Limitation of claim 1.

Finally, Petitioner's reliance on Dr. Houh's testimony (*see* Pet. 21–25) is unavailing. Although Dr. Houh agrees with the arguments in the Petition and includes quotes from the cited portions of Dill (*see* Ex. 1002 ¶¶ 88–94, 99–103), his testimony suffers the same deficiencies as the Petition. We do not credit his conclusion that Dill includes the requisite disclosure (*see id.*

¶¶ 99, 103) because he fails to provide sufficient supporting explanation or evidence (*see* 37 C.F.R. § 42.65(a)).

Accordingly, for each of the two reasons identified above, we determine that Petitioner fails to show that Dill teaches (or otherwise renders obvious) “an integration tier . . . including web services communication mechanisms for interfacing with a mobile wallet application . . . as well as with a plurality of different device types over a plurality of different communication channels,” as required by the claim 1.

c) Conclusion

As explained above, Petitioner relies upon Dill for the claimed “mobile wallet application installed on a hardware SIM card” and the Integration Tier Limitation (i.e., “an integration tier . . . including web services communication mechanisms for interfacing with a mobile wallet application . . . as well as with a plurality of different device types over a plurality of different communication channels”). However, for the reasons explained above, we determine that Petitioner fails to show that Dill teaches (or otherwise renders obvious) either limitation. *See supra* §§ II.D.2.a–b. Consequently, we determine that Petitioner has not shown, by a preponderance of the evidence, that the subject matter of claim 1 would have been obvious over Dill, Vadhri, and Akashika.

For clarity, we note that this Decision does not rely on Patent Owner’s other arguments regarding elements 1.3A–C.²⁴ Specifically, we do not reach Patent Owner’s arguments that: the alleged integration tier does not *include* web services communication mechanisms (*see* PO Resp. 10–11, 36–42; Pet.

²⁴ We also do not address Patent Owner’s arguments regarding elements 1.4A and 1.6. *See* PO Resp. 20–29, 45–46; Pet. Reply 9, 13–14.

Reply 1–3, 10–11; PO Sur-reply 1–10, 12–13); the alleged *web services* communication mechanisms do not interface with *a mobile wallet application on a wireless device* (see PO Resp. 11, 46–49; Pet. Reply 18–20; PO Sur-reply 16–17); the prior art fails to teach *web services* (see PO Resp. 50–52; Pet. Reply 3–5, 14–15; PO Sur-reply 17–21); and the prior art fails to teach a mobile wallet application installed on a wireless device (see PO Resp. 12–16, 52–56; Pet. Reply 7, 15–18).

3. Independent Claim 11

Independent claim 11 includes limitations that are commensurate in scope with the limitations of claim 1 discussed above. Specifically, independent claim 11 recites:

an integration tier . . . [11.8C] including web services communication mechanisms for interfacing with the mobile wallet application which is installed on a hardware SIM card [11.8D] as well as with a plurality of different device types over a plurality of different communication channels.

Ex. 1001, 26:38–44 (Petitioner’s reference designations added); see Ex. 1003 ¶¶ 340–341 (correlating reference designations with claim language).

For these claim limitations, Petitioner relies on its analysis of the corresponding limitations in independent claim 1. See Pet. 77 (citing analysis of elements 1.3B and 1.3C for elements 11.8C and 11.8D); see also Ex. 1003 ¶¶ 340–341. Consequently, Petitioner fails to sufficiently account for two limitations of claim 11: (a) “the mobile wallet application which is installed on a hardware SIM card” (see *supra* § II.D.2.a) and (b) “an integration tier . . . including web services communication mechanisms for interfacing with the mobile wallet application . . . as well as with a plurality

of different device types over a plurality of different communication channels” (*see supra* § II.D.2.b).

Accordingly, we determine that Petitioner has not shown, by a preponderance of the evidence, that the subject matter of independent claim 11 would have been obvious over Dill, Vadhri, and Akashika.

4. *Independent Claim 22*

Independent claim 22 includes limitations that are commensurate in scope with the limitations of claim 1 discussed above. Specifically, independent claim 22 recites:

an integration tier . . . [22.8C] including web services communication mechanisms for interfacing with the mobile wallet application which is installed on a hardware SIM card [22.8D] as well as with a plurality of different device types over a plurality of different communication channels.

Ex. 1001, 29:13–19 (Petitioner’s reference designations added); *see*

Ex. 1003 ¶¶ 396–397 (correlating reference designations with claim language).

For these claim limitations, Petitioner relies on its analysis of the corresponding limitations in independent claim 1. *See* Pet. 81 (citing analysis of elements 1.3B and 1.3C for elements 22.8C and 22.8D); *see also* Ex. 1003 ¶¶ 396–397. Consequently, Petitioner fails to sufficiently account for two limitations of claim 22: (a) “the mobile wallet application which is installed on a hardware SIM card” (*see supra* § II.D.2.a) and (b) “an integration tier . . . including web services communication mechanisms for interfacing with the mobile wallet application . . . as well as with a plurality of different device types over a plurality of different communication channels” (*see supra* § II.D.2.b).

Accordingly, we determine that Petitioner has not shown, by a preponderance of the evidence, that the subject matter of independent claim 22 would have been obvious over Dill, Vadhri, and Akashika.

5. Dependent Claims 2–10 & 12–21

Claims 2–10 depend from independent claim 1, and claims 12–21 depend from independent claim 11. Ex. 1001, 24:33–25:62, 27:1–28:35. Each of these dependent claims includes all the limitations of the respective independent claim. Petitioner’s reliance on and application of Dill to these dependent claims does not cure the above-noted deficiencies of the independent claims. *See* Pet. 56–76, 79–80; *supra* § II.D.2–3.

Accordingly, we determine that Petitioner has not shown, by a preponderance of the evidence, that the subject matter of any of dependent claims 2–10 and 12–21 would have been obvious over Dill, Vadhri, and Akashika.

III. CONCLUSION

Based on the evidence presented with the Petition, the evidence introduced during the trial, and the parties’ respective arguments, Petitioner has not shown by a preponderance of the evidence that any of claims 1–22 are unpatentable.

In summary:

Claims	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–22	103(a)	Dill, Vadhri, Akashika		1–22

IV. ORDER

Accordingly, it is

ORDERED that claims 1–22 of U.S. Patent No. 9,208,488 B2 are not determined to be unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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