

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

FINTIV, INC.,
Patent Owner.

IPR2023-00398
Patent 10,438,196 B2

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

HOSKINS, *Administrative Patent Judge*.

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

I. INTRODUCTION

Apple Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) pursuant to 35 U.S.C. §§ 311–319 requesting an *inter partes* review of all claims (i.e., claims 1–22) of U.S. Patent No. 10,438,196 B2 (Ex. 1001, “the ’196 patent”). We issued an Institution Decision (Paper 9, “Inst. Dec.”) instituting the petitioned review.

Fintiv, Inc. (“Patent Owner”) then filed a Patent Owner Response (Paper 18, “PO Resp.”) to the Petition. Petitioner filed a Reply (Paper 22, “Pet. Reply”) to the Patent Owner Response. Patent Owner filed a Sur-reply (Paper 24, “PO Sur-reply”) to the Reply.

An oral hearing was held on April 10, 2024, for which the transcript was entered into the record (Paper 30, “Tr.”).

We have jurisdiction under 35 U.S.C. § 6(b)(4) and § 318(a). This Decision is a final written decision under 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 as to the patentability of claims 1–22 of the ’196 patent. We determine Petitioner has not shown by a preponderance of the evidence that any of those claims are unpatentable.

II. BACKGROUND

A. *Real Parties-in-Interest and Related Proceedings*

Petitioner and Patent Owner are the only real parties-in-interest for this proceeding. *See* Pet. 1; Paper 4.

The parties identify *Fintiv, Inc. v. PayPal Holdings, Inc.*, No. 6:22-cv-00288 (W.D. Tex.), as involving the ’196 patent. *See* Pet. 1; Paper 4. Petitioner represents it “is not a party to that case.” Pet. 1.

Petitioner also identifies IPR2023-00399 as a related proceeding, because in that case Petitioner has challenged claims 1–22 of U.S. Patent No. 9,208,488 B2, which issued from a parent application of the ’196 patent. *See* Pet. 1; Ex. 1001, code (63). A final written decision in that case is being issued on the same day as the present Decision.

B. The ’196 Patent

The ’196 patent is entitled “Using a Mobile Wallet Infrastructure to Support Multiple Mobile Wallet Providers.” Ex. 1001, code (54).

Figure 1 (reproduced below with our annotations) illustrates a monetary transaction system architecture in which embodiments of the ’196 patent may operate. *Id.* at 3:4–5, 9:62–63.

Platform Functional Architecture

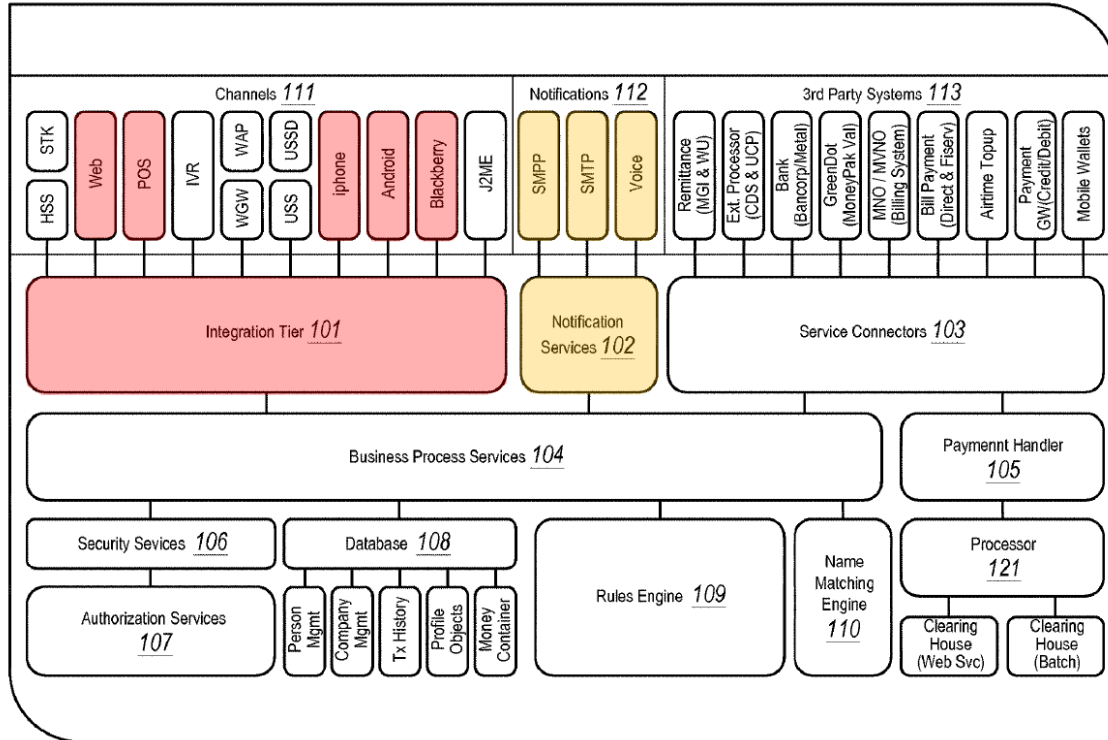


FIG. 1
’196 Patent Figure 1 (Annotated).

Figure 1 illustrates an exemplary platform functional architecture that includes, as pertinent to the present Decision, integration tier 101 (red) in communication with communication channels 111 (some also red), as well as notification services 102 (orange) in communication with notification channels 112 (also orange). *See id.* at 9:62–10:13; *see also id.* at 1:35–2:42 (describing how the “cloud-based transaction platform” of the ’196 patent utilizes “communication channels” to communicate with other systems and devices).

“Integration tier 101 is configured to manage mobile wallet sessions” utilizing communication channels 111. *Id.* at 9:63–10:1. Thus, integration tier 101 can include “a communication (e.g., Web services) API^[1] and/or other communication mechanisms^[2] to accept messages from channels 111.” *Id.* at 9:65–10:1. Each channel 111 “can be integrated to one or more mechanisms for sending messages to integration tier 101.” *Id.* at 10:5–7. As shown in Figure 1, channels 111 may connect integration tier 101 to the “Web,” a “POS” (point of sale) system, a mobile device such as an “iphone” or an “Android” or a “Blackberry,” and other systems and devices. *See id.* at 1:21–31, 2:4–6.

“Notification services 102 is configured to send various notifications through different notification channels 112.” *Id.* at 10:7–9. Exemplary notification channels 112 include: Short Message Peer-to-Peer (“SMPP”) for

¹ The ’196 patent does not appear to define the term “API.” We understand it to mean Application Program (or Programming) Interface. *See* Ex. 1006 ¶ 48; Ex. 2019.

² Such other communication mechanisms include: International Standards Organization 8583 for Point of Sale and Automated Teller Machine devices; and Advanced Message Queuing Protocol. *See* Ex. 1001, 10:1–5.

Short Messaging Service (“SMS”); Simple Mail Transfer Protocol (“SMTP”) for emails; and Voice. *Id.* at Fig. 1, 10:9–12. Notification services 102 also “can be configured through a web services API.” *Id.* at 10:12–13.

C. The Claims of the ’196 Patent

Petitioner challenges all twenty-two claims of the ’196 patent, of which claims 1, 8, 16, 21, and 22 are independent. We reproduce illustrative claim 1 here, with our emphasis added.

1. A computing system for facilitating management of a mobile wallet, comprising:
 - one or more processors;
 - system memory;
 - an integration tier configured to manage mobile wallet sessions with a mobile device and including web services communication mechanisms for interfacing with a mobile wallet application and a plurality of different device types over a plurality of different communication channels, the integration tier being configured to receive binary and text messages from a mobile device;*
 - a notification services engine configured to interface with the integration tier and to send a plurality of corresponding different types of messages over the different communication channels to different devices, including a customer’s mobile device, to interface with a mobile wallet application installed on the customer’s mobile device;
 - service connectors that are each configured to connect the computing system to a different third party system;
 - a payment handler that exposes a common API for interacting with different payment processors;

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

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

one or more computer-readable storage media having stored thereon computer-executable instructions which are executable by the one or more processors, to facilitate a transaction for a customer using the mobile wallet by causing the computing system to perform at least the following:

receive communication from the customer over one of the plurality of channels connected to the computing system, the customer communication indicating that the customer desires to purchase an item at an agent terminal for a specified amount of funds using a specified payment method from a mobile wallet;

return a secure, perishable purchase code to the customer over at least one of the plurality of channels connected to the computing system;

receive communication from the agent terminal over at least one of the plurality of channels connected to the computing system, the agent terminal communication indicating that the purchase code has been presented to an agent;

debit the mobile wallet by the specified amount of funds;

credit an agent account by the specified amount of funds; and

after selecting a particular channel included in the plurality of channels, send a notification communication from the computing system to the agent terminal using the particular channel, which is connected to the computing system, the notification communication providing a notification indicating confirmation of the processing of the transaction.

Ex. 1001, 23:60–24:52 (emphasis added).

Our emphasis above identifies “the Integration Tier Limitation,” for further reference below.

D. Asserted Prior Art

Petitioner relies principally on the three prior art references set forth in the table below. *See* Pet. 6–7 (summarizing Petitioner’s sole ground of unpatentability).

Name	Reference	Pub. Date	Exhibit No.
Dill	US 2009/0265272 A1	Oct. 22, 2009	1005
Vadhri	US 2010/0133334 A1	June 3, 2010	1006
Akashika	US 2009/0217047 A1	Aug. 27, 2009	1007

E. Asserted Ground

Petitioner’s sole ground of unpatentability is that claims 1–22 of the ’196 patent are unpatentable under 35 U.S.C. § 103(a)³ as having been obvious over Dill, Vadhri, and Akashika. *See, e.g.*, Pet. 6–7.

F. Testimonial Evidence

Petitioner relies on the testimony of Henry Houh, Ph.D. (Exhibits 1003, 1021, 2004, and 2021) as a proffered expert witness. Patent Owner relies on the testimony of Michael Shamos, Ph.D. (Exhibits 1022, 2001,

³ The first-inventor-to-file provisions of the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“the AIA”), took effect in March 2013. *See* AIA § 3(n)(1). Petitioner assumes the ’196 patent has a priority date in November 2011, so the pre-AIA version of 35 U.S.C. § 103 applies here. *See* Pet. 4, 7, 9, 11. Patent Owner does not dispute Petitioner’s assumption. Thus, we apply pre-AIA law in this Decision.

and 2003) and Mr. Kai Johnson (Exhibits 1023 and 2016) as proffered expert witnesses.

III. ANALYSIS OF PETITIONER’S CHALLENGE

Petitioner argues claims 1–22 of the ’196 patent are unpatentable as having been obvious over Dill, Vadhri, and Akashika. *See, e.g.*, Pet. 6–7. Patent Owner opposes. *See* PO Resp. *generally*. Having reviewed the record, we conclude Petitioner has not shown by a preponderance of the evidence that any of those claims are unpatentable because Petitioner has not established Dill discloses the Integration Tier Limitation of representative claim 1.⁴

A. *Statement of Law*

1. *Petitioner’s Burden of Proof*

Petitioner bears the burden of proving unpatentability of the challenged claims, and this burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). Petitioner must prove unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

⁴ Petitioner must show a disclosure in Dill because neither the Petition nor the Reply contend that Dill suggests or renders obvious the aspects of the Integration Tier Limitation. *See* Pet. 21–26; Pet. Reply 10–11. Moreover, even if Petitioner’s briefing could be interpreted as including such a contention, it would not have been persuasive because Petitioner identifies (and we discern) no rationale to show that this limitation would have been obvious over Dill.

2. *Law of Obviousness*

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. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The 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) secondary considerations of nonobviousness, if placed at issue which has not happened here. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. *Level of Ordinary Skill in the Art*

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1354–55 (Fed. Cir. 2001) (citing *Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999)). “This reference point prevents . . . factfinders from using their own insight or, worse yet, hindsight, to gauge obviousness.” *Id.* at 1355. “The person of ordinary skill in the art is a hypothetical person who is presumed to know the relevant art” at the time of the invention. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). 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) (citations omitted). “The patent’s purpose can also be informative.” *Id.* (citation omitted).

Petitioner contends a person having ordinary skill in the art pertaining to the ’196 patent “would have had a working knowledge of mobile payment systems and techniques,” as well as “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; Ex. 1003 ¶¶ 21–23. Further according to Petitioner: “Lack of work experience can be remedied by additional education, and vice versa.” Pet. 4; Ex. 1003 ¶ 22.

In the Institution Decision, we applied Petitioner’s formulation, which Patent Owner did not dispute at that time. *See* Inst. Dec. 9–10.

Now, Patent Owner “adopts” Petitioner’s formulation, but argues the level of ordinary skill in the art additionally requires “further detail about what should be meant by ‘a working knowledge of mobile payment systems and techniques’” per Petitioner’s formulation. PO Resp. 6. Specifically, according to Patent Owner, this working knowledge must include “knowledge of ‘*mobile wallets*’ because the claims of [the] ’196 Patent are directed to ‘mobile wallets.’” *Id.* at 6–7 & n.1 (emphasis added) (citing Ex. 1001, 9:26–30 (defining the term “mobile wallet”), 23:60–61 (claim 1 preamble)); Ex. 2003 ¶¶ 12–17.

We adopt Petitioner’s undisputed formulation of ordinary skill in the art as set forth above, because we are satisfied this formulation generally comports with the level of skill necessary to understand and implement the

teachings of the '196 patent and the asserted prior art. We do not adopt Patent Owner's annotation to Petitioner's formulation as requiring knowledge of "mobile wallets" specifically, because we determine knowledge of "mobile payment systems and techniques" per Petitioner's formulation is tied sufficiently to the claims of the '196 patent to reflect the level of ordinary skill in the pertinent art. At the same time, even if we were to include knowledge of "mobile wallets" in our formulation, it would not materially change our Decision as set forth below. That is, we would still determine Petitioner has not shown by a preponderance of the evidence that Dill discloses the Integration Tier Limitation.

C. Dr. Houh's Expert Witness Qualifications

Patent Owner argues Petitioner's expert witness, Dr. Houh, lacks a working knowledge of "financial payment systems" generally, and of "mobile wallets" specifically, so we should "afford[] little weight" to his testimony. PO Resp. 7–10 (citing Ex. 1003 ¶¶ 18–19; Ex. 1004; Ex. 2004, 8:15–9:1, 10:13–18, 13:5–15, 18:12–14, 19:2–20:4, 21:22–25:12, 28:10–30:20).

Petitioner replies that Patent Owner's argument ignores Dr. Houh's testimony and mis-applies the level of ordinary skill in the art. *See* Pet. Reply 22–23. Petitioner asserts Dr. Houh has experience with "setting up accounting systems and integrating on-line payment systems on numerous occasions," including integrating "web payment systems with various web sites." *Id.* at 22 (quoting Ex. 1003 ¶ 18). Petitioner asserts Dr. Houh's experience additionally includes integrating a company's web site with online payment solutions such as mobile shopping terminals, during which

he set up the “accounting system, built the web site, integrated various web payment mechanisms with the web site, set up mobile payment systems, and also set up a mobile point of sale system.” *Id.* (quoting Ex. 1003 ¶ 19).

We need not resolve the parties’ dispute as to whether Dr. Houh qualifies as an ordinarily skilled artisan. Even assuming that Dr. Houh possesses, at a minimum, ordinary skill in the art—as we have done in this Decision—we determine Petitioner still fails to show that any of the challenged claims are unpatentable.

D. Claim Construction

We interpret the ’196 patent claims “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). This “includ[es] construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

Petitioner and Patent Owner discuss several claim construction issues. *See* Pet. 5–6; PO Resp. 10–26; Pet. Reply 1–8; PO Sur-reply 1–11. 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 discussed below, this Decision turns on whether Dill discloses the Integration Tier Limitation of claim 1 (Ex. 1001, 23:64–24:3) and similar limitations recited in the other independent claims. We address the scope of

the Integration Tier Limitation below in Section III.F.5(a), as this limitation pertains to the disclosures in Dill contested by the parties.

E. Summary of Dill

Dill discloses systems and methods for money transfers that facilitate flexible payment options for the transaction. *See* Ex. 1005, codes (54) and (57), ¶ 2. Figure 9 of Dill, reproduced below, illustrates an “exemplary system for making financial transfers.” *Id.* ¶ 25.

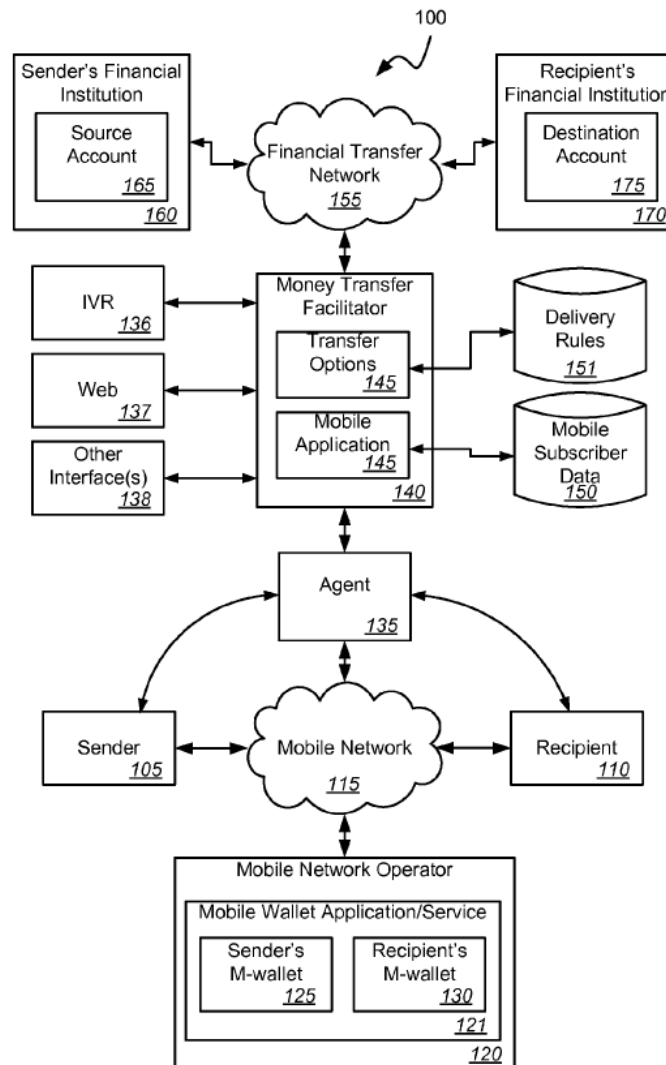


FIG. 9
Dill Figure 9.

Figure 9 illustrates financial transfer system 100 that includes, among other things, sender 105 initiating a money transfer (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 system 140⁵ may receive the money transfer information from mobile wallet application 121 via mobile network 115 and agent system 135. *Id.* ¶¶ 100–101. Money transfer facilitator 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 system 140 further is coupled to financial transfer network 155 such that it is capable of transferring money from source account 165 in sender’s financial institution 160 to destination account 175 in recipient’s financial institution 170. *Id.* ¶ 49.

⁵ System 140 includes two components that are both labeled using the same numerical identifier — transfer options module 145 and mobile application 145. *See* Ex. 1005 ¶¶ 50, 101, 102, and Fig. 9.

F. Claims 1–7

Petitioner provides arguments and evidence in support of contending independent claim 1 and its dependent claims 2–7 are unpatentable as having been obvious over Dill, Vadhri, and Akashika. *See* Pet. 6–67; Ex. 1003 ¶¶ 45–243.

Patent Owner disagrees, on the basis that Dill does not disclose some of the subject matter in claim 1 that Petitioner contends Dill discloses. *See* PO Resp. 26–50; Ex. 2003 ¶¶ 28–51. Patent Owner does not dispute Petitioner’s reliance on Vadhri for the obviousness of modifying Dill’s system to include an API server and use secure perishable codes, or Petitioner’s reliance on Akashika for the obviousness of modifying Dill’s system to use an access control list. *See* Pet. 6–7, 13–17, 36–41, 48–50; PO Resp. 26–50.

Thus, as far as the disputed issues are concerned, this case turns on *whether Dill discloses* the subject matter in claim 1 that Petitioner contends Dill discloses. *See, e.g.*, Tr. 8:17–18 (Petitioner’s counsel stating “what’s in dispute between the parties is only the disclosure in Dill”). That claimed subject matter includes the Integration Tier Limitation — “an integration tier configured to manage mobile wallet sessions with a mobile device and including web services communication mechanisms for interfacing with a mobile wallet application and a plurality of different device types over a plurality of different communication channels.” Ex. 1001, 23:64–24:2; *see* Pet. 21–28 (relying solely on Dill as disclosing the Integration Tier Limitation).

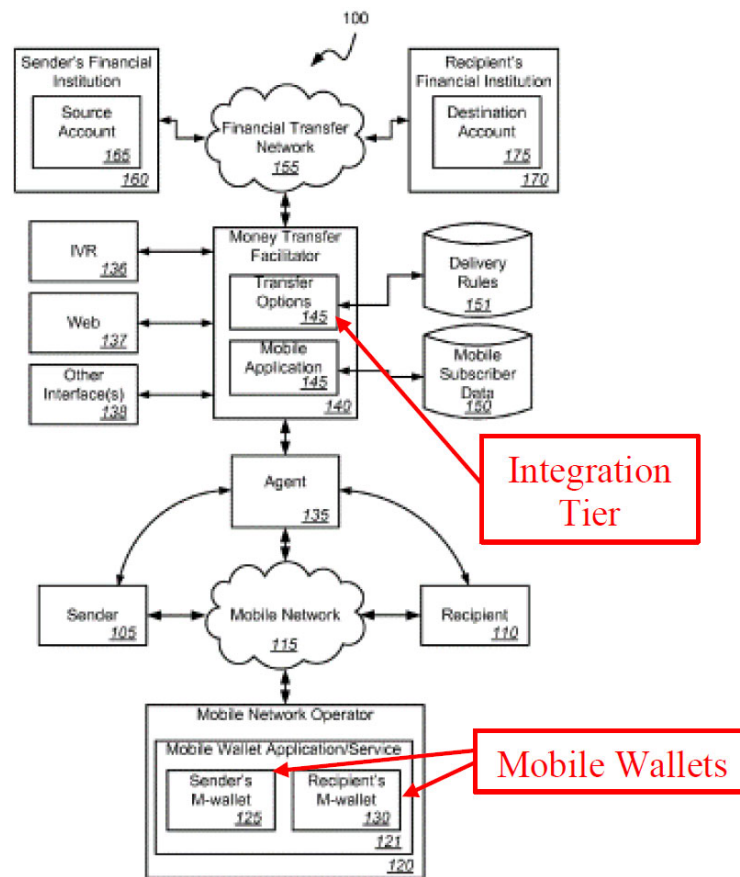
For the following reasons, we determine Petitioner has not shown by a preponderance of the evidence that Dill discloses the Integration Tier

Limitation, so Petitioner has not established the unpatentability of claims 1–7 over Dill, Vadhri, and Akashika.

1. The Petition

In the Petition, Petitioner contends Dill discloses “an integration tier configured to manage mobile wallet sessions with a mobile device,” as required by the Integration Tier Limitation. Ex. 1001, 23:64–65; *see* Pet. 21–23; Ex. 1003 ¶¶ 81–86. In particular, Petitioner asserts the “integration tier” of claim 1 corresponds to Dill’s transfer options module 145. *See* Pet. 21–23⁶ (citing Ex. 1005, Figs. 5 and 9, ¶¶ 51, 53, 55, 77, 100–101; Ex. 1001, Fig. 1, 9:63–10:7; Ex. 1003 ¶¶ 81–82). Petitioner annotates Dill’s Figure 9 to illustrate this contention, as reproduced below (on the next page).

⁶ Patent Owner points out the Petition once also refers to “Dill’s mobile application 145, the ‘*integration tier*,’” Pet. 31; *see* PO Resp. 27–28. However, Petitioner has clarified that “[t]he Petition shows how Dill’s transfer options module 145 is the claimed ‘integration tier.’” Pet. Reply 8, 10 (citing Pet. 23); *see also* Tr. 9:8–18, 14:7–15 (Petitioner’s counsel stating that “throughout the petition” Dill’s transfer options module 145 “corresponds to the integration tier that’s recited in the claims”).

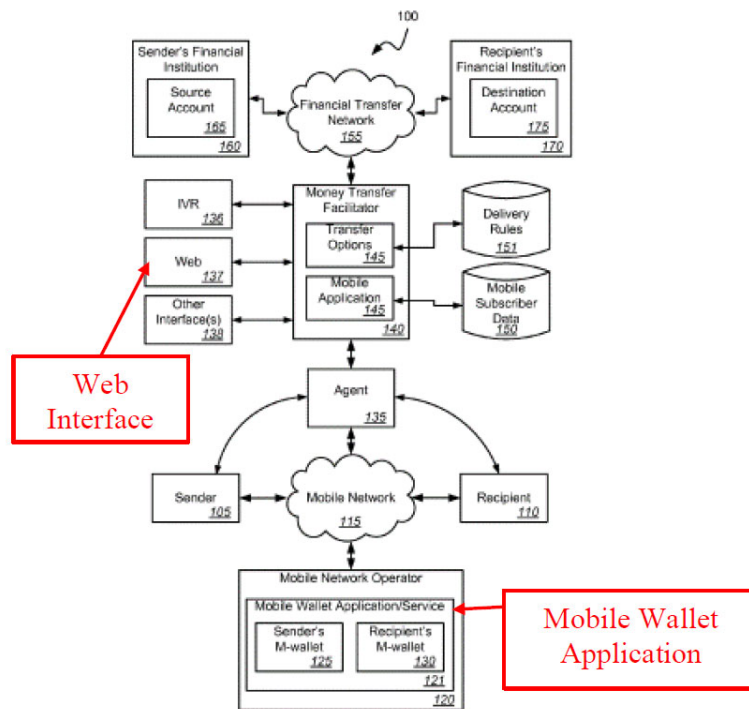


Dill Figure 9 (Annotated at Pet. 22).

Figure 9 illustrates financial transfer system 100, which Petitioner has annotated to identify transfer options module 145 as the “Integration Tier” of claim 1, and to identify sending mobile wallet 125 and receiving mobile wallet 130 as the “Mobile Wallets” of claim 1. *See* Ex. 1005 ¶¶ 100–101; Pet. 22–23. Petitioner contends in support that Dill’s “[t]ransfer options module 145 [is] communicatively coupled with the one or more interfaces 136–138’ that ‘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.’” Pet. 23 (quoting Ex. 1005 ¶ 101) (citing Ex. 1003 ¶ 82).

Petitioner then contends Dill’s transfer options module 145 “includ[es] web services communication mechanisms for interfacing with a

mobile wallet application and a plurality of different device types over a plurality of different communication channels,” as further required by the Integration Tier Limitation. Ex. 1001, 23:64–24:2; *see* Pet. 24–26; Ex. 1003 ¶¶ 87–95. In particular, Petitioner asserts the “web services communication mechanisms” of claim 1 correspond to Dill’s web interface 137, and the “mobile wallet application” of claim 1 corresponds to Dill’s mobile wallet application 121. *See* Pet. 24 (citing Ex. 1003 ¶¶ 87–88). Petitioner annotates Dill’s Figure 9 to illustrate this contention, as reproduced below.



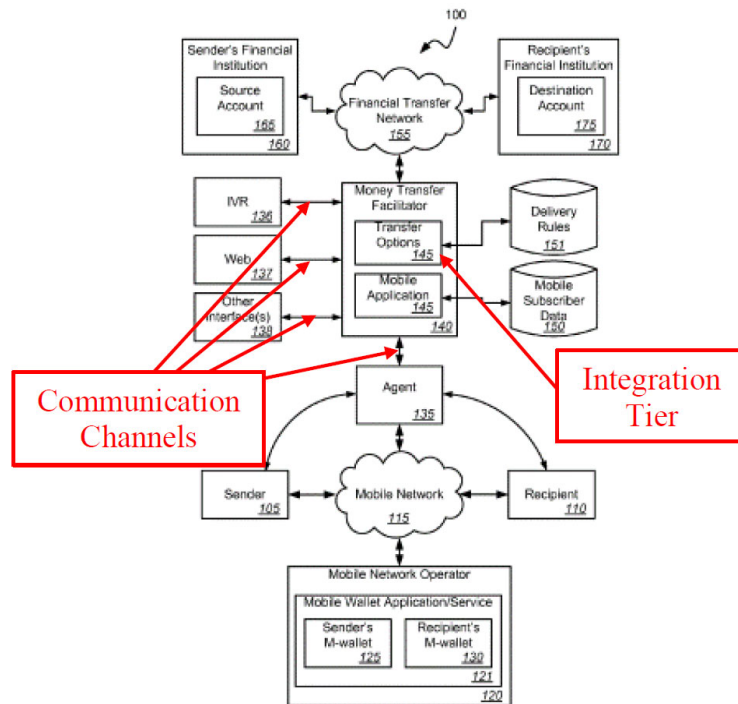
Dill Figure 9 (Annotated at Pet. 24).

Figure 9 illustrates financial transfer system 100, which Petitioner has annotated to identify web interface 137 as the “Web Interface” of claim 1, and to identify mobile wallet application 121 as the “Mobile Wallet Application” of claim 1. *See* Ex. 1005 ¶¶ 100–101; Pet. 24.

Petitioner contends Dill’s transfer options module 145 utilizes web interface 137 to communicate with mobile wallets 125 and 130 within

mobile wallet application 121 to initiate money transfers, via “[‘]a web site of the money transfer facilitator’ as well as other channels.” Pet. 24 (quoting Ex. 1005 ¶ 33) (citing Ex. 1005, Fig. 9, ¶¶ 15, 47, 51, 54, 101; Ex. 1003 ¶¶ 87–88). Petitioner further contends “Dill also explains that ‘notification of the transfer transaction and possibly instructions and/or options’ may be provided to a client ‘via one of the interfaces 136–138, e.g., by logging onto a website.’” Pet. 25 (quoting Ex. 1005 ¶ 104) (citing Ex. 1003 ¶ 88); *see also id.* at 27–28, 31–32 (arguing Dill’s transfer options module 145 communicates with mobile devices “through a ‘web site’ and a ‘web page’” as well as “via SMS over . . . interfaces 136–138” and mobile network 115) (quoting Ex. 1005 ¶ 33) (citing Ex. 1005 ¶¶ 35, 104; Ex. 1003 ¶¶ 99–102, 111). Petitioner concludes a person of ordinary skill in the art would have understood Dill’s transfer options module 145 “includes ‘*web services communication mechanisms*’ [per claim 1] such as interface 137 for interfacing with a mobile wallet application 121.” *Id.* at 25 (citing Ex. 1005 ¶¶ 15, 104; Ex. 1003 ¶ 90).

Petitioner additionally contends Dill’s transfer options module 145 “is ‘communicatively coupled with the one or more interfaces 136–138’ to” communicate with mobile wallets 125 and 130 in order to complete money transfers. Pet. 25–26 (citing Ex. 1005, Fig. 9, ¶ 101; Ex. 1003 ¶¶ 91–92). Petitioner annotates Dill’s Figure 9 to illustrate this contention, as reproduced below (on the next page).



Dill Figure 9 (Annotated at Pet. 26).

Figure 9 illustrates financial transfer system 100, which Petitioner has annotated to identify transfer options module 145 as the “Integration Tier” of claim 1, and to identify four double-headed arrows extending between money transfer facilitator system 140 (which includes transfer options module 145) and, respectively, Interactive Voice Response (IVR) interface 136, web interface 137, other interfaces 138, and agent system 135, as the “Communication Channels” of claim 1. *See* Ex. 1005 ¶¶ 100–101; Pet. 25–26. Petitioner concludes “interfaces 136–138 . . . represent a plurality of different device types (i.e., IVR system, web site, etc.), as well as different communication channels that are used to conduct transactions,” as recited in the Integration Tier Limitation. Pet. 26, 32 (citing Ex. 1003 ¶¶ 94, 112–113). Petitioner further argues mobile network 115 in Dill is another communication channel, per the Integration Tier Limitation. *See id.*

at 26, 45, 51–52, 54–55 (citing Ex. 1005, Fig. 9, ¶¶ 32, 51, 52, 70, 90, 100; Ex. 1003 ¶¶ 93, 159–161, 180–183, 188–189).

2. *The Patent Owner Response*

Patent Owner argues Petitioner has failed to establish Dill teaches “an integration tier that includes web services mechanisms for interfacing with a plurality of different device types *over a plurality of different channels*,” as required by the Integration Tier Limitation. PO Resp. 33 (section heading formatting modified, retaining Patent Owner’s emphasis).

Patent Owner asserts “the ‘web services communication mechanisms’ in the ‘integration tier’ are . . . required to interface with ‘a plurality of different device types over a plurality of different communication channels.’” *Id.* (citing Ex. 2003 ¶ 36). Patent Owner argues the Petition’s annotations to Dill’s Figure 9 identifying various communication channels shown therein “fail[] to meet the claim language” of the Integration Tier Limitation. *Id.* at 33–34 (citing Pet. 26 (annotations reproduced above)). For example, according to Patent Owner, Petitioner “fails to explain how Dill’s ‘IVR’ (interactive voice response) 136 and ‘Other Interfaces’ 138 . . . are ‘web services communication mechanisms for interfacing’ with devices, as claimed.” *Id.* at 34–35 (citing Ex. 2003 ¶ 37). Patent Owner also asserts Dill fails to teach that the communication channel between money transfer facilitator system 140 and agent system 135 “is a channel over which ‘web services communication mechanisms’ interface with devices, as claimed.” *Id.* at 35 (citing Ex. 2003 ¶ 37).

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 omitted). Patent Owner maintains 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); *see also id.* at 12 (discussing the claim term “different communication channels”).

3. *The Petitioner Reply*

Petitioner replies that Patent Owner’s opposition “attempts to read in several additional limitations into” the Integration Tier Limitation, particularly the “different communication channels” term. Pet. Reply 6 (quoting PO Resp. 12) (citing Ex. 1021 ¶¶ 24–25).

Petitioner particularly asserts claim 1 does not “exclude communication channels from its scope that may not interface with the ‘web services communication mechanisms,’” as Patent Owner would have it according to Petitioner’s reading. *Id.* (citing Ex. 1021 ¶ 26). For example, Petitioner points out that the ’96 patent specification contemplates notification services 102 having its own web services API (i.e., a “web services communication mechanism” per claim 1) and other notification channels 112, in addition to the web services API and communication channels 111 of integration tier 101. *See id.* (citing Ex. 1001, Fig. 1, 10:12–13; Ex. 1021 ¶¶ 27–28).

Petitioner further concludes “communication channels that interface, even indirectly, with the ‘web services communication mechanisms’ still interface with the ‘web services communication mechanisms.’” *Id.* at 6–7 (citing Ex. 1021 ¶¶ 27, 29; Ex. 1022, 54:11–55:8, 56:11–57:14).

Turning to Dill’s disclosure, Petitioner argues it satisfies the Integration Tier Limitation. *See id.* at 10–11. Petitioner asserts “Dill’s transfer options module 145 is the claimed ‘integration tier’” which “interfaces with web interface 137, the claimed ‘web services communication mechanisms.’” *Id.* at 10, 20 (citing Pet. 23–25). Petitioner argues 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.” *Id.* at 10, 12–13 (citing Pet. 24–25; Ex. 1005 ¶ 101 (“The transfer options module 145 can be adapted to receive transaction information for a money transfer transaction from a sender 105 through at least one [of] the interfaces 136–138[.]”)).

Petitioner adds that Dill’s transfer options module 145 further “interfaces with a plurality of different device types over a plurality of different communication channels” per the Integration Tier Limitation, and cites two examples. *Id.* at 10. “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,’” such that “[t]he two-headed arrows between these devices and transfer options module 145 [in Figure 9] are the claimed ‘plurality of different communication channels.’” *Id.* at 10–11 (citing Pet. 25–26). “Second, Dill’s transfer options module 145 also utilizes mobile network 115 [in Figure 9], which is another one of a plurality of different communication channels” utilized “to interface with a user’s

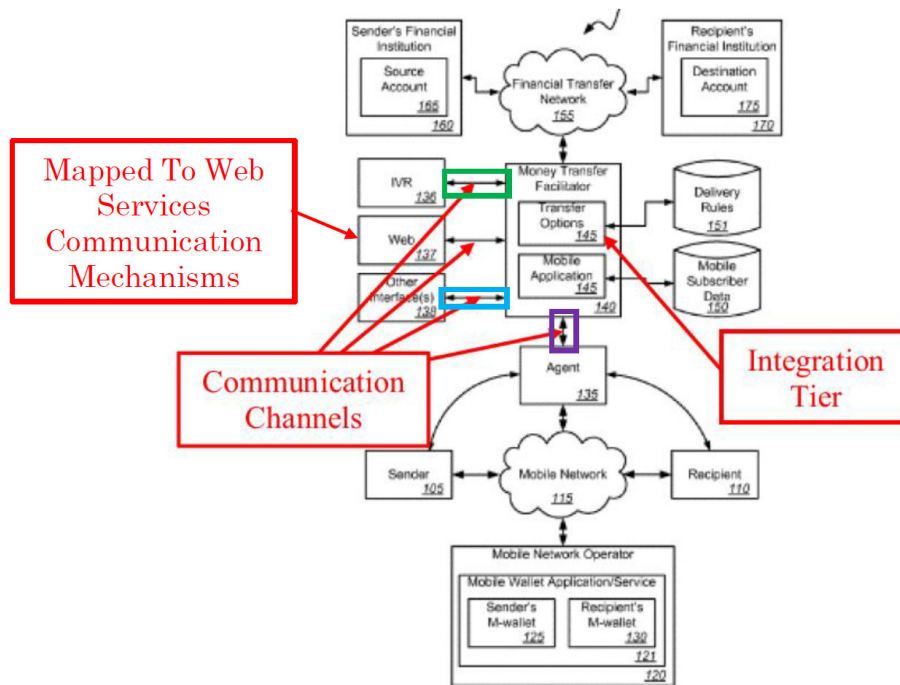
mobile device configured to run Dill’s mobile wallet 125.” *Id.* at 11 (citing Pet. 23, 26, 33; Ex. 1005 ¶¶ 10, 94).

Petitioner asserts Patent Owner’s opposition concerning Dill’s disclosure is “based on a misunderstanding of the Petition.” *Id.* According to Petitioner, “[t]he Petition did not map Dill’s IVR 136 and Other Interfaces 138 to ‘web services communication mechanisms,’” but rather it “mapped IVR 136 and Other Interfaces 138 to a plurality of different device types” communicating with Dill’s transfer options module 145 using a plurality of communication channels shown as double-headed arrows in Figure 9. *Id.* (citing Pet. 26).

4. *The Patent Owner Sur-reply*

Patent Owner responds that the Integration Tier Limitation “specifies that the ‘web services communication mechanisms’ included in the integration tier interface with a ‘plurality of different communication channels.’” PO Sur-reply 11 (citing Ex. 1001, 23:64–24:2). Patent Owner asserts Petitioner and its witness, Dr. Houh, overlook this claim requirement. *See id.* at 11–12 (citing Ex. 1021 ¶¶ 28–29).

Turning to Dill’s disclosure, Patent Owner argues Dill fails to teach an integration tier including web services mechanisms interfacing with a plurality of different device types *over a plurality of different channels*. *See id.* at 15 (emphasis in section title) (citing Ex. 2003 ¶ 36). Patent Owner adds further annotations to Petitioner’s annotations in Dill’s Figure 9 to illustrate this contention, as reproduced below (on the next page).



Dill Figure 9 (Annotated at Pet. 26 and PO Sur-reply 15).

Figure 9 illustrates financial transfer system 100, which Petitioner annotates with red boxes and arrows to identify the “Integration Tier” and “Communication Channels” of claim 1, and which Patent Owner then further annotates with another red box and arrow to identify where Petitioner has “Mapped [the] Web Services Communication Mechanisms” of claim 1 to web interface 137, and with green, blue, and purple boxes to identify several communication channels that do not interface with web interface 137.

Patent Owner asserts Petitioner fails to explain how Dill’s alleged web services communication mechanisms (i.e., web interface 137) directly or indirectly interface with the communication channels leading to Dill’s IVR interface 136 (annotated in green above) or other interfaces 138 (annotated in blue above), so as to correspond to the plurality of different communication channels required by the Integration Tier Limitation. *See*

PO Sur-reply 15–16. Patent Owner also asserts there is similarly no interface between Dill’s web interface 137 and the communication channel between Dill’s money transfer facilitator system 140 and Dill’s agent system 135 (annotated in purple above). *See id.* at 16–17 (citing Pet. Reply 11; Ex. 1005 ¶¶ 10, 94).

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. *Id.* at 17. Patent Owner asserts this is insufficient to satisfy the Integration Tier Limitation, which requires “more than a single communication channel to interface with the ‘web services communication mechanisms.’” *Id.* (citing Ex. 2003 ¶ 38).

5. Analysis

a) Plain Language of the Integration Tier Limitation

We disagree with Petitioner’s and Dr. Houh’s apparent premise that the “plurality of different communication channels” recited in the Integration Tier Limitation of claim 1 may include *any* communication channel that leads to the integration tier. *See* Pet. Reply 6–7; Ex. 1021 ¶¶ 24–29. Instead, the Integration Tier Limitation recites that the integration tier “*include[s] web services communication mechanisms for interfacing with a mobile wallet application and a plurality of different device types over a plurality of different communication channels.*” Ex. 1001, 23:64–24:2 (emphasis added).

It is true, as Petitioner and Dr. Houh point out (*see* Pet. Reply 6–7; Ex. 1021 ¶¶ 24–29), that claim 1 is open to other communication channels being present in the computing system, due to the open-ended “comprising” transition term following the preamble. Ex. 1001, 23:61; *see 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[.]”). Specifically, we agree with Petitioner’s contention that claim 1 “does not explicitly or implicitly *exclude*” (Pet. Reply 6–7 (emphasis added)) other communication channels leading to and from the integration tier. Nonetheless, the Integration Tier Limitation requires that the computing system must *include*, as an essential element of claim 1, an integration tier including web services communication mechanisms for interfacing with a mobile wallet application and a plurality of different device types over a plurality of different communication channels.

Petitioner’s analysis of the Integration Tier Limitation in the Petition obscures the import of the claim language, by considering the limitation in four different pieces [1.3A]–[1.3D] rather than as a whole. *See* Pet. 21, 24, 25, 27 (section titles); *see also* Ex. 1024 (Petitioner’s Demonstrative Exhibits), Slide 4 (coloring the Integration Tier Limitation in four different colors). In particular, the section title including the “plurality of different communication channels” term is: “[1.3C] ***[an integration tier configured to manage mobile wallet sessions and] . . . a plurality of different device types over a plurality of different communication channels.***” Pet. 25. The language omitted by the ellipsis in that section title is the portion of the

limitation that ties the plurality of different communication channels back to the web services communication mechanisms of the integration tier. The Integration Tier Limitation does not recite only that the integration tier communicates with device types over a plurality of different communication channels, as is suggested by the Petition’s section title.

Our foregoing understanding of the plain language of claim 1 is consistent with the ’196 patent specification. In particular, the specification describes that “[i]ntegration tier 101 can . . . include a communication (e.g., Web services) API and/or other communication mechanisms to accept messages from channels 111,” and “[e]ach of channels 111 can be integrated to one or more mechanisms for sending messages to integration tier 101.” Ex. 1001, 9:65–10:7, Fig. 1. It also states that the cloud-based transaction system 210 illustrated in Figure 2 “provides a web interface” that “receives a subscriber-initiated transaction over one of a plurality of communication channels (111 from FIG. 1).” *Id.* at 11:61–12:12.

In conclusion, we reject Petitioner’s apparent argument that the “plurality of different communication channels” recited in the Integration Tier Limitation of claim 1 may include *any* communication channel that leads to the integration tier.

The Integration Tier Limitation requires no further construction for purposes of this proceeding. *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’”).

b) Dill’s Disclosure

As discussed in detail above, Petitioner asserts Dill discloses the “integration tier” of claim 1 as transfer options module 145, and Dill discloses the “web services communication mechanisms” of claim 1 as web interface 137. *See supra* Section III.F.1 (summarizing the Petition); Section III.F.3 (summarizing the Petitioner Reply).

(i) Integration Tier Including Web Services Communication Mechanisms for Interfacing with Devices Over a Plurality of Different Communication Channels

For the following reasons, we conclude 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 devices over *a plurality of different communication channels*, as is required by the Integration Tier Limitation of claim 1.

Petitioner argues Dill provides the claimed “plurality” of communication channels between transfer options module 145 and other devices as the collection of: (1) a first communication channel to web interface 137; (2) a second communication channel to Interactive Voice Response (IVR) interface 136; (3) a third communication channel to other interface(s) 138; and/or (4) a fourth communication channel to agent system 135 and mobile network 115. *See* Pet. 22–26, 27–28, 31–32 (summarized above, citing Ex. 1005, Fig. 9, ¶¶ 15, 33, 47, 51, 52, 54, 100,

101, 104; Ex. 1003 ¶¶ 82, 87–95, 99–102, 111–113); Pet. Reply 10–11 (§ III.B), 12–13 (§ III.D), 20–21 (§ III.E.2) (summarized above, further citing Ex. 1005 ¶ 10).

However, we find that of those four channels (1)–(4), only the first channel (1) is associated with web interface 137 such that it qualifies as a “communication channel,” as required by claim 1. There is no indication in the Dill disclosures cited by Petitioner that any of the other three channels (2)–(4) are associated with web interface 137. For example, Figure 9 of Dill includes a double-headed arrow to illustrate communication between web interface 137 and transfer options module 145, but Figure 9 does not include any arrows to illustrate communication between web interface 137 and any one or more of IVR interface 136, other interfaces 138, agent system 135, or mobile network 115. *See* Ex. 1005, Fig. 9. In other words, Petitioner fails to show Dill teaches web interface 137 interfaces with any devices over any of channels (2)–(4), as would be required by Petitioner’s mapping.

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. 25–26; *see also* Pet. Reply 10–11), 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.

Further, the written passages of Dill cited by Petitioner fail to indicate that web interface 137 interfaces, directly or indirectly, with any devices

over a channel associated with IVR interface 136, other interfaces 138, agent system 135, or mobile network 115. *See* Ex. 1005 ¶¶ 10, 15, 33, 47, 51, 52, 54, 100, 101, 104. We reproduce here the pertinent portions of the foregoing passages, as they relate to the Integration Tier Limitation of claim 1.

Dill's paragraph 10 pertinently provides:

According to another embodiment, a system [e.g. Fig. 9 #100] can comprise a mobile communications network [e.g. Fig. 9 #115] and a mobile device communicatively coupled with the mobile communications network. The mobile device can execute a mobile wallet application [e.g. Fig. 9 #121]. . . . The system can also include a money transfer facilitator system [e.g. Fig. 9 #140] communicatively coupled with the mobile communications network. The money transfer facilitator system can be adapted to receive the transaction identifier from the mobile wallet application [and] send a recipient identifier to the mobile wallet application via the mobile communications network

Ex. 1005 ¶ 10. This passage discloses that money transfer facilitator system 140 communicates with mobile wallets 125 and 130 using mobile network 115. However, the passage does not disclose that web interface 137 interfaces, directly or indirectly, with any devices over mobile network 115.

Dill's paragraph 15 pertinently provides:

According to still another embodiment, a money transfer facilitator system [e.g. Fig. 9 #140] can comprise one or more interfaces [e.g. Fig. 9 #136, 137, 138] for conducting money transfer transactions and a transfer options module [e.g. Fig. 9 #145] communicatively coupled with the one or more interfaces. For example, the one or more interfaces can comprise at least one of an Interactive Voice Response (IVR) interface, a web interface, an interface to an agent system [e.g. Fig. 9 #135], or other interface. The transfer options module can be adapted to receive transaction information for a money transfer transaction from a sender through at least one or [sic

“of”] the interfaces, 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. . . .

Ex. 1005 ¶ 15. This passage discloses that transfer options module 145 communicates with devices using any one of the described communication channels illustrated as arrows in Figure 9. However, the passage does not disclose that web interface 137 interfaces, directly or indirectly, with any devices over any of the communication channels associated with IVR interface 136, other interfaces 138, agent system 135, or mobile network 115.

Dill’s paragraph 33 pertinently provides:

According to one embodiment, a money transfer transaction can be initiated through a variety of channels. . . . The money transfer transaction may be initiated from a retail agent location of a money transfer facilitator (such as Western Union), from a web site of the money transfer facilitator, from a telephone money transfer service of the money transfer facilitator, from a mobile money transfer send, a kiosk, an ATM or from other channels. In any of the channels, the transaction may be staged by the sender and then completed at a later time. For example, a sender can stage a transaction by calling an IVR or speaking with an operator for the money transfer facilitator to provide transaction information (e.g., sender name, receiver name, and/or amount) and then complete the transfer by visiting an Agent location and paying the transfer amount, along with applicable fees. Similarly, a sender may stage a transaction by paying for it in advance in a checkout lane and then later providing the money transfer facilitator with transaction information (e.g., by providing the transaction information via IVR, live operator and/or web page). . . .

Ex. 1005 ¶ 33. This passage discloses that transfer options module 145 communicates with devices using a variety of communication channels

including “a web site” of money transfer facilitator system 140. However, the passage does not disclose that the web site (much less web interface 137) interfaces, directly or indirectly, with any devices over any of the other communication channels.

Dill’s paragraph 47 pertinently provides:

As noted above, embodiments of the present invention provide methods and systems for supporting money transfer transactions initiated by and/or conducted through a variety of channels but are not limited to a wireless communication channel or systems including or using a wireless communication device. Therefore, according to still another embodiment, a money transfer facilitator system [e.g. Fig. 9 #140] can comprise one or more interfaces [e.g. Fig. 9 #136, 137, 138] for conducting money transfer transactions and a transfer options module [e.g. Fig. 9 #145] communicatively coupled with the one or more interfaces. For example, the one or more interfaces can comprise at least one of an Interactive Voice Response (IVR) interface, a web interface, an interface to an agent system, or other interface. The transfer options module can be adapted to receive transaction information for a money transfer transaction from a sender through at least one or [sic “of”] the interfaces, 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. . . .

Ex. 1005 ¶ 47. This passage is largely to the same effect as paragraphs 15 and 33 discussed above, although it adds that the various channels may be either wired channels or wireless channels. That addition has nothing to do with whether web interface 137 interfaces, directly or indirectly, with any devices over any of the communication channels associated with IVR interface 136, other interfaces 138, agent system 135, or mobile network 115.

Dill's paragraph 51 pertinently provides:

The system [of Figure 1] can also include an agent 135 in communication with the money transfer facilitator 140. The agent 135 can comprise a retail outlet location and associated systems of the money transfer facilitator 140. Generally speaking, the agent 135 provides a channel by which entities can access the services of the money transfer facilitator 140. It should also be noted that, while not illustrated here for the sake of simplicity and clarity, the agent 135 and/or money transfer facilitator 140 can also provide other channels for accessing the services of the money transfer facilitator 140. For example, such channels can include but are not limited to a web site, a telephone service, a kiosk, an ATM or other channels. . . . For example, a sender 105 can access the services of the money transfer facilitator 140 via a web site of the money transfer facilitator 140[.] . . .

Ex. 1005 ¶ 51. This passage is to the same effect as paragraphs 15, 33, and 47 discussed above.

Dill's paragraph 52 pertinently provides:

The system 100 [of Figure 1] can also include a mobile network 115, such as a cellular or other wireless network, communicatively coupled with the agent 135 and/or the money transfer facilitator 140. . . . [T]he mobile network 115 and mobile network operator system 120 can support communication to and/or from mobile devices communicatively coupled therewith such as a mobile device associated with the sender 105 and/or a mobile device associated with the recipient 110. . . .

Ex. 1005 ¶ 52. This passage discloses that money transfer facilitator 140 and agent system 135 of Figure 9 communicate with mobile devices associated with a sender and recipient using mobile network 115 which can be a wireless network. However, it does not disclose that web interface 137 of Figure 9 interfaces, directly or indirectly, with agent system 135 or mobile network 115.

Dill's paragraph 54 pertinently provides:

According to one embodiment [of Figure 1], the money transfer facilitator 140 . . . can receive the request to initiate the money transfer transaction from the mobile wallet application 121 of a mobile network operator 120, from a web site of the money transfer facilitator 140, from the agent 135, from a telephone money transfer service of the money transfer facilitator 140, from a kiosk, from an ATM or from another channel. . . .

Ex. 1005 ¶ 54. This passage is to the same effect as paragraphs 15, 33, and 47 discussed above.

Dill's paragraphs 100 and 101 pertinently provide:

FIG. 9 is a block diagram illustrating another exemplary system for making financial transfers according to one embodiment of the present invention. . . . [T]he system 100 can include a money transfer facilitator system 140 as described above [in connection with Figure 1] that may be adapted to receive transaction information from a mobile wallet application 121 via a mobile network 115 as described in detail above.

As illustrated here [in Figure 9], the money transfer facilitator system 140 can additionally or alternatively comprise one or more interfaces 136–138 for conducting money transfer transactions and a transfer options module 145 communicatively coupled with the one or more interfaces 136–138. For example, the one or more interfaces 136–138 can comprise at least one of an Interactive Voice Response (IVR) interface 136, a web interface 137, as well as or instead of an interface to an agent system 135, a telephone interface to a customer service representative, or other interfaces 138. The 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. . . .

Ex. 1005 ¶¶ 100–101. These passages are to the same effect as paragraphs 15, 33, and 47 discussed above.

Dill’s paragraph 104 pertinently provides:

Such [money transfer] services can be provided to the recipient 110 [in Figure 9] in a variety of ways. For example, a notification can be provided to the recipient 110 via a mobile device and mobile network 115 as described above. Additionally or alternatively, a telephone call, telegram, email, SMS, U.S. postal letter, or other type of message can be sent to the recipient 110 providing the recipient 110 with notification of the transfer transaction and possibly instructions and/or options. Via one of the interfaces 136–138, e.g., by logging onto a website, calling an IVR, visiting an agent location, etc. depending upon the notification and/or instructions provided, the recipient can select a delivery option and/or provide instructions for the delivery. . . . [T]he recipient can be notified by the money transfer facilitator system, e.g., by email, U.S. mail, SMS, etc. . . .

Ex. 1005 ¶ 104. This passage discloses that money facilitator system 140 communicates with recipient 110 using web interface 137 (by logging onto a website) as well as using other communication channels. However, the passage does not disclose that web interface 137 interfaces, directly or indirectly, with any devices over any of the other communication channels.

In sum and at best for Petitioner, the foregoing passages of Dill combine to disclose that transfer options module 145 may communicate with devices via any one of Petitioner’s four identified channels (1)–(4) as alternative communication channels. We agree with Patent Owner’s position that Dill does not disclose that web interface 137 interfaces with any devices over at least two of Petitioner’s four identified channels (1)–(4),

so as to provide the “plurality of different communication channels” required by the Integration Tier Limitation of claim 1. *See* PO Sur-reply 15–17 (summarized above).

During oral argument, we questioned Petitioner’s counsel concerning how Dill might disclose that transfer options module 145 includes web interface 137 for interfacing with a plurality of different device types over a plurality of different communication channels. *See* Tr. 22:17–30:15. Petitioner conceded 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 Figure 9. *Id.* at 25:8–10. Petitioner nonetheless 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.” *Id.* at 25:8–13 (emphasis added), 26:7–13. However, as discussed in detail above, we find no disclosure in Dill to suggest that web interface 137 interfaces, directly or indirectly, with any devices over a channel associated with agent system 135, with IVR interface 136, or with other interfaces 138.

Petitioner also cited Dill’s paragraph 90 as indicating that Dill discloses transfer options module 145 includes web interface 137 for interfacing with a plurality of different device types over a plurality of different communication channels. *See id.* at 25:2–7, 26:13–27:4. That passage pertinently 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

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. However, the passage does not disclose that web interface 137 interfaces, directly or indirectly, with any device over any of the communication channels associated with IVR interface 136, agent 135, other interface(s) 138, or mobile network 115.

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 id.* at 26:22–27:25, 28:10–15, 29:4–18, 30:4–14.

However, Petitioner’s foregoing oral argument is procedurally improper, because it was not made in the Petition or in the Petitioner Reply. *See* Pet. 21–28 (Petitioner’s initial argument for how Dill discloses the Integration Tier Limitation); Pet. Reply 10–11 (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, and agent system 135 and mobile network 115. *See, e.g.*, Pet. 26 (annotating Dill’s Figure 9 to identify the “Communication Channels”); Pet. Reply 10–11. 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 interface with web interface 137, as was suggested during the oral argument.⁷ “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)⁸, 85–86; Paper 27 (Hearing Order), 2–3; *see Dell Inc. v. Accelaron, 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”).

⁷ The Petition does state “Dill also teaches that its system is configured for transactions through a ‘web site’ and a ‘web page’ as well as notifications through ‘web page notification.’” Pet. 27 (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 Dill’s integration tier is configured to receive binary and text messages from a mobile device per claim 1 (Ex. 1001, 24:2–3; *see* Pet. 27–28 (arguing Limitation [1.3D])), not that Dill’s web services communication mechanisms interface with devices over a plurality of different communication channels per claim 1 (*see* Pet. 25–26 (arguing Limitation [1.3C])).

⁸ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

Finally, Petitioner’s reliance on Dr. Houh’s testimony (*see* Pet. 21–26 (citing Ex. 1003 ¶¶ 81–95)) is unavailing. Although Dr. Houh agrees with the arguments in the Petition and includes quotes from the cited portions of Dill (*see* Ex. 1003 ¶¶ 81–95), his testimony suffers the same deficiencies as the Petition. We do not credit his conclusion that Dill includes the requisite disclosure because he fails to provide sufficient supporting explanation or evidence. *See* 37 C.F.R. § 42.65(a).

In conclusion 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 over a plurality of different communication channels, as is required by the Integration Tier Limitation of claim 1.

(ii) *Integration Tier Including Web Services Communication Mechanisms for Interfacing with a Plurality of Different Device Types*

For the following reasons, we conclude Petitioner also 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 required by the Integration Tier Limitation of claim 1.

Petitioner argues in the Petition that Dill provides the “plurality of different device types” of the Integration Tier Limitation, because “Fig. 9 shows interfaces 136–138, which represent a plurality of different device types (i.e., IVR system, web site, etc.).” Pet. 26 (emphasis added) (citing Ex. 1003 ¶ 94) (addressing limitation [1.3C], which includes the recited “plurality of different devices” term); *see also id.* at 32 (“As discussed in [1.3C], the interfaces 136–138 represent a plurality of different device types

(i.e., IVR system, web site, etc.) as well as different communication channels[.]”). Petitioner reiterates in the Petitioner Reply that “Dill’s . . . IVR system 136 and other interfaces 138 . . . are the claimed ‘plurality of different device types,’” such that “[t]he two-headed arrows between these devices and transfer options module 145 [in Figure 9] are the claimed ‘plurality of different communication channels.’” Pet. Reply 10–11 (citing Pet. 25–26). The Petitioner Reply also states: “The Petition identified *a plurality of different device types (at least IVR 136, Other Interfaces 138, and a user’s mobile device) . . .*” *Id.* at 11 (emphasis added) (citing Pet. 23, 26, 33).

However, we are not persuaded, for reasons similar to those expressed above in Section III.F.5(b)(i) relating to Dill’s alleged disclosure of the plurality of different communication channels required by the Integration Tier Limitation of claim 1. That is, even if Dill’s IVR interface 136 and other interfaces 138 can be considered “device types” per claim 1, still there is no disclosure in Dill that web interface 137 interfaces, directly or indirectly, with IVR interface 136 or other interfaces 138. Further, to the extent Petitioner relies on the “mobile devices” of sender 105 and/or recipient 110 as being the device types of the Integration Tier Limitation, Petitioner does not explain adequately why those devices may be considered to be “different device *types*” as claimed. Ex. 1001, 23:67–24:1 (emphasis added); *see* Pet. 22–23, 25–26, 32–33. 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 required by the Integration Tier Limitation of claim 1.

c) Patent Owner's Other Arguments

The Patent Owner Response raises several other arguments that we need not and do not reach in this Decision, given the bases for our Decision as set forth above. Three of these arguments concern the Integration Tier Limitation directly or indirectly and so, for the sake of clarity, we note expressly that this Decision does not rely on these arguments as a basis for ruling in Patent Owner's favor.

First, we do not reach Patent Owner's argument that Dill fails to disclose "an integration tier . . . *including* web services communication mechanisms," as recited in claim 1. Ex. 1001, 23:64–66 (emphasis added); *see* PO Resp. 2–3, 5 ("First"), 11 (§ III.A), 27–33 (§ VI.A); Pet. Reply 2–3 (§ II.A), 8–10 (§ III.A); PO Sur-reply 1–11 (§ II), 13–14 (§ IV). Second, we do not reach Patent Owner's argument that Dill does not disclose a "*web services*" communication mechanism, as that term in claim 1 should be construed. Ex. 1001, 23:65–66 (emphasis added); *see* PO Resp. 35 n.9, 43–46 (§ VI.F); Pet. Reply 3–5 (§ II.B), 12–13 (§ III.D); PO Sur-reply 21–25 (§ VIII). Third, we do not reach Patent Owner's argument that Dill fails to disclose its computing system "receive[s] communication from the agent terminal over at least one of *the* plurality of channels," as recited in claim 1. PO Resp. 5–6 ("Third," quoting Ex. 1001, 24:38–39 (emphasis by Patent Owner)), 37–39 (§ VI.D); Pet. Reply 13–16 (§ III.E); PO Sur-reply 18–20 (§ VI). Fourth, we do not reach Patent Owner's argument that Dill fails to disclose a mobile wallet application installed on a customer's mobile device. *See* PO Resp. 46–50 (§ VI.G); Pet. Reply 16–19 (§ III.F.1); PO Sur-reply 20–21 (§ VII). Fifth, we do not reach Patent Owner's argument that Dill fails to disclose web services communication mechanisms for interfacing

with a mobile wallet application. *See* PO Resp. 11–12 (§ III.B), 39–43 (§ VI.E); Pet. Reply 20–22 (§ III.F.2); PO Sur-reply 20–21 (§ VII).

6. *Conclusion as to Claims 1–7*

Based on the record presented, we conclude Petitioner has not shown by a preponderance of the evidence that Dill discloses the Integration Tier Limitation of independent claim 1 and its dependent claims 2–7, so Petitioner has not shown those claims are unpatentable as having been obvious over Dill, Vadhri, and Akashika.

G. *Claims 8–20*

Independent claims 8 and 16 each recite a limitation that is materially identical to the Integration Tier Limitation of independent claim 1, which is discussed above in Section III.F. *See* Ex. 1001, 25:40–46 (claim 8), 26:56–62 (claim 16).

When addressing this subject matter of claims 8 and 16 that overlaps with claim 1, Petitioner and Dr. Houh simply refer back to their arguments and testimony addressing the Integration Tier Limitation of claim 1. *See* Pet. 67–68 (table listing limitations [8.10A], [8.10C], and [8.10D], and referring back to the “substantively identical” limitations [1.3A], [1.3B], and [1.3C]), 70–71 (addressing limitation [8.10B]), 75–76 (table listing limitations [16.9A]–[16.9D], and referring back to the “substantively identical” limitations [1.3A], [8.10B], [1.3B], and [1.3C]); Pet. Reply 1 n.1, 21–22; Ex. 1003 ¶¶ 263–268 (identifying and discussing limitations [8.10A]–[8.10D]), ¶¶ 311–314 (identifying and discussing limitations [16.9A]–[16.9D]).

Accordingly, for the reasons provided above in Section III.F in connection with the Integration Tier Limitation of claim 1, we conclude Petitioner has not shown by a preponderance of the evidence that any of independent claims 8 and 16, and their respective dependent claims 9–15 and 17–20, are unpatentable as having been obvious over Dill, Vadhri, and Akashika.

H. Claims 21 and 22

Independent claims 21 and 22 each recite a limitation that is materially identical to the Integration Tier Limitation of independent claim 1, which is discussed above in Section III.F. *See* Ex. 1001, 27:35–41 (claim 21), 28:48–54 (claim 22).

When addressing this subject matter of claims 21 and 22 that overlaps with claim 1, Petitioner and Dr. Houh simply refer back to their arguments and testimony addressing the Integration Tier Limitation of claim 1. *See* Pet. 78 (table listing limitations [21.3A]–[21.3C], and referring back to the “substantively identical” limitations [1.3A]–[1.3C]), 84 (table listing limitations [22.3A]–[22.3C], and referring back to the “substantively identical” limitations [1.3A]–[1.3C]); Pet. Reply 1 n.1, 21–22; Ex. 1003 ¶¶ 331–333 (identifying and discussing limitations [21.3A]–[21.3C]), ¶¶ 370–372 (identifying and discussing limitations [22.3A]–[22.3C]).

Accordingly, for the reasons provided above in Section III.F in connection with the Integration Tier Limitation of claim 1, we conclude Petitioner has not shown by a preponderance of the evidence that either of independent claims 21 and 22 is unpatentable as having been obvious over Dill, Vadhri, and Akashika.

IV. SUMMARY OF CONCLUSIONS

In summary, we determine Petitioner has not shown by a preponderance of the evidence that any of claims 1–22 of the '196 patent is unpatentable, as shown in the following table:

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

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–22 of the '196 patent have not been proven by a preponderance of the evidence to be unpatentable;

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

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