

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PAYPAYL HOLDINGS LTD

Petitioner,

v.

FINTIV, INC.,

Patent Owner.

Case No. IPR2023-00744
U.S. Patent No. 8,538,845

PATENT OWNER'S NOTICE OF APPEAL

Notice is hereby given, pursuant to 37 C.F.R. § 90.2(a) and 35 U.S.C. §§ 141(c), 142, and 319, that Patent Owner, Fintiv, Inc., appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision of the Patent Trial and Appeal Board (“PTAB”) in Case No. IPR2023-00744, entered October 2, 2024 (Paper No. 29) (Exhibit A). For the limited purpose of providing the Director with the information specified in 37 C.F.R. § 90.2(a)(3)(ii), Patent Owner indicates that the issues on appeal may include, but are not limited to, the following: (1) whether the PTAB erred in finding that Petitioner has shown by a preponderance of the evidence that Claims 1-3 and 5-7 of U.S. Patent No. 8,538,845 (“the ’845 patent”) are unpatentable; (2) whether the PTAB erred in finding that Petitioner has shown by a preponderance of the evidence that Claims 5 and 7 are unpatentable under 35 U.S.C. § 102(b) as anticipated by U.S. Patent Publication No. 2007/02556220 A1 (“Tumminaro”); (3) whether the PTAB erred in finding that Petitioner has shown by a preponderance of the evidence that Claims 5 through 7 are unpatentable under 35 U.S.C. § 103(a) as obvious in view of Tumminaro and the background knowledge of a person of ordinary skill in the art; (4) whether the PTAB erred in finding that Petitioner has shown by a preponderance of the evidence that Claims 1 through 3 are unpatentable under 35 U.S.C. § 103(a) as obvious in view of Tumminaro, U.S. Patent. Publication No. 2006/0253335 A1 (“Keena”), and the background knowledge of a person of ordinary skill in the art;

and (4) whether the PTAB erred in any further findings or determinations of the Board supporting or relating to the issues above, including the Board's consideration and/or interpretation of the expert testimony, prior art, and other evidence in the record; the Board's claim constructions; and the Board's factual findings, conclusions of law, or other determinations supporting or related to the issues above.

Simultaneous with this submission and in accordance with 37 C.F.R. § 90.2(a), a copy of this Notice of Appeal is being filed with the Director of the United States Patent and Trademark Office, filed with the PTAB, and served upon Petitioner in accordance with 37 C.F.R. § 42.6(e). In addition, this Notice of Appeal, along with the required docketing fees, is being filed with the Clerk's Office for the United States Court of Appeals for the Federal Circuit in accordance with Fed. Cir. R. 15(a)(1).

Respectfully Submitted,

November 25, 2024

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CERTIFICATE OF FILING

The undersigned hereby certifies that, in addition to being electronically filed through E2E, a true and correct copy of the above-captioned PATENT OWNER'S NOTICE OF APPEAL is being filed with the Director of the U.S. Patent and Trademark office, via Priority Mail, on November 25, 2024, at the following address:

Director of the United States Patent and Trademark Office
c/o Office of the General Counsel, 10B20
Madison Building East
600 Dulany Street
Alexandria, VA 22314-5793

The undersigned also hereby certifies that a true and correct copy of the above-captioned PATENT OWNER'S NOTICE OF APPEAL is being filed and the filing fee paid via electronic filing system, CM/ECF, with the Clerk's Office of the U.S. Court of Appeals for the Federal Circuit on November 25, 2024.

Respectfully Submitted,

November 25, 2024

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CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a copy of the foregoing PATENT OWNER'S NOTICE OF APPEAL was served via email (as consented to by counsel) on November 25, 2024, to lead and backup counsel of record for Petitioner as follows:

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EXHIBIT A

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PAYPAL HOLDINGS, INC. and PAYPAL, INC.,
Petitioner,

v.

FINTIV, INC.,
Patent Owner.

IPR2023-00744
Patent 8,538,845 B2

Before KRISTEN L. DROESCH, MICHAEL R. ZECHER, and
GEORGE R. HOSKINS, *Administrative Patent Judges*.

ZECHER, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Petitioner, PayPal Holdings, Inc. and PayPal, Inc. (collectively, “PayPal”), filed a Petition requesting an *inter partes* review (“IPR”) of claims 1–3 and 5–7 of U.S. Patent No. 8,538,845 B2 (Ex. 1001, “the ’845 patent”). Paper 2 (“Pet.”). Patent Owner, Fintiv, Inc. (“Fintiv”), filed a Preliminary Response. Paper 7. Taking into account the arguments presented in Fintiv’s Preliminary Response, we determined that the information presented in the Petition established that there was a reasonable likelihood that PayPal would prevail with respect to challenging at least one of claims 1–3 and 5–7 of the ’845 patent as unpatentable. Pursuant to 35 U.S.C. § 314, we instituted this IPR on October 19, 2023, as to all challenged claims and all grounds raised in the Petition. Paper 10 (“Dec. on Inst.”).

During trial, Fintiv filed a Patent Owner Response (Paper 14, “PO Resp.”), PayPal filed a Reply to the Patent Owner Response (Paper 16, “Pet. Reply”), and Fintiv filed a Sur-reply to the Reply (Paper 17, “PO Sur-reply”). In addition, an oral argument was held on July 18, 2024, and a transcript of the hearing is included in the record. Paper 28 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 1–3 and 5–7 of the ’845 patent. For the reasons we identify below, we hold that PayPal has demonstrated by a preponderance of the evidence that all challenged claims are unpatentable.

A. Real Party in Interest (“RPI”)

The Petition identifies PayPal Holdings, Inc. and PayPal, Inc. as the RPIs. Pet. 75. Fintiv identifies itself as the only RPI. Paper 3, 1 (Fintiv’s Mandatory Notices Pursuant to 37 C.F.R. § 42.8(a)(2)).

B. Related Matters

The parties indicate that the ’845 patent is the subject of a district court case titled *Fintiv, Inc. v. PayPal Holdings, Inc.*, No. 6:22-cv-00288-ADA (W.D. Tex. filed Mar. 17, 2022). Pet. 75; Paper 3, 1. In addition to this Petition, PayPal indicates that Apple Inc. (“Apple”) filed the following three petitions challenging related patents owned by Fintiv: (1) *Apple Inc. v. Fintiv, Inc.*, IPR2022-00976, Paper 2 (PTAB May 16, 2022) (challenging claims 1–3 of U.S. Patent No. 9,892,386 B2); (2) *Apple Inc. v. Fintiv, Inc.*, IPR2023-00398, Paper 2 (PTAB Dec. 2, 2022) (challenging claims 1–22 of U.S. Patent No. 10,438,196 B2); and (3) *Apple Inc. v. Fintiv, Inc.*, IPR2023-00399, Paper 2 (PTAB Dec, 2, 2022) (challenging claims 1–22 of U.S. Patent No. 9,208,488 B2). Pet. 76. We also take this opportunity to note that Apple filed the following two additional petitions challenging patents where the patent owner identified Fintiv as an RPI: (1) *Apple Inc. v. Mozido Corfire-Korea, Ltd.*, IPR2022-01149, Paper 2 (PTAB June 16, 2022) (challenging claims 1–13 of U.S. Patent No. 10,223,692 B2); and (2) *Apple Inc. v. Mozido Inc.*, IPR2022-01150, Paper 2 (PTAB June 16, 2022) (challenging claims 1–21 of U.S. Patent No. 9,189,785 B2). The Board has issued a final written decision in each of the five related proceedings. See IPR2022-00976, Paper 27; IPR2023-00398, Paper 31; IPR2023-00399, Paper 31; IPR2022-01149, Paper 24; IPR2022-01150, Paper 24.

C. The '845 Patent

The '845 patent, titled “Monetary Transaction System,” issued from U.S. Patent Application No. 13/484,199 (“the '199 application”), filed on May 30, 2012. Ex. 1001, codes (54), (21), (22). The '199 application claims the benefit of the following two provisional applications: (1) U.S. Provisional Application No. 61/522,099, filed on August 10, 2011; and (2) U.S. Provisional Application No. 61/493,064 (Ex. 2003, “the '064 application”), filed on June 3, 2011. Ex. 1001, code (60).

The '845 patent generally relates to a “monetary transaction system (also referred to as a ‘mobile wallet platform’, ‘mobile wallet program’ or ‘mobile wallet transaction system’)” between an “‘unbanked user’ that does not have access to a bank account” and another entity, such as “a person, a retail store, an agent, or other entity.” Ex. 1001, 6:4–7, 3:45–47. The monetary transaction system may be used to perform a number of different tasks, including “depositing funds in a mobile wallet, withdrawing funds from a mobile wallet, [and] . . . transferring funds through a mobile wallet.” *Id.* at 3:51–62.

Figure 2 of the '845 patent, reproduced below, illustrates one embodiment of a monetary transaction system. Ex. 1001, 2:31–32.

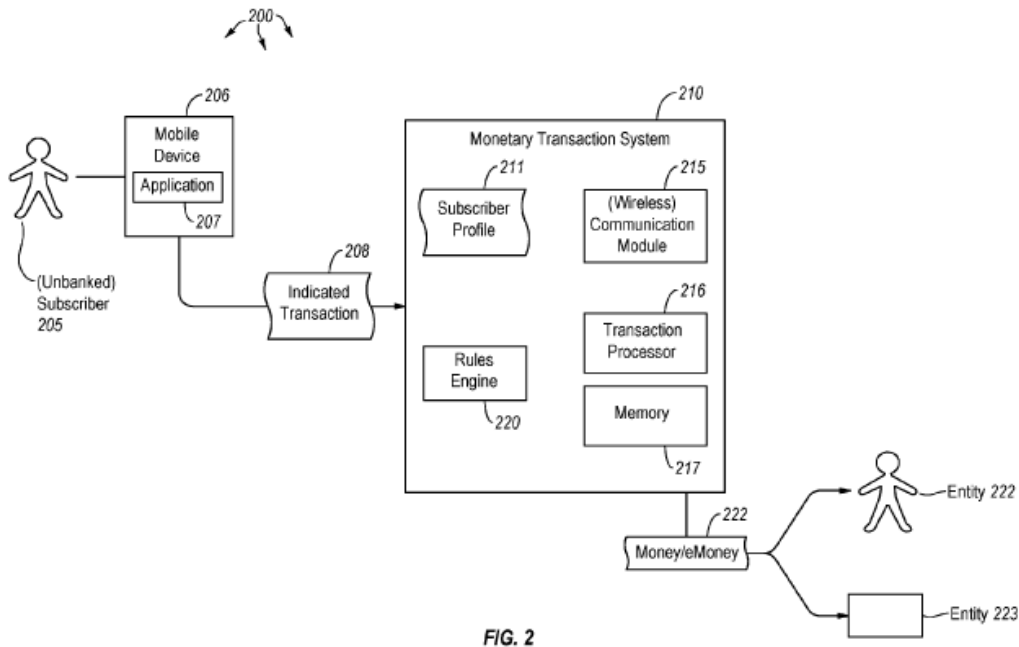


FIG. 2

Figure 2 illustrates monetary transaction system 200 that includes unbanked subscriber 205 using mobile device 206 running mobile wallet application 207 to conduct indicated transaction 208 with entity 222 or 223 (e.g., a user or agent). *Id.* at 13:62–14:32. Using mobile device 206 running mobile wallet application 207, unbanked subscriber 205 sends indicated transaction 208 to transaction processor 216 in mobile wallet platform 210, which, in turn, accesses profile information 211 about the unbanked subscriber and consults rules engine 220 to determine whether the indicated transaction is permissible. *Id.*

Despite subscriber 205 being identified as “unbanked,” the ’845 patent discloses that, after creating profile 211 with monetary transaction system 200, the unbanked subscriber is not precluded from accessing a bank account. *See* Ex. 1001, 13:62–14:32. For instance, the ’845 patent states that determining whether indicated transaction 208 is permissible based on data in unbanked subscriber’s profile 211 may include determining “whether

the [unbanked] subscriber has enough eMoney in his or her stored value account, or has money in his or her bank account.” *Id.* at 14:23–25.

D. Challenged Claims

Claims 1 and 5 are independent. Independent claims 1 and 5 are each directed to “[a] monetary transaction system for conducting monetary transactions between unbanked subscribers and other entities.” Ex. 1001, 29:33–35, 31:12–14. Claims 2 and 3 directly depend from independent claim 1, and claims 6 and 7 directly depend from independent claim 5. *Id.* at 30:13–20, 32:27–33. Independent claims 1 and 5 are illustrative of the challenged claims and are reproduced below.

1. A monetary transaction system for conducting monetary transactions between unbanked subscribers and other entities, the system comprising: a mobile device configured to run a monetary transaction system application; an unbanked monetary transaction system subscriber that has a profile with the monetary transaction system, wherein the unbanked subscriber indicates, via the monetary transaction system application, one or more specified transactions that are to be performed using the monetary transaction system;

a monetary transaction system processor that performs the one or more transactions specified by the unbanked subscriber, wherein performing the specified transactions includes communicating with a monetary transaction database to determine whether the transaction is permissible based on data indicated in the unbanked subscriber’s profile;

at least one entity that is to be involved in the specified transaction, the at least one entity having a profile with the monetary transaction system; and

wherein the monetary transaction system is implemented to deposit funds at an agent branch through a mobile wallet, including performing the following steps:

receiving communication from an agent branch over one of a plurality of channels connected to the monetary transaction system, the agent communication indicating that the unbanked subscriber desires to deposit a specified amount of funds into the unbanked subscriber's mobile wallet account;

validating the status of the unbanked subscriber's mobile wallet account; determining if the agent branch is authorized to receive deposited money; performing one or more of a limit check and a velocity check on the unbanked subscriber's mobile wallet account, the limit check determining whether sufficient funds are available to make the deposit amount, the velocity check determining whether the unbanked subscriber has exceeded a specified number of transactions within a specified time period;

crediting the unbanked subscriber's mobile wallet account with the specified amount of funds when the agent bank is authorized to receive the deposited money;

returning a notification to the agent branch confirming the deposit; and notifying the subscriber that the specified amount of funds was deposited in the unbanked subscriber's mobile wallet account over at least one of the plurality of channels connected to the monetary transaction system.

Ex. 1001, 29:33–30:12.

5. A monetary transaction system for conducting monetary transactions between unbanked subscribers and other entities, the system comprising:

a mobile device configured to run a monetary transaction system application;

a monetary transaction system subscriber that has a profile with the monetary transaction system, wherein the subscriber indicates, via the monetary transaction system application, one or more specified transactions that are to be performed using the monetary transaction system;

a monetary transaction system processor that performs the one or more transactions specified by the subscriber, wherein

performing the specified transactions includes communicating with a monetary transaction database to determine whether the transaction is permissible based on data indicated in the subscriber's profile;

at least one entity that is to be involved in the specified transaction, the at least one entity having a profile with the monetary transaction system; and

wherein the monetary transaction system is implemented to transfer money between mobile wallets, including performing the following steps:

receiving subscriber communication over one of a plurality of channels connected to the monetary transaction system, the subscriber communication indicating that an unbanked subscriber desires to transfer a specified amount of funds to specified recipient using a specified payment method from the subscriber's mobile wallet;

validating the status of the selected payment method;

performing at least one of a limit check and a velocity check on the selected payment method, the limit check determining whether sufficient funds are available to make the deposit amount, the velocity check determining whether the unbanked subscriber has exceeded a specified number of transactions within a specified time period;

validating the status of the specified recipient to ensure the specified recipient has a valid mobile wallet account;

debiting the specified payment method by the specified amount of funds;

transferring the specified amount of funds to the specified recipient over at least one of the plurality of channels connected to the monetary transaction system;

notifying the unbanked subscriber that the specified amount of funds was transferred to the specified recipient over at least one of the plurality of channels connected to the monetary transaction system.

Ex. 1001, 31:12–32:26.

E. Asserted Prior Art References

PayPal relies on the prior art references set forth in the table below.

Name¹	Reference	Dates	Exhibit No.
Tumminaro	US 2007/0255620 A1	published Nov. 1, 2007; filed Mar. 30, 2007	1005
Keena	US 2006/0253335 A1	published Nov. 9, 2006; PCT filed Jan. 22, 2004	1006

F. Asserted Grounds of Unpatentability

PayPal challenges claims 1–3 and 5–7 of the '845 patent based on the asserted grounds of unpatentability set forth in the table below. Pet. 5, 29–71.

Claim(s) Challenged	35 U.S.C. §	References
5, 7	102(b) ²	Tumminaro
5–7	103(a)	Tumminaro, the background knowledge of a person of ordinary skill in the art
1–3	103(a)	Tumminaro, Keena, the background knowledge of a person of ordinary skill in the art

¹ For clarity and ease of reference, we only list the first named inventor.

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102 and 103, effective March 16, 2013. Because the '845 patent was filed before this date, the pre-AIA versions of §§ 102 and 103 apply. Ex. 1001, code (22).

PayPal supports its arguments in the Petition with the testimony of Dr. Sandeep Chatterjee. Ex. 1003 (Declaration of Dr. Chatterjee in support of Petition). Fintiv supports its arguments in the Patent Owner Response with the testimony of Kai Johnson. Ex. 2007 (Declaration of Mr. Johnson in support of Patent Owner's Response).

II. ANALYSIS

A. Claim Construction

In this IPR, claim terms are construed using the same claim construction standard as in a civil action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b). That is, claim terms generally are construed in accordance with their ordinary and customary meaning, as would have been understood by a person of ordinary skill in the art, in view of the specification and the prosecution history pertaining to the patent at issue. *See id.* The ordinary and customary meaning of a claim term “is its meaning to the ordinary artisan after reading the entire patent,” and “as of the effective filing date of the patent application.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313, 1321 (Fed. Cir. 2005) (en banc).

In the Petition, PayPal contends that the following four claim terms require construction: (1) “unbanked subscriber” (independent claims 1 and 5) should be construed as “one that does not have [(or have access to)] a financial institution account”; (2) “wherein performing the specified transaction includes communicating with a monetary transaction database to determine whether the transaction is permissible based on data indicated in the [unbanked] subscriber’s profile” (independent claims 1 and 5) should be construed as “communicating with a monetary transaction database to approve or deny a transaction based on data in the subscriber’s profile,

including the balance of the user’s account and the number of transactions performed in a given time period”; (3) “validating the status of the specified recipient to ensure the specified recipient has a valid mobile wallet account” (independent claim 5 only) should be construed as “determining that the specified recipient has a mobile wallet account that is allowed to receive the transferred funds”; and (4) “validating the status of the unbanked subscriber’s mobile wallet account” (independent claim 1 only) should be construed as “determining that the unbanked subscriber’s mobile wallet account is allowed to receive the deposited funds.” Pet. 16–20 (citing Ex. 1001, 1:43–46, 3:38–41, 12:25–27, 14:19–25, 19:39–44; Ex. 1003 ¶¶ 80–95; Ex. 1011, 37, 66, 151; Ex. 1027, 39, 65, 39).

1. “unbanked subscriber” (independent claims 1 and 5)

For purposes of institution, we determined that the only claim term that required construction was “unbanked subscriber” because, based on the preliminary record, there appeared to be a dispute between the parties regarding its scope and meaning. Dec. on Inst. 10. Upon reviewing the specification of the ’845 patent, we preliminarily found that it provides an explicit definition for the claim term “unbanked subscriber” because it states that “[a]n ‘unbanked subscriber’ is a subscriber that does not have (or does not have access to) a bank account or credit union account.” *Id.* at 11 (quoting Ex. 1001, 12:25–27). We reasoned that, by using the verb “is” following “unbanked subscriber,” the specification sets forth an explicit definition for this claim term with reasonable clarity, deliberateness, and precision. *Id.* We declined to adopt PayPal’s proposed construction for the claim term “unbanked subscriber” because PayPal did not use the same terminology as the specification to define this claim term and, as a result, we

declined to address Fintiv’s preliminary arguments directed to the phrase “financial institution” added by PayPal’s proposed construction. *Id.* at 11–12.

During the course of trial, the parties present a wide range of arguments regarding the scope and meaning of the claim term “unbanked subscriber.” PO Resp. 14–22; Pet. Reply 1–12; PO Sur-reply 1–9. However, during the oral argument, the parties affirmatively agreed with our preliminary finding that the specification of the ’845 patent explicitly defines the claim term “unbanked subscriber” as “a subscriber that does not have (or does not have access to) a bank account or credit union account.” *See* Tr. 10:14–20 (counsel for PayPal stating that “we can agree that there is a definition here in the specification”), 37:12–16 (counsel for Fintiv agreeing that there is “an explicit definition of unbanked subscriber in the [specification]”); *see also* Ex. 1038 (Fintiv’s Responsive Claim Construction Brief filed in the district court case), 10³ (arguing the claim term “unbanked subscriber” should be accorded its plain and ordinary meaning and citing to the explicit definition for this claim term in column 12, lines 25–27, of the specification of the ’845 patent).

With the understanding that both parties agree that the specification of the ’845 patent explicitly defines the claim term “unbanked subscriber,” the dispute between the parties turns on whether the phrase “bank account” used in the specification’s explicit definition encompasses “traditional bank

³ All references to the page numbers in Fintiv’s Responsive Claim Construction Brief filed in the district court case refer to the native page numbers located in the bottom, middle portion of each page in Exhibit 1038.

accounts” and, if so, whether having or accessing “traditional bank accounts” would preclude a subscriber from being unbanked. *See, e.g.*, PO Resp. 17–18 (arguing the “language from the Specification does not qualify the type of ‘bank account,’ and certainly does not limit ‘unbanked subscribers’ to those lacking ‘*traditional*’ bank accounts”); Pet. Reply 5–7 (arguing that Fintiv’s position that “the [claim] term ‘unbanked subscriber’ prohibits a user from having access to *any* account held at a bank,” including “traditional bank accounts,” contradicts positions Fintiv took both in its opposition to PayPal’s patent eligibility challenge and in its claim construction briefing filed in the district court case).

Based on the fully developed trial record, we need not resolve whether the word “bank account” used in the specification’s explicit definition of an “unbanked subscriber” encompasses “traditional bank accounts” because, as we explain below, both the intrinsic and extrinsic evidence support allowing an “unbanked subscriber” to obtain access to a bank account upon enrolling with the monetary transaction system so he/she may use that bank account to make deposits, withdrawals, and transfers. *See, e.g., Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe 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))).

a. Intrinsic Evidence

We begin our analysis with a review of the specification of the ’845 patent. *See Phillips*, 415 F.3d at 1315 (stating that “the specification is ‘the single best guide to the meaning of a disputed term’” (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996))). We

maintain our preliminary finding that the specification of the '845 patent provides an explicit definition for the claim term “unbanked subscriber” because it states that “[a]n ‘unbanked subscriber’ is a subscriber that does not have (or does not have access to) a bank account or credit union account.” Ex. 1001, 12:25–27. This explicit definition, however, does not end our inquiry. *See, e.g., Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1383 (Fed. Cir. 2009) (Lourie, J., dissenting in part) (“It is fundamental that we must read a claim term in a manner that comports with the written description of the patent as a whole, and not simply with a single sentence, even one purporting to be a definition, that is inconsistent with the remainder of the specification.” (citation omitted)), *cited with approval in ABS Glob., Inc. v. Cytonome/ST, LLC*, 84 F.4th 1034, 1041 (Fed. Cir. 2023); *Nestle USA, Inc. v. Steuben Foods, Inc.*, 686 Fed. App'x 917, 919 (Fed. Cir. 2017) (holding that the specification of the involved patent explicitly defined the claim term “aseptic” to mean “FDA level of aseptic,” but considering other disclosures in the specification to determine the scope and meaning of the phrase “FDA level of aseptic”). Figures 2–5A and their corresponding descriptions in the specification of the '845 patent disclose embodiments that provide additional guidance as to how an “unbanked subscriber” obtains access to a bank account when enrolling with the monetary transaction system and then uses that bank account to make deposits, withdrawals, and transfers. *See id.* at 13:62–17:27, Figs. 2–5A.

Figure 2 of the '845 patent discloses how monetary transaction system 210 provides a web interface that allows unbanked subscriber 205 to enroll for a mobile wallet by creating a subscriber account. Ex. 1001, 14:33–50. After enrolling in monetary transaction system 210 and creating subscriber

profile 211 that includes the subscriber account, unbanked subscriber 205 performs indicated transaction 208 by communicating with monetary transaction database 225 to determine whether the transaction is permissible. *Id.* at 14:19–22. For instance, the ’845 patent states that determining whether indicated transaction 208 is permissible based on the unbanked subscriber’s profile 211 may include determining “whether the [unbanked] subscriber has enough eMoney in his or her stored value account, or *has money in his or her bank account.*” *Id.* at 14:23–25 (emphasis added). These disclosures contemplate that, after enrolling in monetary transaction system 210, unbanked subscriber 205 obtains access to a subscriber account. At least in one instance, the specification fairly suggests that a subscriber account constitutes a bank account created for unbanked subscriber 205 upon enrollment into monetary transaction system 210.

Figures 3 and 4 of the ’845 patent⁴ reinforce our view that, after enrolling in monetary transaction system 210, unbanked subscriber 205 obtains access to a subscriber account, because these figures illustrate how unbanked subscriber 205 deposits and withdraws cash using a mobile wallet account. Ex. 1001, 10:40–41. Beginning with step 310 of Figure 3, monetary transaction 210 receives a communication from an agent branch

⁴ When providing an overview of the ’845 patent in the Patent Owner Response, Fintiv relies, in part, on Figures 3 and 4 and their corresponding descriptions to explain embodiments that fall within the scope of the challenged claims. *See* PO Resp. 4–10; *see also* PO Sur-reply 7 (arguing “the express definition identified in the Institution Decision does not exclude every embodiment in the ’845 Patent specification, because the specification includes numerous embodiments (some of which were described in the [Patent Owner Response] at 4–10” (citation omitted)).

indicating that “unbanked subscriber 205 desires to deposit a specified amount of funds into the unbanked subscriber’s mobile wallet account.” *Id.* at 15:49–55. Turning to step 410 of Figure 4, monetary transaction 210 receives a communication from unbanked subscriber 205 indicating that “[he/she] desires to withdraw a specified amount of funds from the unbanked subscriber’s mobile wallet account at the agent branch.” *Id.* at 16:41–47. At steps 420 and 430, monetary transaction system 210 “validates the status of the unbanked subscriber’s mobile wallet account” and “determines if the balance in the unbanked subscriber’s mobile wallet account is sufficient to accommodate the requested withdrawal for the specified amount of funds.” *Id.* at 16:47–52. These deposit and withdrawal transactions with an agent branch make clear that unbanked subscriber 205 requires access to a mobile wallet account. Notably, apart from using slightly different terminology, we cannot discern any material distinctions between the subscriber account (e.g., a bank account) created upon enrollment in Figure 2 and the mobile wallet account used for deposits and withdrawals in Figures 3 and 4. *See, e.g., id.* at 14:54–57 (“The system then presents the (unbanked) subscriber’s account data associated with the mobile wallet and/or a notification indicating that enrollment was successful to the subscriber.”).

Similar to Figures 2–4, Figure 5A of the ’845 patent further illustrates that, after enrolling in monetary transaction system 210, unbanked subscriber 205 obtains access to a subscriber account, because this figure illustrates how unbanked subscriber 205 transfers eMoney using his/her account. Ex. 1001, 17:9–10. After subscriber A (501) enters identification information identifying subscriber B (502) and a transfer amount, processor

216 of monetary transaction system 210 determines if there are sufficient funds in subscriber A (501)'s account to complete the transfer. *Id.* at 17:10–15. If sufficient funds are available, monetary transaction system 210 completes the transfer and notifies both subscriber A (501) and subscriber B (502). *Id.* at 17:15–22. Accordingly, the '845 patent states that “eMoney may be transferred between two mFS [(mobile financial services)] platform subscribers, one or both of which may be unbanked.” *Id.* at 17:22–24. This transfer makes clear that, even if one of the subscribers is unbanked subscriber 205, he/she requires access to an account. Once again, apart from using slightly different terminology, we cannot discern any material distinctions between the subscriber account (e.g., a bank account) created upon enrollment in Figure 2, the mobile wallet account used for deposits and withdrawals in Figures 3 and 4, and the account used for transfers in Figure 5A.

To the extent Fintiv attempts to distinguish the subscriber account in Figure 2, the mobile wallet account in Figures 3 and 4, or the account in Figure 5A from a bank account because they only store virtual currency in the form of “eMoney” credits instead of legal tender in the form of U.S. dollars, we do not agree. *See* PO Resp. 2–10. The plain language of independent claim 1 recites, in relevant part, “the monetary transaction system is implemented to deposit *funds* at an agent branch through a mobile wallet.” Ex. 1001, 29:52–54 (emphasis added). Similarly, the plain language of independent claim 5 recites, in relevant part, “the monetary transaction system is implemented to transfer *money* between mobile wallets.” *Id.* at 31:31–32 (emphasis added). Neither the remaining limitations of independent claims 1 and 5, nor the specification of the '845

patent, limit the deposit of the claimed “funds” in independent claim 1 or the transfer of the claimed “money” in independent claim 5 to virtual currency in the form of “eMoney” credits. Moreover, as PayPal correctly argues in its Reply, the specification of the ’845 patent treats real currency and “eMoney” credits as essentially the same because it discloses that the mFS program hosted by the mFS platform (otherwise known as the monetary transaction system) transfers value “in the form of real currency or the electronic representation referred to herein as eMoney.” Pet. Reply 19 (quoting Ex. 1001, 10:30–32); *see also* Ex. 1001, 9:14–17 (“The terms ‘mFS platform,’ ‘mobile wallet platform,’ and ‘monetary transaction system’ refer to an overall platform or ecosystem of different components that work together to provide the various functions described herein on a global scale.”).

b. Extrinsic Evidence

Turning to the extrinsic evidence, the U.S. Court of Appeals for the Federal Circuit has cautioned that, “while extrinsic evidence ‘can shed useful light on the relevant art,’ . . . it is less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (quotations omitted). Although less significant, the extrinsic evidence presented by PayPal during trial supports our reading of the specification of the ’845 patent, and highlights the inconsistent positions taken by Fintiv between this proceeding and the district court case.

In Fintiv’s Responsive Claim Construction Brief filed in the district court case, Fintiv took the position that the claim term “unbanked subscriber” should be accorded its plain and ordinary meaning. Ex. 1038, 10. To support its position, Fintiv relied on the same disclosure in the

specification of the '845 that we rely on as providing an explicit definition for the claim term “unbanked subscriber.” *Id.* (citing Ex. 1001, 12:25–27). Fintiv then asserted that “the '845 Patent makes it clear that the [claim] term ‘unbanked subscriber’ *does not exclude a subscriber that has a bank account.*” *Id.* (emphasis added). According to Fintiv, “the '845 Patent explains that performing a specified transaction ‘may include communicating with the monetary transaction database 225 to determine whether the transaction is permissible based on data indicated in the unbanked subscriber’s profile (for instance, whether the subscriber has enough eMoney in his or her stored value account, ***or has enough money in his or her bank account.***’” *Id.* (emphasis in original) (quoting Ex. 1001, 14:19–25).

As evidenced by these claim construction arguments, Fintiv represented to the district court that the claim term “unbanked subscriber” “does not exclude a subscriber that has a bank account.” Ex. 1038, 10. Fintiv’s representation in this regard supports our reading of the specification of the '845 patent, which, as we explain above, allows an unbanked subscriber to obtain access to a bank account when enrolling with the monetary transaction system so that he/she may use that bank account to make deposits, withdrawals, and transfers. *See* Ex. 1001, 13:62–17:27, Figs. 2–5A.

In addition, and perhaps more importantly, the claim construction arguments we note above highlight the inconsistent positions taken by Fintiv between this proceeding and the district court case. On the one hand, Fintiv represented to the district court that the claim term “unbanked subscriber” “does not exclude a subscriber that has a bank account.” Ex. 1038, 10.

On the other hand, Fintiv appears to walk away from its representations made to the district court by arguing in this proceeding that the specification's explicit definition of the claim term "unbanked subscriber" effectively excludes a subscriber that has, or has access to, any type of bank account. *See, e.g.*, PO Resp. 17 (arguing "the Specification does not qualify the type of 'bank account,' and certainly does not limit 'unbanked subscribers' to those lacking '*traditional*' bank accounts"). In our view, "[t]his case falls squarely within the principle that a 'patent may not, like a nose of wax, be twisted one way to avoid anticipation and another to find infringement.'" *CommScope Techs. LLC v. Dali Wireless Inc.*, 10 F.4th 1289, 1299 (Fed. Cir. 2021) (quoting *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001)).

Fintiv's declarant in this proceeding, Mr. Johnson, was also Fintiv's declarant in the district court case. He offered deposition testimony in the district court case that also supports our reading of the specification of the '845 patent. During Mr. Johnson's deposition in the district court case, counsel for PayPal asked him: "[w]hat does the term 'unbanked' add to the term 'subscriber'?" Ex. 1035, 279:11–12. In response, he stated: "[s]o I think you read this term in context of the claims and the specification where it's clear that even *an unbanked subscriber may have a bank account and may use a bank account with the services.*" *Id.* at 279:14–19 (emphasis added); *see also id.* at 279:21–280:5 (testifying to the same). Later in the deposition, PayPal's counsel asked Mr. Johnson another question: "[a]nd so your opinion of unbanked subscriber is that a user that uses a bank account to deposit a specified amount of funds into its mobile wallet satisfies the limitation unbanked subscriber in claim 1 of the '845 patent, correct?" *Id.* at

287:9–15. In response, he stated: “[y]eah, as I said, you want to look at not only all the claims, but the entire specification.” *Id.* at 287:17–19.

As evidenced by Mr. Johnson’s deposition testimony in the district court case, he took the position that the claims and specification of the ’845 patent clearly indicate that “an unbanked subscriber may have a bank account and may use a bank account with the services.” Ex. 1035, 279:14–19. This deposition testimony from Mr. Johnson supports our reading of the specification of the ’845 patent, which, as we explain above, allows an unbanked subscriber to obtain access to a bank account when enrolling with the monetary transaction system so that he/she may use that bank account to make deposits, withdrawals, and transfers. *See* Ex. 1001, 13:62–17:27, Figs. 2–5A.

c. Judicial Estoppel Argument

In its Reply, PayPal contends that we should apply judicial estoppel to prevent Fintiv from advancing inconsistent positions regarding the construction of the claim term “unbanked subscriber” in this proceeding and in the district court case. Pet. Reply 5–7. In its Sur-reply, Fintiv contends that judicial estoppel does not apply under these particular circumstances because “it did not persuade the district court that an unbanked subscriber can have a bank account.” PO Sur-reply 5–6. Fintiv asserts that “[t]he district court made no such finding.” *Id.* at 6.

We do not agree with PayPal that the circumstances presented here warrant us applying judicial estoppel. Judicial estoppel is an equitable doctrine that may be invoked by a court at its discretion. *New Hampshire v. Maine*, 532 U.S. 742, 750 (2001). The Supreme Court provides several non-exclusive factors that guide a court’s decision whether to apply judicial

estoppel: (1) the party's later position must be "clearly inconsistent" with its earlier position; (2) the party must have succeeded in persuading a court to adopt the earlier position, thereby posing a "risk of inconsistent court determinations"; and (3) "the party seeking to assert an inconsistent position would derive an unfair advantage or impose an unfair detriment on the opposing party if not estopped." *Id.* at 750–51.

PayPal does not provide any evidence indicating that factor (2) has been met. As we note above, Fintiv took the position in the district court case that the claim term "unbanked subscriber" should be accorded its plain and ordinary meaning. Ex. 1038, 10. To support its position, Fintiv relied on the same disclosure in the specification of the '845 patent that we rely on as providing an explicit definition for this claim term. *Id.* (citing Ex. 1001, 12:25–27). Fintiv also asserted that claim term "unbanked subscriber" "does not exclude a subscriber that has a bank account." *Id.*

When issuing the Final Claim Constructions of the Court, the district court only indicated that the claim term "unbanked subscriber" should be accorded its plain and ordinary meaning. Ex. 1012, 2. We do not have the benefit of the district court's reasoned analysis to understand why it accorded the claim term "unbanked subscriber" its plain and ordinary meaning, much less whether the district court agreed with Fintiv that the plain and ordinary meaning of this claim term encompasses a subscriber that has a bank account. Without the district court's reasoned analysis, we are not convinced that factor (2) has been met because it does not appear that Fintiv succeeded in persuading the district court to adopt its position that the claim term "unbanked subscriber" "does not exclude a subscriber that has a bank account." Ex. 1038, 10.

Although we decline to apply judicial estoppel under these particular circumstances, that does not absolve Fintiv. As we explain above in our analysis of the extrinsic evidence presented by PayPal during the course of trial, Fintiv did, indeed, take inconsistent positions regarding the construction of the claim term “unbanked subscriber” between this proceeding and the district court case. *See supra* Section II.A.1.b. At the very least, these inconsistent positions instill doubt that Fintiv’s claim construction arguments for the claim term “unbanked subscriber” presented in this proceeding are correct.

d. Remaining Arguments

In its Patent Owner Response, Fintiv contends that it would be erroneous for us to premise the construction of the claim term “unbanked subscriber” on a requirement that the challenged claims cover every embodiment disclosed in the specification of the ’845 patent. PO Resp. 20–21. Fintiv argues that the ’845 patent discloses embodiments that apply to both banked and unbanked subscribers, but the challenged claims “are unambiguously limited to unbanked subscribers.” *Id.* at 22. According to Fintiv, we should not interpret the challenged claims in a manner that requires them to cover embodiments in the specification directed to banked subscribers (e.g., subscribers with prepaid debit credits). *Id.*

In its Reply, PayPal contends that we should not adopt Fintiv’s arguments regarding the scope and meaning of the claim term “unbanked subscriber” because they would exclude every embodiment in the ’845 patent. *See* Pet. Reply 7. According to PayPal, a partner bank participating in the mFS program maintains “mFS program master accounts that hold the funds for all mFS services and transactions.” *Id.* at 8 (emphasis omitted)

(quoting Ex. 1001, 11:56–59) (citing Ex. 1001, 11:9–16; Ex. 1037, 39:3–11). PayPal also argues that the “partner bank may elect to maintain a separate bank account for each subscriber . . . or a single master account . . . that contains the funds for all of the subscriber mobile wallet” accounts. *Id.* (quoting Ex. 1001, 12:5–8) (citing Ex. 1001, 11:20–26; Ex. 1037, 85:13–25). PayPal asserts that interpreting the claim term “unbanked subscriber” as preventing access to a single master bank account or a separate bank account “leads to the absurd result where *every* embodiment of the ’845 patent is excluded.” *Id.*

In its Sur-reply, Fintiv contends that PayPal’s argument that every embodiment of the ’845 patent holds subscriber funds in a partner bank misses the mark. PO Sur-reply 6. According to Fintiv, the specification of the ’845 patent discloses that the bank account held at the partner bank is the agent company’s bank account, which is only accessible to the agent administrator. *Id.* (citing Ex. 1001, 22:19–22, 22:46–48). Fintiv argues that PayPal has offered no evidence that the “unbanked subscriber” in the context of the ’845 patent owns the agent company’s bank account, or could make deposits and withdrawals into/from the agent company’s bank account. *Id.* at 6–7. Fintiv asserts that “[PayPal’s] characterization of the agent company’s bank account as one that ‘*holds*’ subscriber funds in no way diminishes . . . that the [unbanked] subscriber *neither has, nor has access to, the agent company’s bank account.*” *Id.* at 7.

Based on the fully developed trial record, we agree with PayPal that the specification of the ’845 patent contemplates that a partner bank participating in the mFS program (otherwise known as the monetary transaction system) may elect to maintain a separate bank account for each

subscriber or a single master account for all subscribers. *See* Pet. Reply 7–8. The specification of the ’845 patent discloses that “[a] partner bank may elect to maintain a separate bank account for each subscriber and/or agent branch, or a single master account may be established that contains the funds for all of the subscriber mobile wallet and agent branch accounts.”

Ex. 1001, 12:5–9. Notably, this disclosure refers to “each subscriber,” without distinguishing between banked and unbanked subscribers. The disclosure that a partner bank may elect to maintain a separate account for each subscriber or a single master account for all subscribers also is consistent with the embodiments illustrated in Figures 2–5A of the ’845 patent, which, as we explain above, allow an unbanked subscriber to obtain access to a bank account upon enrolling with the monetary transaction system so he/she may use that bank account to make deposits, withdrawals, and transfers. *See id.* at 13:62–17:27, Figs. 2–5A. Stated differently, if we were to read the disclosure that a partner bank may elect to maintain a separate account for each subscriber or a single master account for all subscribers as being inapplicable to an unbanked subscriber, it would effectively exclude the embodiments illustrated in Figures 2–5A of the ’845 patent. *See Vitronics Corp.*, 90 F.3d at 1583 (holding that a claim construction that excludes a preferred embodiment “is rarely, if ever correct and would require highly persuasive evidentiary support”).

Fintiv’s counter argument is premised on the notion that the specification of the ’845 patent limits the bank accounts held at a partner bank to those for agent companies or branches. *See* PO Sur-reply 6–7. The aforementioned disclosure in the specification of the ’845 patent, however, clearly contemplates that the bank accounts held at the partner bank apply to

both subscribers and agent branches. *See* Ex. 1001, 12:5–9. Contrary to Fintiv’s assertion, PayPal does not take the position that a bank account of an agent branch holds the funds of an unbanked subscriber, but rather PayPal argues—and we agree—that a partner bank participating in the mFS program may elect to maintain a separate bank account for each subscriber or a single master account for all subscribers. *See* Pet. Reply 7–8.

e. Summary

In summary, upon weighing all the evidence bearing on the construction of the claim term “unbanked subscriber,” the specification of the ’845 patent explicitly defines this claim term as “a subscriber that does not have (or does not have access to) a bank account or credit union account.” We further clarify that both the intrinsic and extrinsic evidence support allowing an unbanked subscriber to obtain access to a bank account upon enrolling with the monetary transaction system so he/she may use that bank account to make deposits, withdrawals, and transfers.

*2. “performing one or more of a limit check and a velocity check”
(independent claim 1)*

During trial, the parties present arguments that turn on the scope and meaning of the following two claim terms: (1) “performing one or more of a limit check and a velocity check”; and (2) “a limit check.” *See* PO Resp. 46–57; Pet. Reply 16–17; PO Sur-reply 15–21. In its Patent Owner Response, Fintiv contends that, based on the Federal Circuit’s decision in *SuperGuide Corp. v. DirectTV Enters.*, 358 F.3d 870, 885–86 (Fed Cir. 2004), “the language in [independent] claim 1 reciting ‘performing one or more of a limit check and a velocity check on the unbanked subscriber’s mobile wallet account,’ requires performing at least one limit check and at

least one velocity check.” PO Resp. 46–47. Fintiv argues that, to the extent PayPal asserts that these requirements of independent claim 1 can be met by performing either a limit check or a velocity check, “it is incorrect as a matter of law.” *Id.* at 47–48; *see also id.* at 55 (arguing the same).

Fintiv also argues that Tumminaro fails to teach the following two aspects of the claim term “limit check”: (1) “the limit check determining whether sufficient funds are available to make the deposit amount”; and (2) performing the limit check “on the unbanked subscriber’s mobile wallet account.” PO Resp. 48. Fintiv then argues that the specification of the ’845 patent discloses several examples of limit checks, none of which suggest that performing a limit check on the unbanked subscriber’s mobile wallet account includes an agent simply counting physical cash. *Id.* at 48–49 (citing Ex. 1001, 15:61–62, 23:45, 29:16; Ex. 2007 ¶ 138). In addition, Fintiv argues that the ’845 patent incorporates by reference the entirety of the ’064 application and, in particular, Figure 7 of the ’064 application illustrates a deposit transaction where the agent counts cash provided by the customer at step 3 and the platform performs limit checks at step 5. *Id.* at 49–50 (citing Ex. 1001, 1:10–12; Ex. 2003, 51; Ex. 2007 ¶ 141). According to Fintiv, steps 3 and 5 illustrated in Figure 7 of the ’064 application are distinct, sequential steps that require different actors. *Id.* at 50–51 (citing Ex. 2007 ¶ 142). Fintiv asserts that it would be incorrect to read Figure 7 of the ’064 application as disclosing two limit checks—a first limit check at step 3 and a second limit check at step 5. *Id.* at 52 (citing Ex. 2007 ¶ 143; Dec. on Inst. 48–49). Fintiv also asserts that it would be incorrect to view the claim term “limit check” as involving nothing more than “determining whether sufficient funds are available to make the deposit amount” because

the limit check must be “on the unbanked subscriber’s mobile wallet account.” *Id.* at 52–53 (citing Dec. on Inst. 45–46).

In its Reply, PayPal contends that the Federal Circuit’s decision in *SuperGuide* applies only if the items following “at least one of” are categories containing many possible values. Pet. Reply 16 (citing *SuperGuide*, 358 F.3d at 870; *Apple, Inc. v. Evolved Wireless LLC*, 2017 WL 6543970, at *4 (PTAB Dec. 20, 2017)⁵). In contrast to the claims at issue in *SuperGuide*, PayPal argues that “a velocity check” and “a limit check” following the “one or more of” language of independent claim 1 are not categories containing many possible values and, therefore, this independent claim requires either a velocity check or a limit check—not both. *See id.* PayPal also argues that *SuperGuide* does not apply because the specification of the ’845 patent discloses embodiments that require a velocity check or a limit check—not both. *Id.* at 16–17 (citing Ex. 1001, 15:60–65; Ex. 1037, 171:10–172:7, 173:13–22, 175:2–16). PayPal asserts that, apart from independent claim 1 reciting, in relevant part, that “the limit check determines whether sufficient funds are available to make the deposit,” the specification merely parrots the same language, without indicating whether placing a “transaction limit” on user accounts includes determining whether a maximum balance will be exceeded. *Id.* at 17 (quoting Ex. 1001, 29:16) (citing Ex. 1001, 15:61–62; Ex. 1037, 187:7–23, 188:7–9, 189:6–8).

⁵ Alternative citation *Apple Inc. v. Evolved Wireless LLC*, IPR2016-01177, Paper 27 at 7–21 (PTAB Dec. 20, 2017) (Final Written Decision).

In its Sur-reply, Fintiv contends that PayPal merely offers attorney argument in its Reply and does not rebut the testimony of Fintiv's declarant, Mr. Johnson, on the issue as to whether the claim term "limit check" includes an agent physically counting cash presented for deposit. PO Sur-reply 18 (citing Ex. 2007 ¶ 146). Fintiv argues that PayPal "fail[s] to explain why the agent needs to check any information on the mobile wallet account (*e.g.*, information stored about the account in the MFS platform) in order to count the cash" and, therefore, PayPal fails to carry its burden that the combined teachings of Tumminaro and Keena account for the limit check "on the unbanked subscriber's mobile wallet account" required by independent claim 1. *Id.* at 18–19 (citing Pet. 65).

Based on the fully developed trial record, we agree with PayPal that the Federal Circuit's decision in *SuperGuide* is distinguishable from the circumstances presented here. *See* Pet. Reply 16. In *SuperGuide*, the Federal Circuit agreed with the district court's construction that the ordinary and customary meaning of the claim phrase "at least one of" means "one or more." *SuperGuide*, 358 F.3d at 886 (citing *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999)). The Federal Circuit held that, when "[t]he phrase 'at least one of' precedes a series of categories of criteria, and the patentee used the term 'and' to separate the categories of criteria," the phrase connotes a conjunctive list and requires selecting at least one value for each category. *Id.* For example, in *SuperGuide*, the claim phrase "storing at least one of a desired program start time, a desired program end time, a desired program service, and a desired program type" was construed as requiring storing at least one desired program start time, at least one desired program end time, and so forth. *Id.* at 884.

In the *Apple* decision cited by PayPal in its Reply, the Board explained that courts have not interpreted *SuperGuide* as setting forth a *per se* rule that the use of “at least one of”/“one or more” followed by “and” connotes a conjunctive list. *See Apple*, IPR2016-01177, Paper 27 at 9. In particular, in *Apple*, the Board recognized that courts have found *SuperGuide* inapplicable when the listed items following “at least one of”/“one or more” are not categories containing many possible values. *Id.* We agree with the Board’s reasoning in *Apple* that *SuperGuide* is distinguishable on this basis. This leads us to the relevant inquiry—whether the “a limit check” and “a velocity check” following the language “one or more of” in independent claim 1 are categories that may have multiple values, such as in *SuperGuide*, or individual parameters.

a. Specification of the '845 Patent, Including the Plain Language of Independent Claim 1

We agree with PayPal that “a limit check” and “a velocity check” are not categories that contain multiple values and, therefore, these two checks amount to individual parameters. *See* Pet. Reply 16. The plain language of independent claim 1 is controlling because it explicitly states that performing “a limit check” amounts to one parameter that includes “determining whether sufficient funds are available to make the deposit amount,” and performing “a velocity check” amounts to another parameter that includes “determining whether the unbanked subscriber has exceeded a specified number of transactions within a specified time period.” Ex. 1001, 29:65–30:3.

A review of the specification of the '845 patent only reinforces our view that the plain language of independent claim 1 is controlling. When

discussing how Figure 3 illustrates unbanked subscriber 205 depositing funds at an agent branch using his/her mobile wallet, the specification of the '845 states that “monetary transaction system [210] may then use rules engine 220 to perform a limit check (to determine whether sufficient funds are available) *and/or* a velocity check (to determine whether the user has exceeded a specified number of (hourly, daily, or weekly) transactions) on the unbanked subscriber’s mobile wallet account (step 340).” Ex. 1001, 15:60–65 (emphasis added), Fig. 3. Both the plain language of independent claim 1 and the specification suggest that, at least with respect to performing “a limit check,” it is one parameter—namely, determining whether sufficient funds are available to complete a deposit into the unbanked subscriber’s mobile wallet account. The specification, including the claims, makes no reference to providing monetary transaction system 210 and associated rules engine 220 with multiple, different parameters that may be used to perform the claimed “limit check.”

This cited disclosure in the specification also indicates that there are three embodiments. Ex. 1001, 15:60–65. By using the phrase “and/or,” the specification discloses a first embodiment that requires performing both a limit check and a velocity check, a second embodiment that requires performing only a limit check, or a third embodiment that requires performing only a velocity check. Narrowly reading “a limit check” and “a velocity check” following the language “one or more of” in independent claim 1 as always requiring performing both a limit check and a velocity check would require highly persuasive evidentiary support, because it would exclude the other two embodiments that require performing only a limit

check or performing only a velocity check. *See Vitronics Corp.*, 90 F.3d at 1583.

Apart from relying on the Federal Circuit’s decision in *SuperGuide*, which, as we explain above, is not a per se rule, Fintiv does not direct us to, nor can we find, other highly persuasive evidentiary support that would justify its narrow reading. At best, Fintiv directs us to the disclosure in the specification of the ’845 patent that discloses placing “[t]ransaction limits . . . on user accounts.” *See* PO Resp. 48–49 (citing Ex. 1001, 29:16); PO Sur-reply 19–20 (citing the same). This disclosure in the specification further states that “transaction limits are fully configurable for each particular use case, channel and payment method that allows maximum flexibility to restrict higher risk use cases.” Ex. 1001, 29:16–19. Although these disclosures in the specification refer to placing transaction limits on user accounts and how they are configurable, it does not provide additional examples as to what constitutes a limit check. Absent more specific examples with respect to performing a limit check in the context of an unbanked subscriber engaging in a deposit transaction, we decline to view the claim term “limit check” as requiring anything more than the one parameter we identify above—namely, determining whether sufficient funds are available to complete a deposit into the unbanked subscriber’s mobile wallet account.

b. The ’064 Application

Fintiv adds another layer of complexity to its proposed construction of the claim term “limit check” by directing us to Figure 7 of the ’064 application where, according to Fintiv, an agent counting cash presented for deposit in step 3 is not the same as the Platform terminal performing the

limit check in step 5. *See* PO Resp. 49–51. We do not share Fintiv’s view that steps 3 and 5 in Figure 7 of the ’064 application effectively preclude the claim term “limit check” from including an agent physically counting cash presented for deposit into the unbanked subscriber’s mobile wallet account.

The ’845 patent incorporates by reference the ’064 application in its entirety. Ex. 1001, 1:6–12. For convenience, Fintiv’s annotated version of Figure 7 of the ’064 application is reproduced below.



PO Resp. 50. Fintiv’s annotated version of Figure 7 of the ’064 application is directed to a deposit transaction that involves eight steps. Ex. 2003, 51,

95.⁶ Of particular importance, step 3 states that the “[a]gent counts the cash and initiates the transaction on the Platform terminal,” whereas step 5 states that the “Platform [terminal] validates the account status, determines if the agent is allowed to perform this function and performs limits and velocity checks.” *Id.* at 51.

The '064 application, however, does not provide a corresponding description of the steps in Figure 7. *See* Ex. 2003, 88–111. At best, relying on Figure 7 by itself, there appears to be some interplay between step 5 where the Platform terminal “determines if the agent is allowed to perform this function” and step 3 where the “[a]gent counts the cash and initiates the transaction on the Platform terminal.” Absent clear evidence of disclaimer, we decline to endorse Fintiv’s position that steps 3 and 5 in Figure 7 are distinct, sequential steps that would result in step 5 being completely divorced from step 3. *See* PO Resp. 49–51. Stated differently, for the limit check in step 5 to preclude an agent physically counting cash presented for deposit in step 3, there must be waiver of claim scope that is “both so clear as to show reasonable clarity and deliberateness, and so unmistakable as to be unambiguous evidence of disclaimer.” *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1322 (Fed. Cir. 2012) (internal quotation marks omitted) (quoting *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1325–26 (Fed. Cir. 2003)). Given the lack of guidance in the '064 application regarding the steps of Figure 7, we cannot substantiate Fintiv’s assertion that the claim

⁶ All references to the page numbers in the '064 application are the page numbers inserted by Fintiv in the bottom, right-hand corner of each page in Exhibit 2003.

term “limit check” precludes an agent physically counting cash presented for deposit into the unbanked subscriber’s mobile wallet account.

c. Summary

In summary, upon weighing all the evidence bearing on the construction of the claim term “performing one or more of a limit check and a velocity check,” we construe this claim term as performing a limit check, a velocity check, or both a limit check and a velocity check. We further clarify that both the plain language of independent claim 1 and the specification of the ’845 patent support construing the claim term “limit check” as determining whether sufficient funds are available to complete a deposit into the unbanked subscriber’s mobile wallet account, without disavowing an agent physically counting cash presented for deposit.

3. *“a specified payment method”/“the selected payment method”
(independent claim 5)*

During trial, the parties present arguments that turn on the scope and meaning of the claim terms “a specified payment method”/“the selected payment method.” See PO Resp. 39–44; Pet. Reply 12–16; PO Sur-reply 21–24. In its Patent Owner Response, Fintiv contends that the plain language of independent claim 5, the specification of the ’845 patent, and general purpose dictionaries that define the word “select” all require that the claim terms “a specified payment method”/“the selected payment method” must enable the unbanked subscriber to specify/select from multiple payment methods in the mobile wallet. PO Resp. 39–41 (citing Ex. 1001, 19:31–46, 27:28–30, 27:51–53; Ex. 2007 ¶¶ 102, 126, 127; Exs. 2004–2006 (general purpose dictionaries that define the word “select”)). Fintiv argues that the claim terms “a specified payment method”/“the selected payment

method” must be read in conjunction with other limitations of independent claim 5 requiring an “unbanked subscriber.” *Id.* at 42. According to Fintiv, both Tumminaro’s pooled account and prepaid debit card account are payment methods that “would nullify a subscriber’s status as an ‘unbanked subscriber.’” *Id.* at 42–43 (citing Pet. 43; Ex. 2007 ¶¶ 80, 104, 105, 129). Fintiv also argues that Tumminaro does not disclose “a source of funds for a transfer other than the subscriber’s account at a partner bank,” nor does Tumminaro show “any step where an unbanked subscriber could specify a payment method other than the account at the partner bank.” *Id.* at 43 (citing Ex. 2007 ¶ 121).

In its Reply, PayPal disagrees with Fintiv that the claim terms “a specified payment method”/“the selected payment method” require the user to specify one of multiple payment methods in the mobile wallet. *See* Pet. Reply 12–15. PayPal contends that the words “specified/selected” simply characterize the “payment method,” but they do not require an additional step that requires the unbanked subscriber to “actively specify/select a payment method.” *Id.* at 13 (citing *Uniloc 2017 LLC v. Netflix, Inc.*, 2022 WL 17688150, at *6 (Fed. Cir. Dec. 15, 2022); *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015)). PayPal further argues that there is no explicit requirement in independent claim 5 that the unbanked subscriber specify/select from multiple payment methods. *Id.* According to PayPal, Fintiv knew how to claim multiple potential communication channels in independent claim 5, but yet chose not to use similar language when describing the payment methods. *Id.* at 14.

In its Sur-reply, Fintiv contends that the arguments presented in PayPal’s “Reply paint[] an incomplete version of” the claim terms

“a specified payment method”/“the selected payment method.” PO Sur-reply 21. According to Fintiv, the relevant language of independent claim 5 “makes clear that the ‘*specified* payment method’ is *the one that the subscriber desires*.” *Id.* Fintiv also argues that the *Uniloc* case cited by PayPal is distinguishable from the circumstances presented here because the claim language at issue in *Uniloc* did not connect “with the *user’s desire*.” *Id.* at 21–22. Furthermore, Fintiv argues that, unlike *Uniloc*, the “validating” step of independent claim 5 would be rendered superfluous if there were not a selection of a payment method made by the user. *Id.* at 22.

Based on the fully developed trial record, we agree with PayPal that the claim terms “a specified payment method”/“the selected payment method” do not require an additional step where the unbanked subscriber specifies/selects a payment method from multiple payment methods. *See* Pet. Reply 13–15. To support this argument, PayPal directs us to the Federal Circuit’s *Uniloc* decision. The claim language at issue in *Uniloc* required “coding pixel information of each macroblock contained in the object region by using *a selected known coding technique* to generate coded object pixel information.” *Uniloc*, 2022 WL 17688150, at *5 (emphasis in original). The Federal Circuit reasoned that the word “‘selected’ is ‘not a step in the claimed method,’ but is a ‘phrase that characterizes the claimed’ use of a known coding technique to code the pixel information of the object region.” *Id.* at *6 (quoting *Summit 6*, 802 F.3d at 1290–92).

The claim language at issue in independent claim 5 recites, in relevant part:

receiving subscriber communication over one of a plurality of channels connected to the monetary transaction

system, the subscriber communication indicating that an unbanked subscriber desires to transfer a specified amount of funds to specified recipient using *a specified payment method* from the subscriber's mobile wallet; [and]

validating the status of *the selected payment method*.

Ex. 1001, 31:34–32:6 (emphases added). Similar to the claim language at issue in *Uniloc*, the words “specified” and “selected” are not separate steps, but rather they are phrases that characterize a payment method used to complete a transfer of funds desired by the unbanked subscriber. To be clear, we are not stating that the words “specified” and “selected” carry no weight. The payment method must have been specified/selected at some point—just not as part of the steps required by independent claim 5.

We do not agree with Fintiv's argument that the *Uniloc* case is inapplicable to the circumstances presented here because the claim language at issue in *Uniloc* did not connect with the “user's desires.” See PO Sur-reply 21–22. Fintiv's argument implicates the “unbanked subscriber desires” language recited in independent claim 5. This language, however, merely characterizes the unbanked subscriber's desire to transfer funds to a recipient. In our view, it does not rise to the level of requiring an additional step where the unbanked subscriber must separately specify/select a payment method.

Because we determine that specifying/selecting a payment method is not an additional step required by independent claim 5, it follows that there is no explicit requirement for the unbanked subscriber to specify/select from multiple payment methods. Such a requirement is not even set forth in the specification of the '845 patent. The words “specified payment method” and “selected payment method” are repeated several times throughout the

specification, but they are always used as a singular noun and not a plural noun. *See* Ex. 1001, 18:66–20:32, 29:16–19. There is only one occasion where the specification provides an example as to the meaning of these words. When discussing how a mFS subscriber pays a bill using a mobile wallet, the specification states that “[t]he subscriber communication indicates that unbanked subscriber 205 desires to pay a bill for a specified amount using a specified payment method from the unbanked subscriber’s mobile wallet (e.g., eMoney).” Ex. 1001, 19:36–39, Fig. 8, step 810. In this scenario, the only payment method for unbanked subscriber 205 to specify or select is eMoney. At no point does the specification explain that unbanked subscriber 205 may specify/select from multiple payment methods.

In summary, upon weighing all the evidence bearing on the construction of the claim terms “a specified payment method”/“the selected payment method,” we construe these claim terms as merely requiring a payment method. We do not construe these claim terms as requiring an additional step where the unbanked subscriber specifies/selects a payment method from multiple payment methods.

B. Anticipation by Tumminaro

PayPal contends that claims 5 and 7 of the ’845 patent are unpatentable under § 102(b) as anticipated by Tumminaro. Pet. 29–52. PayPal contends that Tumminaro discloses or describes the subject matter of each challenged claim. *Id.* PayPal also relies on the testimony of Dr. Chatterjee to support its positions. *See* Ex. 1003. During trial, Fintiv contends that Tumminaro fails to disclose the following limitations of independent claim 5: (1) “unbanked subscriber”; and (2) “a specified

payment method”/“the selected payment method.” PO Resp. 34–46⁷;
PO Sur-reply 9–14, 21–24.

Based on the fully developed trial record, we determine that PayPal has shown by a preponderance of the evidence that claims 5 and 7 of the ’845 patent are unpatentable as anticipated by Tumminaro. We begin our analysis with the principles of law that generally apply to an anticipation ground, next we assess the level of skill in the art, followed by a brief overview of Tumminaro, and then we address the parties’ contentions with respect to the challenged claims.

1. Principles of Law

To establish anticipation, “all of the elements and limitations of the claim must be shown in a single prior reference, arranged as in the claim.” *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001). When evaluating a single prior art reference in the context of anticipation, the reference must be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (citing *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)). “[T]he dispositive question regarding anticipation [i]s whether one

⁷ Fintiv presents several arguments as to why Tumminaro fails to disclose the claim term “unbanked subscriber” based on PayPal’s proposed construction of this claim term as “one that does not have [(l)or have access to(l)] a financial institution account.” PO Resp. 22–34; PO Sur-reply 13–14. We need not address these arguments because, as we explain above in our claim construction analysis, we decline to adopt PayPal’s proposed construction of the claim term “unbanked subscriber” because PayPal did not use the same terminology as the specification of the ’845 patent to define this claim term.

skilled in the art would reasonably understand or infer from the [prior art reference's] teaching' that every claim element was disclosed in that single reference.” *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1368 (Fed. Cir. 2003) (alterations in original) (quoting *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991)). We analyze the asserted ground based on anticipation with the principles we identify above in mind.

2. *Level of Skill in the Art*

Factors pertinent to a determination of the level of ordinary skill in the art include “(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.” *Envtl. Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 696 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). “Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case.” *Id.* at 696–97.

Relying on the testimony of Dr. Chatterjee, PayPal argues the following:

[a]s of 2011, a [person of ordinary skill in the art] in the '845 patent's field would have [had] a working knowledge of mobile payment systems, including of software development for mobile payment systems. Such 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 in the field of mobile payment systems. Lack of work experience can be remedied by additional education, and vice versa.

Pet. 6 (citing Ex. 1003 ¶ 37). In its Patent Owner Response, Fintiv does not address the level of skill in the art. *See* PO Resp. Fintiv’s declarant, however, agrees with PayPal’s assessment of the level of skill in the art. *See* Ex. 2007 ¶¶ 28, 29.

Accordingly, we maintain our preliminary determination regarding the level of ordinary skill in the art. Dec. on Inst. 13–14. That is, we adopt PayPal’s proposed assessment of the level of ordinary skill in the art because Dr. Chatterjee’s supporting testimony is consistent with the ’845 patent and the asserted prior art. We apply this assessment of the level of ordinary skill in the art in our anticipation and obviousness evaluations below.

3. Overview of Tumminaro

Tumminaro generally relates to “systems and techniques for effectuating financial transactions via mobile devices” through “a closed-loop financial transaction system for person-to-person and consumer to merchant transactions.” Ex. 1005 ¶ 3. Tumminaro identifies various needs addressed by its disclosed invention, including the “[n]eed for electronic payments to be accessible to banked and unbanked consumers.” *Id.* ¶ 36; *see also id.* ¶ 447 (disclosing that, “for unbanked users, accounts can be created or held in a pooled account with the partner bank”).

Figure 1 of Tumminaro, reproduced below, illustrates a block diagram of the closed-loop financial transaction system. Ex. 1005 ¶¶ 48, 144.

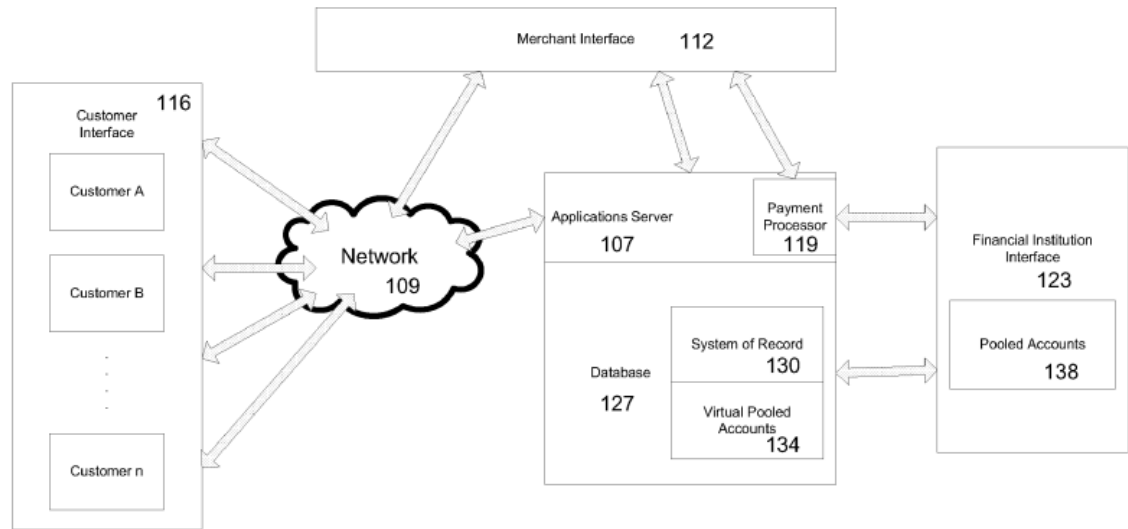


Fig. 1

Figure 1 illustrates network 109 (e.g., the Internet) that connects applications server 107, which includes payment processor 119, with merchant interface 112 and customer interface 116. *Id.* ¶¶ 144–46. Applications server 107 further connects to financial institution interface 123 and database 127 that stores a system of record 130 and virtual pooled accounts 134. *Id.* ¶ 146. The financial institution associated with financial institution interface 123 may manage pooled accounts 138. *Id.*

Figure 3 of Tumminaro, reproduced below, illustrates an environment for implementing one embodiment of the financial transaction system. Ex. 1005 ¶¶ 50, 158.

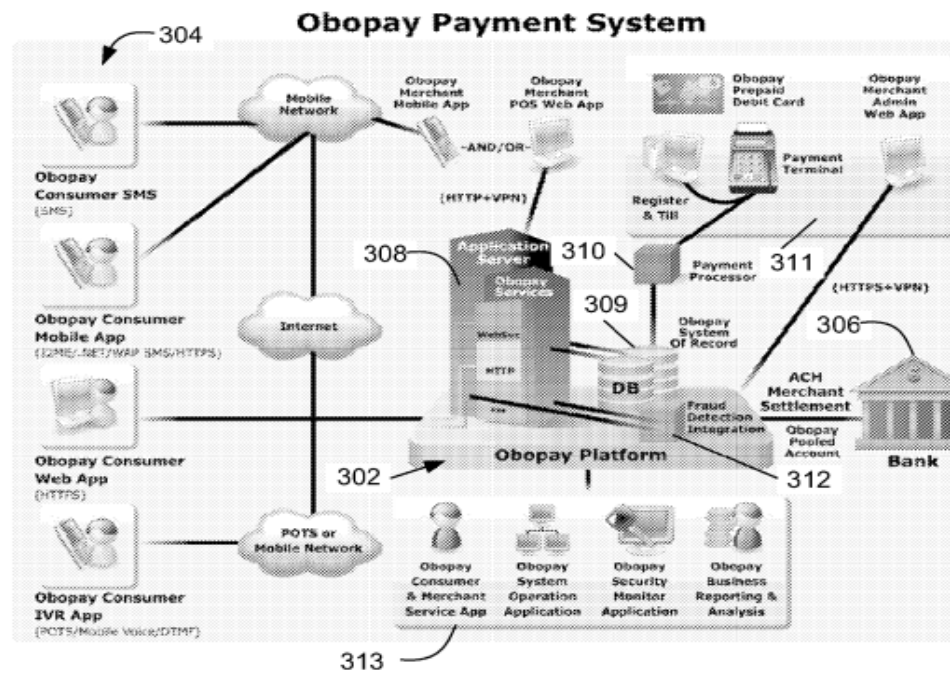


Fig. 3

Figure 3 illustrates robust technology environment 300 (also called Obopay Payment System) that includes mobile client server platform 302, scalable hardware environment 304, and bank integration 306. *Id.* ¶ 158. Mobile client server platform 302 further includes application server 308 that obtains information (e.g., account numbers, balance information, etc.) from transactional database 309 to manage payment processor 310 that communicates with merchant point of sale (“POS”) terminals 311. *Id.* ¶ 173. Mobile client server platform 302 also includes fraud detection system 312 that controls risk using “a general rules engine . . . that applies limits and determines the acceptability of requested transactions from a risk perspective.” *Id.* ¶ 176.

Tumminaro discloses that its mobile payment platforms and services, including the Obopay Payment System illustrated in Figure 3 above, provide

“a fast, easy way to make payments by users of mobile devices” using a “mobile client application, resident on [each] mobile device, [that] simplifies access and performs financial transactions in a fast, secure manner.”

Ex. 1005 ¶ 34. More specifically, “[t]he mobile client application allows people to pay friends, shop, and transfer funds [using] their mobile device. An account holder can access the mobile client application to send money or request money from anyone with a mobile device that supports text messaging or mobile Internet capabilities.” *Id.* ¶ 705.

4. Claim 5

The preamble of independent claim 5 recites “[a] monetary transaction system for conducting monetary transactions between unbanked subscribers and other entities, the system comprising.” Ex. 1001, 31:12–14. To the extent the preamble should be treated as limiting, PayPal contends that Tumminaro discloses the Obopay Payment System illustrated in Figure 3 (“payment system”) is capable of making electronic payments accessible to both “banked and unbanked consumers.” Pet. 29–31 (quoting Ex. 1005 ¶ 36) (citing Ex. 1005, code (57), ¶¶ 36, 38, 447; Ex. 1003 ¶¶ 114–19). PayPal argues that Tumminaro’s payment system allows other entities, “such as ‘partner’ and ‘companion’ banks, ‘consumers,’ and ‘merchants’” to conduct financial transactions. *Id.* at 31 (citing Ex. 1005 ¶ 455; Ex. 1003 ¶¶ 117, 118).

Independent claim 5 recites “a mobile device configured to run a monetary transaction system application.” Ex. 1001, 31:15–16. PayPal contends that Tumminaro discloses this limitation because the Obopay consumer mobile app is a mobile client application (“MCA”) that resides on a user’s mobile device, and allows the user to transfer funds, send money,

and request money to or from anyone with a mobile device that has text messaging or Internet capabilities. Pet. 31 (citing Ex. 1005 ¶ 465, Figs. 3, 38; Ex. 1003 ¶¶ 120–22).

Independent claim 5 recites “a monetary transaction system subscriber that has a profile with the monetary transaction system, wherein the subscriber indicates, via the monetary transaction system application, one or more specified transactions that are to be performed using the monetary transaction system.” Ex. 1001, 31:17–21. PayPal contends that Tumminaro discloses this limitation because each user of the payment system that has a profile associated therewith maintained in a profile database is a “monetary transaction system subscriber.” Pet. 32–33 (citing Ex. 1005 ¶¶ 271, 448; Ex. 1003 ¶ 123). PayPal argues that Tumminaro further discloses that each user indicates one or more specified transactions using the MCA that resides on his/her mobile device. *Id.* at 33 (citing Ex. 1005 ¶¶ 34, 465, Fig. 38; Ex. 1003 ¶¶ 127, 128).

Independent claim 5 recites “a monetary transaction processor that performs the one or more transactions specified by the subscriber, wherein performing the specified transactions includes communicating with a monetary transaction database to determine whether the transaction is permissible based on data indicated in the subscriber’s profile.” Ex. 1001, 31:22–27. PayPal contends that Tumminaro discloses “a monetary transaction system processor that performs the one or more transactions specified by the subscriber” because application server 308 obtains information (e.g., account numbers, balance information, etc.) from transactional database 309 to manage payment processor 310. Pet. 34 (citing Ex. 1005 ¶ 173; Ex. 1003 ¶ 129). PayPal also argues that Tumminaro’s

payment system includes a settlement engine that facilitates person-to-person (“P2P”) transactions. *Id.* (citing Ex. 1005 ¶¶ 174, 175). PayPal further contends that Tumminaro discloses “communicating with a monetary transaction database to determine whether the transaction is permissible based on data indicated in the subscriber’s profile” because the payment system includes fraud detection system 312 that controls risk using “a general rules engine . . . that applies limits and determines the acceptability of requested transactions from a risk perspective.” *Id.* at 35 (quoting Ex. 1005 ¶ 176). According to PayPal, the fraud detection system controls risk using both information retrieved from the user’s profile stored in a “user profile database” and information retrieved from a historical transactions database for that user. *Id.* at 36–38 (citing Ex. 1005 ¶¶ 271–73, 275–78, 449, 692, 693; Ex. 1003 ¶¶ 133, 138).

Independent claim 5 recites “at least one entity that is to be involved in the specified transaction, the at least one entity having a profile with the monetary transaction system.” Ex. 1001, 31:28–30. PayPal contends that Tumminaro discloses this limitation because each user or merchant involved in a financial transaction on a P2P basis is an entity that has a user profile associated therewith. Pet. 39 (citing Ex. 1005 ¶¶ 34, 271, 273, 448). More specifically, PayPal argues that Tumminaro contemplates a situation where funds are transferred between unbanked users (e.g., two no-card users), each of which has a user profile. *Id.* (citing Ex. 1005 ¶¶ 34, 271, 273, 345, 348, 417, 420, 421, 448, Figs. 13, 23, 26, 35; Ex. 1003 ¶ 141).

Independent claim 5 recites “wherein the monetary transaction system is implemented to transfer money between mobile wallets, including performing the following steps.” Ex. 1001, 31:31–33. PayPal contends that

Tumminaro discloses this limitation because the MCA (also referred to as the mobile client application and platform (“MCAP”)) is a “mobile wallet.” Pet. 39–40 (quoting Ex. 1005 ¶ 882). Relying on the testimony of Dr. Chatterjee, PayPal then asserts that each transfer implemented by Tumminaro’s payment system, including transferring money between two unbanked users, constitutes a transfer between mobile wallets. *See id.* at 40 (citing Ex. 1003 ¶¶ 142, 143).

The first step of independent claim 5 recites “receiving subscriber communication over one of a plurality of channels connected to the monetary transaction system, the subscriber communication indicating that an unbanked subscriber desires to transfer a specified amount of funds to specified recipient using a specified payment method from the subscriber’s mobile wallet.” Ex. 1001, 31:34–32:5. PayPal contends that Tumminaro discloses this limitation because unbanked subscribers (i.e., subscribers that do not have bank accounts) may transfer funds to other subscribers using either an account held in a pooled account or a prepaid debit card over a plurality of available channels, including, for example, by using the Web or a short message service (“SMS”) message. Pet. 40–43 (citing Ex. 1005 ¶¶ 220, 228, 229, 242, 348, 353, 434, 447, 455, 465, Fig. 16; Ex. 1003 ¶¶ 146–150, 157).

The second step of independent claim 5 recites “validating the status of the selected payment method.” Ex. 1001, 32:6. PayPal contends that Tumminaro discloses this limitation because, based on its analysis above with respect to the “receiving” step, an unbanked subscriber may select either an account held in a pooled account or prepaid debit card as “the . . . payment method” using the MCA on his/her mobile device. Pet. 43–44.

PayPal further argues that, once a payment method is selected using the MCA, Tumminaro's payment service validates the selection by identifying the user as a member of the payment system, validating his/her account, checking the account balance, and checking the personal identification number ("PIN"). *Id.* (citing Ex. 1005 ¶¶ 347–48, Figs. 13–16; Ex. 1003 ¶ 158).

The third step of independent claim 5 recites "performing at least one of a limit check and a velocity check on the selected payment method, the limit check determining whether sufficient funds are available to make the deposit amount, the velocity check determining whether the unbanked subscriber has exceeded a specified number of transactions within a specified time period." Ex. 1001, 32:7–13. PayPal contends that Tumminaro discloses "a limit check" because it is capable of checking whether a payment method selected by the user (e.g., an account held in a pooled account) has a sufficient balance and whether he/she has set a per transaction limit. Pet. 45–46 (citing Ex. 1005 ¶¶ 335, 336, 348, 598, Figs. 14–16; Ex. 1003 ¶ 161). PayPal also contends that Tumminaro discloses "a velocity check" because there are "velocity settings" parameters stored in each user profile that may restrict the number of transactions per day or the amount of money that may be transferred in a transaction. *Id.* at 46–47 (quoting Ex. 1005 ¶ 271) (citing Ex. 1005 ¶¶ 280, 434, Fig. 35).

The fourth step of independent claim 5 recites "validating the status of the specified recipient to ensure the specified recipient has a valid mobile wallet account." Ex. 1001, 32:14–16. PayPal contends that Tumminaro discloses this limitation because it identifies the recipient as a member of the payment system and validates his/her account. Pet. 47 (citing Ex. 1005

¶ 348, Fig. 16). In addition, PayPal contends that Tumminaro's payment system determines whether a user is allowed to receive transferred funds by using both its fraud detection system and user permissions. *Id.* at 48 (citing Ex. 1003 ¶¶ 132–34, 167).

The fifth step of independent claim 5 recites “debiting the specified payment method by the specified amount of funds.” Ex. 1001, 32:17–18. PayPal contends that Tumminaro discloses this limitation because, in the example where the user selects an account held in a pooled account as the “specified payment method,” the payment system debits the pooled account “by the specified amount of funds.” Pet. 48 (citing Ex. 1005 ¶¶ 348, 433, Fig. 13).

The sixth step of independent claim 5 recites “transferring the specified amount of funds to the specified recipient over at least one of the plurality of channels connected to the monetary transaction system.” Ex. 1001, 32:19–22. PayPal contends that Tumminaro discloses this limitation because, after debiting the pooled account selected by the user, the payment system credits the recipient's account by transferring “the specified amount of funds” from the pooled account to the recipient's account over an available communication channel. Pet. 49–50 (citing Ex. 1005 ¶¶ 253, 265, 268, 348, Fig. 16; Ex. 1003 ¶¶ 171–73).

The seventh step of independent claim 5 recites “notifying the unbanked subscriber that the specified amount of funds was transferred to the specified recipient over at least one of the plurality of channels connected to the monetary transaction system.” Ex. 1001, 32:23–26. PayPal contends that Tumminaro discloses this limitation because the payment system notifies the user that a payment has been made by sending a

message over an available communication channel to the user's mobile device indicating that "the specified amount of funds" was transferred to the recipient. Pet. 51 (citing Ex. 1005 ¶¶ 348, 353, Fig. 16; Ex. 1003 ¶ 174).

During trial, Fintiv contends that Tumminaro fails to disclose the following limitations of independent claim 5: (1) "unbanked subscriber"; and (2) "a specified payment method"/"the selected payment method." PO Resp. 34–46; PO Sur-reply 9–14, 21–24. Notwithstanding Fintiv's arguments to the contrary, PayPal has shown by a preponderance of the evidence that Tumminaro discloses all the limitations of independent claim 5. We address Fintiv's arguments in turn.

a. "unbanked subscriber"

In its Patent Owner Response, Fintiv contends that, because Tumminaro's unbanked subscriber is capable of accessing a pooled account and the pooled account is a bank account, Tumminaro fails to disclose the "unbanked subscriber" limitation required by independent claim 5 even under the explicit definition for this claim term in the specification of the '845 patent. PO Resp. 34 (citing Dec. on Inst. 11). According to Fintiv, "[a]ll of the so-called unbanked subscribers in Tumminaro that are able to make deposits or transfers either have or have access to a bank account or a credit union account." *Id.* at 35 (footnote omitted) (citing Ex. 2007 ¶ 76). Fintiv then equates Tumminaro's "no-card" user with its "unbanked user," arguing that Tumminaro's "no-card" user registers with an operator of the payment system, maintains a pooled account with the operator, and holds funds in the pooled account at a partner bank. *Id.* at 35 (citing Ex. 2007 ¶ 79). Fintiv argues that Tumminaro's "no-card" user accesses the pooled account to make deposits, make withdrawals, and initiate P2P transfers. *Id.*

(citing Ex. 1005 ¶¶ 290–294, 344, 345, 348, Figs. 8, 9, 12, 13, 16; Ex. 2007 ¶ 79).

Fintiv further contends that Tumminaro’s “no-card” user may request a credit or debit card issued by a partner bank. PO Resp. 35 (citing Ex. 2007 ¶ 79). Fintiv argues, however, that once Tumminaro’s “no-card” user activates a credit or debit card, he/she becomes a “carded” user, the virtual pooled account is closed, a new individual card account is opened at a partner bank, and the user’s funds are moved from the pooled account to the new individual card account. *Id.* (citing Ex. 1005 ¶ 350, Fig. 18; Ex. 2007 ¶ 80). According to Fintiv, “[t]he [new] individual card account is a bank account in every sense and form, with funds held in a [partner] bank solely for the benefit of the user and available upon demand.” *Id.* (citing Ex. 2007 ¶ 80). Fintiv then asserts that both of Tumminaro’s “carded” and “no-card” users are not the claimed “unbanked subscribers” because they either have an individual card account held at the partner bank or they have access to a pooled account held at the partner bank. *Id.* (citing Ex. 2007 ¶¶ 79, 80, 82–88).

Lastly, Fintiv contends that Tumminaro permits a “no-card” user to perform several types of transactions using the pooled account, including depositing funds from external sources, engaging in Automated Clearing House transfers, withdrawing funds from an automated teller machine (“ATM”), withdrawing funds from a brick-and-mortar bank branch, establishing direct deposits, etc. PO Resp. 36–38 (citing Ex. 1005 ¶¶ 254, 264, 290–292, 499, 512, Fig. 8; Ex. 2007 ¶¶ 94, 96–98). According to Fintiv, performing all of these types of transactions requires access to a bank account and, therefore, Tumminaro’s “no-card” user cannot be the claimed

“unbanked subscriber.” *Id.*; *see also id.* at 39 (arguing that all of Tumminaro’s subscribers have or have access to bank accounts).

In its Reply, PayPal contends that Fintiv’s arguments that Tumminaro fails to disclose the “unbanked subscriber” limitation required by independent claim 5 are premised on an incorrect construction. *See* Pet. Reply 4–12. More specifically, PayPal contends that, when applying the correct construction of the claim term “unbanked subscriber,” Tumminaro’s unbanked user discloses this limitation. *Id.* at 20; *see id.* at 22 (arguing the same). PayPal argues that Tumminaro’s disclosure of unbanked users accessing funds held in a pooled account does not render these users “banked.” *See id.* at 20. PayPal argues that Fintiv fails to appreciate that “Tumminaro describes **creating** accounts for ‘unbanked users’ who do not have a **preexisting** account to interact with Tumminaro’s payment system.” *Id.* 22 (citing Ex. 1005 ¶ 447).

PayPal disagrees with Fintiv’s argument that a prepaid debit card account necessarily requires an individual bank account. Pet. Reply 20 (citing PO Resp. 36). PayPal argues that there is no evidence in Tumminaro that an individual account for a “carded” user is a bank account other than “Fintiv’s say-so.” *Id.* PayPal also disagrees with Fintiv’s assertion that all subscribers in Tumminaro’s payment system must source funds via “banked” methods because, according to PayPal, Fintiv overlooks other methods of getting money into Tumminaro’s payment system, such as cash/check deposits and receiving funds from another source. *Id.* at 21 (citing Ex. 1005 ¶¶ 174, 196, 604; Ex. 1037, 225:11–226:12; PO Resp. 36–37).

In its Sur-reply, Fintiv contends that we preliminarily found in the Institution Decision that Tumminaro discloses that an unbanked user is capable of accessing a pooled account, which PayPal does not dispute in its Reply. PO Sur-reply 13 (citing Dec. on Inst. 27). Fintiv also argues that Tumminaro discloses that a pooled account is a bank account. *Id.* (citing Ex. 1005 ¶¶ 183, 242). Accordingly, Fintiv reiterates that Tumminaro fails to disclose the “unbanked subscriber” limitation required by independent claim 5 even under the explicit definition for this claim term in the specification of the ’845 patent. *Id.*

Based on the fully developed trial record, we agree with PayPal that Tumminaro’s unbanked user discloses the “unbanked subscriber” required by independent claim 5. Pet. 30–31, 40; Pet. Reply 20–22. As we explain in our claim construction analysis above, the specification of the ’845 patent explicitly defines the claim term “unbanked subscriber” as “a subscriber that does not have (or does not have access to) a bank account or credit union account.” We further clarify that both the intrinsic and extrinsic evidence support allowing an unbanked subscriber to obtain access to a bank account upon enrolling with the monetary transaction system so he/she may use that bank account to make deposits, withdrawals, and transfers. *See supra* Section II.A.1.a–e.

With this construction in mind, we turn to the relevant disclosures in Tumminaro relied upon by PayPal to account for the “unbanked subscriber” required by independent claim 5. *See* Pet. 30–31, 40. When describing the “problems and needs” addressed by its disclosed invention, Tumminaro states there is a “[n]eed for electronic payments to be accessible to banked and *unbanked consumers*.” Ex. 1005 ¶ 36 (emphasis added). Later, when

describing how its payment system is “designed to integrate with a companion bank account,” Tumminaro states that “[t]his account can be a pre[-]existing account” (presumably for banked users) and, “*for unbanked users*, accounts can be created or held in a pooled account with the partner bank.” *Id.* ¶ 447 (emphasis added).

In each of these disclosures, Tumminaro clearly draws a distinction between a user that is “banked” because he/she already has a pre-existing bank account to interact with Tumminaro’s payment system, and a user that is “unbanked” because he/she does not have a bank account to interact with Tumminaro’s payment system. Relying on this distinction, we agree with PayPal’s argument that Tumminaro’s unbanked user refers to a user “who do[es] not have a preexisting account to interact with Tumminaro’s payment system.” Pet. Reply 22. That is, consistent with the explicit definition of the claim term “unbanked subscriber” in the specification of the ’845 patent, we find that, prior to enrolling in Tumminaro’s payment system, the unbanked user does not have (or does not have access to) a bank account or credit union account.

Although Tumminaro discloses creating an account for the unbanked user and holding that account in a pooled account with the partner bank to interact with the payment system, this does not undermine the user’s status as “unbanked.” Ex. 1005 ¶ 447. Applying our full construction for the claim term “unbanked subscriber” set forth above, we find that Tumminaro allows the unbanked user to obtain access to an account held in a pooled account with a partner bank when enrolling in the payment system so he/she may use the account to make deposits, withdrawals, and transfers. Similar to Figures 2–5A of the ’845 patent, Figures 53 and 16 of Tumminaro illustrate

how an unbanked user may use his/her account held in a pooled account with a partner bank to perform deposits, withdrawals, and transfers with other banked or unbanked users.

Figure 53 of Tumminaro and its corresponding description illustrate how two unbanked users with accounts held in a pooled account with the partner bank engage in deposit and withdraw transactions. *See* Pet. 23 (citing Ex. 1005 ¶ 603, Fig. 53). When deposit and withdraw transactions occur between two accounts held in a pooled account, “money is retained in the pooled account [] but is moved from one account holder’s account to the other account holder’s account.” Ex. 1005 ¶ 603. “The transfer is immediate and does not incur any transaction fees for the system operator.” *Id.* “For this reason, the account holder may be charged little or nothing for a transaction fee.” *Id.*

Figure 16 of Tumminaro and its corresponding description illustrate how a “no-card” member A (e.g., an unbanked user with an account held in a pooled account with a partner bank) engages in a transaction with a “carded” member B (e.g., a banked user that already has a pre-existing bank account). *See* Pet. 48–49 (citing Ex. 1005 ¶ 348, Fig. 16); *see also* PO Resp. 35–39 (equating Tumminaro’s “no-card” user with an “unbanked user” and its “carded” user with a “banked user”). After initiating a “pay” request between members A and B, validating the accounts of both members, and notifying both members of payment, “[t]he mobile payment service debits member [A] pooled account and credits member B card account.” Ex. 1005 ¶ 348. “The mobile payment service [then] records member A debit transaction and records member B credit transaction.” *Id.*

We do not agree with Fintiv's arguments that Tumminaro's "no-card" user is prevented from being an unbanked user because the "no-card" user performs several types of transactions using an account held in a pooled account with the partner bank. *See* PO Resp. 35–39. Fintiv's arguments in this regard are predicated on the notion that the "no-card" user's account held in a pooled account with the partner bank is a bank account and, therefore, the "no-card" user cannot satisfy the specification's explicit definition for the claim term "unbanked subscriber." In our view, Tumminaro's "no-card" user is merely an unbanked user that obtains access to an account held in a pooled account with the partner bank when enrolling in the payment system so he/she may use the account held in the pooled account to make deposits, withdrawals, and transfers. This does not undermine that status of Tumminaro's "no-card" user as "unbanked" because, without obtaining access to a bank account upon enrollment, there would be no way for the "no-card" user to interact with Tumminaro's payment system.

It is important to remember that the unbanked subscriber in the context of the '845 patent is not precluded from accessing a bank account upon enrolling with its monetary transaction system, as evidenced by the embodiments illustrated in Figures 2–5A. Similarly, Tumminaro's "no-card" user is not precluded from accessing a bank account upon enrolling with the payment system, as evidenced by using an account held in a pooled account with the partner bank to perform several types of transactions. *See* Ex. 1005 ¶¶ 41, 197, 499, 512. Put simply, there are no material distinctions between Tumminaro's "no-card" or unbanked user and the

“unbanked subscriber” required by independent claim 5 that would defeat a finding of anticipation.

b. “a specified payment method”/“the selected payment method”

In its Patent Owner Response, Fintiv contends that “a specified payment method”/“the selected payment method” limitations of independent claim 5 require the unbanked subscriber to specify/select from multiple payment methods in the mobile wallet. PO Resp. 39–41 (citing Ex. 1001, 19:31–46, 27:28–30, 27:51–53; Ex. 2007 ¶¶ 102, 126, 127; Exs. 2004–2006 (general purpose dictionaries that define the word “select”)). According to Fintiv, the multiple payment methods required by the claimed “a specified payment method”/“the selected payment method” cannot include both Tumminaro’s pooled account and prepaid debit card account because they “would nullify a subscriber’s status as an ‘unbanked subscriber.’” *Id.* at 42–43 (citing Pet. 43; Ex. 2007 ¶¶ 80, 104, 105, 129).

Fintiv further argues that the testimony of PayPal’s declarant, Dr. Chatterjee, on this particular issue fares no better because the two payment methods he identifies in Tumminaro—the pooled account or prepaid debit card—both qualify as bank accounts that, even if available to the unbanked user, would nullify his/her status as an “unbanked subscriber.” PO Resp. 43 (citing Ex. 1003 ¶ 157; Ex. 2007 ¶ 130). Lastly, Fintiv asserts that, to the extent the specification of the ’845 patent contemplates using a prepaid debit card as a payment method, it only does so with respect to a banked subscriber—not an unbanked subscriber. *Id.* at 45–46 n.12 (citing Ex. 1001, 27:22–24; Dec. on Inst. 26 n.4).

In its Reply, PayPal contends that Fintiv’s arguments that Tumminaro does not disclose “a specified payment method”/“the selected payment

method” of independent claim 5 are premised on an incorrect claim construction. Pet. Reply 24. PayPal further argues that, even if we were to agree with Fintiv’s proposed construction of the claim terms “a specified payment method”/“the selected payment method” as requiring multiple payment methods, Tumminaro’s unbanked user may access a pooled account or a prepaid debit card account. *Id.* (citing Dec. on Inst. 27–28). Moreover, PayPal argues that, when applying the proper construction of the claim term “unbanked subscriber,” Tumminaro’s pooled account or prepaid debit card account do not nullify the subscriber’s status as unbanked. *Id.*

Based on the fully developed trial record, we agree with PayPal that Tumminaro discloses “a specified payment method”/“the selected payment method” limitations of independent claim 5. Pet. 40–44. As we explain in our claim construction analysis of the claim terms “a specified payment method”/“the selected payment method,” we construe these claim terms as merely requiring a payment method. We do not construe these claim terms as requiring an additional step where the unbanked subscriber specifies/selects a payment method from multiple payment methods. *See supra* Section II.A.3. Applying our claim construction, and considering our previous analysis of the “unbanked subscriber” limitation, we find that Figure 16 of Tumminaro illustrates how an unbanked user may use his/her account held in a pooled account with a partner bank to transfer funds to other banked or unbanked users. *See supra* Section II.B.4.a.

Even if we were to accept Fintiv’s proposed construction of the claim terms “a specified payment method”/“the selected payment method” as requiring multiple payment methods, Tumminaro would still disclose these limitations. *See* Pet. 43. When registering with the monetary payment

system, Tumminaro discloses that a user may register for an advanced state that allows the user to sign up with a particular banking partner to receive a prepaid debit card. Ex. 1005 ¶ 278; *see also id.* at ¶¶ 274, 275 (disclosing how a user registers with the monetary payment system and the four levels of participation, including the advanced state). Tumminaro discloses how a user is capable of “adding money to a prepaid debit account in advance of purchase.” *Id.* ¶ 196. Based on these disclosures, we find that Tumminaro’s unbanked user may access a reloadable prepaid debit card account when enrolling in the payment system.

PayPal’s declarant, Dr. Chatterjee testifies that, “[w]here a given user has two or more accounts associated, for example, a pooled account and a separate prepaid account such as a gift card or prepaid debit card, the user would typically pick one of the multiple accounts to use as a funding source.” Ex. 1003 ¶ 157. We credit Dr. Chatterjee’s testimony on this particular issue because it is consistent with Tumminaro’s disclosure that an unbanked user’s mobile device may be associated with more than one bank account upon enrollment in the payment system. Ex. 1005 ¶ 242 (disclosing that “a mobile device is associated to one or more bank accounts,” including a “prepaid” account or “a pooled account”). Taking into account our analysis above that Tumminaro’s unbanked user is capable of accessing either an account held in a pooled account with a partner bank or a reloadable prepaid debit account when enrolling in the payment system, we find that Tumminaro discloses “a specified payment method”/“the selected payment method” limitations of independent claim 5 because, even under Fintiv’s narrow reading of these limitations, the unbanked user may select

from one of these two payment methods to transfer funds to other banked or unbanked users.

We do not agree with Fintiv's argument that Tumminaro's pooled account and prepaid debit card account are payment methods that would nullify a subscriber's status as an "unbanked." *See* PO Resp. 42–43. As we explain above when addressing the "unbanked subscriber" limitation, Tumminaro's unbanked user satisfies the explicit definition of the claim term "unbanked subscriber" in the specification of the '845 patent because, prior to enrolling with Tumminaro's payment system, the unbanked user does not have (or does not have access to) a bank account or credit union account. Moreover, similar to the "unbanked subscriber" in the '845 patent, Tumminaro's unbanked user may obtain access to either an account held in a pooled account with a partner bank or a reloadable prepaid debit account when enrolling in the payment system so he/she may use the account to make deposits, withdrawals, and transfers. *See supra* Section II.B.4.a.

Fintiv's argument that the specification of the '845 patent contemplates that only a banked subscriber may use a prepaid debit card as a payment method is misplaced. *See* PO Resp. 45–46 n.12. To support its argument, Fintiv directs us to the disclosure in the specification of the '845 patent that states "[o]ther functionality described above in relation to using an eMoney mobile wallet account *may also apply* to banked subscribers using a debit card associated with their mobile wallet[s]." Ex. 1001, 27:22–24 (emphasis added). This disclosure uses the permissive language "may also apply," which, in our view, indicates that the use of a prepaid debit card associated with a mobile wallet account is not limited to banked subscribers. Nevertheless, there is no requirement in the plain language of independent

claim 5, nor in the remainder of the specification of the '845 patent, that the specified/selected payment method precludes the use of certain payment methods, such as a prepaid debit card. *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) (explaining that limitations not appearing in the claims cannot be relied upon for patentability).

c. Summary

In summary, PayPal has demonstrated by a preponderance of the evidence that the subject matter of independent claim 5 is anticipated by Tumminaro.

5. Claim 7

Claim 7 depends from independent claim 5, and further recites “wherein the money is transferred internationally between the mobile wallets.” Ex. 1001, 32:31–33. PayPal contends that Tumminaro discloses this limitation because the “MCAP is basically a ‘mobile wallet’” that allows an account holder to “move money in seconds around the world.” Pet. 51–52 (emphasis omitted) (quoting Ex. 1005 ¶ 882, then quoting *id.* ¶ 440) (citing Ex. 1005 ¶ 202).

During trial, Fintiv does not address separately PayPal’s arguments and supporting evidence as to how Tumminaro discloses the additional limitation of dependent claim 7. *See* PO Resp. 22–46; PO Sur-reply 9–14, 21–24. We have reviewed PayPal’s arguments and supporting evidence as to how Tumminaro discloses the additional limitation of this dependent claim, and we agree with and adopt PayPal’s analysis. *See* Pet. 51–52. Accordingly, PayPal has demonstrated by a preponderance of the evidence that the subject matter of dependent claim 7 is anticipated by Tumminaro.

C. Obviousness Over Tumminaro and the Background Knowledge of a Person of Ordinary Skill in the Art

PayPal contends that claims 5–7 of the ’845 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over the teachings of Tumminaro and the background knowledge of a person of ordinary skill in the art. Pet. 52–56. PayPal contends that the teachings of Tumminaro account for the subject matter of each challenged claim, and provides reasoning as to why a person of ordinary skill in the art would have been prompted to modify the teachings of this reference. *Id.* PayPal also relies on the testimony of Dr. Chatterjee to support its positions. *See* Ex. 1003. During trial, Fintiv contends that Tumminaro fails to disclose the following limitations of independent claim 5: (1) “unbanked subscriber”; and (2) “a specified payment method”/“the selected payment method.” PO Resp. 34–46; PO Sur-reply 9–14, 21–24.

Based on the fully developed trial record, we determine that PayPal has shown by a preponderance of the evidence that claims 5–7 of the ’845 patent are unpatentable as obvious over the teachings of Tumminaro and the background knowledge of a person of ordinary skill in the art. We begin our analysis with the principles of law that generally apply to an asserted ground based on obviousness, and then we address the parties’ contentions with respect to the challenged claims.

1. Principles of Law

A claim is unpatentable under § 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 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 skill in the art; and (4) when in evidence, objective indicia of non-obviousness (i.e., secondary considerations).⁸ *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966). We analyze the asserted grounds based on obviousness with the principles we identify above in mind.

2. Claim 5

With the exception of the “receiving” and “notifying” steps, PayPal’s arguments and evidence with respect to its anticipation ground challenging independent claim 5 equally apply to its obviousness ground challenging this same claim. *See* Pet. 52. We address PayPal’s alternative arguments and evidence as to how the teachings of Tumminaro, together with the background knowledge of a person of ordinary skill in the art, account for the “receiving” and “notifying” steps of independent claim 5 in turn.

The first step of independent claim 5 recites “receiving subscriber communication over one of a plurality of channels connected to the monetary transaction system, the subscriber communication indicating that an unbanked subscriber desires to transfer a specified amount of funds to specified recipient using a specified payment method from the subscriber’s mobile wallet.” Ex. 1001, 31:34–32:5. To the extent Fintiv argues that this “receiving” step actually requires the user to specify/select a particular

⁸ In its Patent Owner Response, Fintiv does not present arguments or evidence of secondary considerations. *See* PO Resp.

payment method for the transfer, PayPal contends that Tumminaro still teaches this limitation because it discloses that “the account holder can select the account from which funds are obtained.” Pet. 52–53 (emphasis omitted) (quoting Ex. 1005 ¶ 242). According to PayPal, a person of ordinary skill in the art would have understood that this particular disclosure in Tumminaro applies to P2P fund transfers or, at the very least, it would have been obvious to do so in the P2P context. *Id.* at 53 (citing Ex. 1003 ¶¶ 168, 169). As further support for this argument, PayPal asserts that a user may provide details of the financial transaction, including “form of the payment.” *Id.* (quoting Ex. 1005 ¶ 335) (citing Ex. 1005 ¶ 334).

Moreover, to the extent Tumminaro’s P2P transfers do not disclose explicitly a “subscriber communication indicating . . . a specified payment method” by allowing the subscriber to select the account from which funds are obtained in the P2P transfer, PayPal contends that it would have been obvious to a person of ordinary skill in the art to modify Tumminaro in this way. Pet. 53. As it identifies above, PayPal argues that Tumminaro already expressly discloses permitting a user to select an account from which funds are obtained to make a purchase, and characterizes this feature as “advantageous[.]” *Id.* at 54 (quoting Ex. 1005 ¶ 242). Relying on the testimony of Dr. Chatterjee, PayPal argues that a person of ordinary skill in the art would have been motivated to enable the user to specify a particular funding source as part of communicating a transaction request for a P2P transfer. *Id.* (citing Ex. 1003 ¶ 181). According to PayPal, modifying Tumminaro in this way aligns with its goal of providing “a payment platform that provides a fast, easy way to make payments by individuals or

merchants using their mobile devices to access [various] account[s].” *Id.* (alterations in original) (citing Ex. 1005 ¶ 143).

The seventh step of independent claim 5 recites “notifying the unbanked subscriber that the specified amount of funds was transferred to the specified recipient over at least one of the plurality of channels connected to the monetary transaction system.” Ex. 1001, 32:23–26. To the extent that Fintiv argues the “notifying” step is required to be performed after the “transferring” step of independent claim 5, PayPal contends that a person of ordinary skill in the art would have understood that changing the order of Tumminaro’s steps for a P2P transfer illustrated in Figure 16 would be a “trivial adjustment.” Pet. 54. Based on Tumminaro’s disclosure that certain steps (e.g., steps 6 and 7 in Figure 16) may be “asynchronous service side threads,” PayPal argues that a person of ordinary skill in the art would have understood that Tumminaro performs an asynchronous process, such that the start of one step does not require necessarily the completion of one or more previous steps. *Id.* at 54–55 (quoting Ex. 1005 ¶ 348) (citing Ex. 1003 ¶¶ 182, 183). PayPal asserts that, even though Tumminaro’s Figure 16 illustrates the “notifying” step (i.e., step 4 in Figure 16) occurring before the “transferring” step (i.e., step 6 in Figure 16), a person of ordinary skill in the art would have understood that the asynchronous nature of these steps does not limit them to a predefined sequence, and changing their order would have been trivial. *Id.* at 55 (citing Ex. 1003 ¶ 183).

At the outset, we take this opportunity to note that Fintiv does not address squarely PayPal’s alternative arguments and evidence explaining how the teachings of Tumminaro, together with the background knowledge of a person of ordinary skill in the art, account for the claim terms

“a specified payment method”/“the selected payment method” that are included within the “receiving” step of independent claim 5. *See* PO Resp. 39–46; PO Sur-reply 21–24. In the Scheduling Order, we cautioned Fintiv “that any arguments not raised in the [Patent Owner Response] may be deemed waived.” Paper 11, 9; *see also In re NuVasive, Inc.*, 842 F.3d 1376, 1381 (Fed. Cir. 2016) (holding that patent owner’s failure to proffer argument at trial as instructed in the scheduling order constitutes waiver). The Board routinely holds patent owners to this cautionary statement. We see no reason to deviate from this position in this proceeding and, as a result, we find that Fintiv waived this particular argument.

In any event, Fintiv relies on the same arguments presented above in its anticipation ground challenging independent claim 5 to rebut PayPal’s explanation as to how the teachings of Tumminaro, together with the background knowledge of a person of ordinary skill in the art, account for the claim terms “unbanked subscriber” and “a specified payment method”/“the selected payment method” required by independent claim 5. *See* PO Resp. 34–46; PO Sur-reply 9–14, 21–24. For the same reasons we identify above, we do not agree with those arguments. *See supra* Section II.B.4.a and b.

In summary, PayPal has demonstrated by a preponderance of the evidence that the subject matter of independent claim 5 would have been obvious over the teachings of Tumminaro and the background knowledge of a person of ordinary skill in the art.

3. *Claims 6 and 7*

Claim 6 depends from independent claim 5, and further recites “wherein validating the status of the specified recipient comprises

performing a check on the specified recipient to comply with the office of foreign assets control.” Ex. 1001, 32:27–30. PayPal contends that the teachings of Tumminaro, together with the background knowledge of a person of ordinary skill in the art, account for this limitation because Tumminaro discloses performing a compliance check for new account holders with the Office of Foreign Asset Control (“O AFC”). Pet. 56 (citing Ex. 1005 ¶ 606). According to PayPal, a person of ordinary skill in the art would have understood that performing O AFC compliance on a new account holder typically includes performing this compliance check when the new account holder first opens his/her account. *Id.* PayPal asserts that the O AFC compliance check would provide the benefits of preventing fraud and enhancing security, both of which are important considerations to Tumminaro’s payment system. *Id.* (citing Ex. 1005 ¶ 609).

Claim 7 depends from independent claim 5, and further recites “wherein the money is transferred internationally between the mobile wallets.” Ex. 1001, 32:31–33. PayPal contends that its arguments and evidence with respect to its anticipation ground challenging dependent claim 7 equally apply to its obviousness ground challenging this same claim. *See* Pet. 52. That is, PayPal contends that Tumminaro discloses this limitation because the “MCAP is basically a ‘mobile wallet’” that allows an account holder to “move money in seconds around the world.” Pet. 51–52 (emphasis omitted) (quoting Ex. 1005 ¶ 882, then quoting *id.* ¶ 440) (citing Ex. 1005 ¶ 202).

During trial, Fintiv does not address separately PayPal’s arguments and supporting evidence as to how the teachings of Tumminaro, together with the background knowledge of a person of ordinary skill in the art,

account for the additional limitations of dependent claims 6 and 7. *See* PO Resp. 22–46; PO Sur-reply 9–14, 21–24. We have reviewed PayPal’s arguments and supporting evidence as to how the teachings of Tumminaro, together with the background knowledge of a person of ordinary skill in the art, account for the additional limitations of these dependent claims, and we agree with and adopt PayPal’s analysis. *See* Pet. 51–52, 55–56.

Accordingly, PayPal has demonstrated by a preponderance of the evidence that the subject matter of dependent claims 6 and 7 would have been obvious over the teachings of Tumminaro and the background knowledge of a person of ordinary skill in the art.

D. Obviousness Over Tumminaro, Keena, and the Background Knowledge of a Person of Ordinary Skill in the Art

PayPal contends that claims 1–3 of the ’845 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over the combined teachings of Tumminaro, Keena, and the background knowledge of a person of ordinary skill in the art. Pet. 56–71. PayPal contends that the combined teachings of Tumminaro and Keena account for the subject matter of each challenged claim, and provides reasoning as to why a person of ordinary skill in the art would have been prompted to modify the teachings of these references. *Id.* PayPal also relies on the testimony of Dr. Chatterjee to support its positions. *See* Ex. 1003. During trial, Fintiv contends that combined teachings of Tumminaro, Keena, and the background knowledge of a person of ordinary skill in that art fail to account for “performing one or more of a limit check and a velocity check,” as required by independent claim 1. PO Resp. 46–57; PO Sur-reply 15–21.

Based on the fully developed trial record, we determine that PayPal has shown by a preponderance of the evidence that claims 1–3 of the ’845 patent are unpatentable as obvious over the combined teachings of Tumminaro, Keena, and the background knowledge of a person of ordinary skill in the art. We begin our analysis with an overview of Keena, and then we address the parties’ contentions with respect to the challenged claims.

1. Overview of Keena

Keena generally relates to a system “for conducting electronic commerce” and, in particular, to “cash based purchasing of services provided electronically using a vendor’s mobile communication device at the point of sale.” Ex. 1006 ¶ 2. Keena discloses mobile payment platform 10 that includes mobile stored value module 14, which registered users may use to “prepay funds which can later be used to make payments for certain goods and services.” *Id.* ¶ 38, Fig. 1. According to Keena, mobile stored value module 14 “offers an alternative payment option useful in situations where subscribers are not banked.” *Id.* In one embodiment, a vendor employs a mobile top-up method on a third party’s phone (e.g., an unbanked user) by allowing the third party to approach the vendor “with cash and request[] a top-up for \$50.” *Id.* ¶ 50. The vendor accomplishes this by using an SMS message to enter “a command using syntax that includes the transaction type (e.g., TOP), the [third party’s] phone number, and the amount.” *Id.* ¶ 51. After the vendor confirms the top-up using a PIN challenge technique, the vendor “receives confirmation of the top-up” and the third party “receives a top-off acknowledgement via SMS.” *Id.*

2. Claim 1

For the most part, PayPal’s arguments and evidence explaining how Tumminaro discloses the limitations of independent claim 5 equally apply to how the combined teachings of Tumminaro, Keena, and the background knowledge of a person of ordinary skill in the art account for the limitations of independent claim 1. *Compare* Pet. 29–39, *with id.* at 56–57. We address the unique limitations of independent claim 1 in turn.

Independent claim 1 recites “wherein the monetary transaction system is implemented to deposit funds at an agent branch through a mobile wallet, including performing the following steps.” Ex. 1001, 29:52–54. PayPal contends that Tumminaro teaches this limitation because the “MCAP is basically a ‘mobile wallet’” that allows a user to add funds to a pooled account or, alternatively, add funds to a prepaid debit card account associated with the user. Pet. 57–58 (quoting Ex. 1005 ¶ 882) (citing Ex. 1005 ¶¶ 173, 174, 196, 262, 604; Ex. 1003 ¶¶ 191, 192). PayPal also argues that the user may deposit funds without engaging an agent branch. *Id.* (citing Ex. 1005 ¶¶ 290–292, 604, Fig. 8).

The first step of independent claim 1 recites “receiving communication from an agent branch over one of a plurality of channels connected to the monetary transaction system, the agent communication indicating that an unbanked subscriber desires to deposit a specified amount of funds into the unbanked subscriber’s mobile wallet account.” Ex. 1001, 29:55–60. PayPal contends that the combined teachings of Tumminaro and Keena account for this limitation because, as it identifies above in its anticipation ground challenging independent claim 5, Tumminaro’s pooled account serves as “the unbanked subscriber’s mobile wallet account.”

Pet. 59 (quoting Ex. 1005 ¶ 447). PayPal argues that Tumminaro also discloses that the user may deposit funds into the pooled account via an agent branch. *Id.* (citing Ex. 1005 ¶¶ 196, 604). To the extent Tumminaro does not disclose expressly “receiving communication from an agent branch . . . indicating that the unbanked subscriber desires to deposit a specified amount of funds to the unbanked subscriber’s mobile wallet account,” PayPal argues that a person of ordinary skill in the art would have been motivated to modify Tumminaro’s merchant POS to perform Keena’s mobile top-up method. *Id.* at 59–61 (citing Ex. 1006 ¶¶ 47–51, Fig. 2A). In addition, PayPal argues that, when engaging in a transaction involving an unbanked user depositing funds into his/her account at the agent branch, a person of ordinary skill in the art would have recognized that Tumminaro’s merchant POS (as modified by Keena) would use SMS to send a vendor communication “over at least one of the plurality of channels connected to the monetary transaction system.” *Id.* at 61–62 (citing Ex. 1005 ¶¶ 45, 51; Ex. 1003 ¶ 195).

Turning to rationale to combine, PayPal contends that there is sufficient motivation to combine the relevant teachings of Tumminaro and Keena. Pet. 24. First, PayPal argues that a person of ordinary skill in the art would have been motivated to modify Tumminaro’s payment system to include Keena’s mobile top-up method to enable subscribers who only have access to cash (e.g., an unbanked user) “to add funds to their mobile wallet accounts and use the [payment] system while maintaining security of the overall system.” *Id.* at 24–25 (citing Ex. 1005 ¶¶ 36, 174, 196, 604; Ex. 1006 ¶ 23). According to PayPal, modifying Tumminaro’s payment system in this way “would allow more users to more conveniently make

more cash deposits with greater security.” *Id.* at 25. Second, PayPal argues that a person of ordinary skill in the art would have been motivated to modify Tumminaro’s payment system to include Keena’s notifications of a completed top-up transaction “to efficiently alert the parties of the success of the requested top-up transaction.” *Id.* at 25–26 (citing Ex. 1005 ¶¶ 150, 327; Ex. 1006 ¶ 51; Ex. 1003 ¶ 110). As support for this argument, PayPal asserts that sending Keena’s notifications to both parties (1) “would provide greater transparency to subscribers and improve the customer experience,” and (2) would inform users of Tumminaro’s payment system in real-time or near real-time, thereby promoting Tumminaro’s goal of immediate fund transfer. *Id.* at 26 (citing Ex. 1005 ¶¶ 36, 339, 370, 375, 482, 591, 603; Ex. 1006 ¶ 47).

The second step of independent claim 1 recites “validating the status of the unbanked subscriber’s mobile wallet account.” Ex. 1001, 29:61–62. PayPal contends that Tumminaro teaches this limitation because an agent branch may accept funds from account holders, which, in turn, are deposited into a pooled account. Pet. 62 (citing Ex. 1005 ¶ 604). PayPal argues that, in Tumminaro, these types of deposits are only available to certain users in the “verified state” that may “add (i.e. load), or withdraw (i.e. unload) money,” but not “enrolled” users that can only “receive and request money.” *Id.* (quoting Ex. 1005 ¶¶ 276, 277) (citing Ex. 1003 ¶ 196). Relying on the testimony of Dr. Chatterjee, PayPal asserts that these disclosures in Tumminaro indicate that its payment system must validate the status of the unbanked user’s account to determine whether he/she is allowed to deposit funds. *Id.* (citing Ex. 1003 ¶ 196).

The third step of independent claim 1 recites “determining if the agent branch is authorized to receive the deposited money.” Ex. 1001, 29:62–63. PayPal contends that Tumminaro teaches this limitation because only vendors that are pre-registered to serve as agent branches may deposit funds using Tumminaro’s payment system. Pet. 63 (citing Ex. 1005 ¶ 604; Ex. 1003 ¶ 197). To the extent Fintiv argues that Tumminaro does not teach determining “if the agent branch is authorized to receive the deposited money,” PayPal asserts that a person of ordinary skill in the art would have found it obvious to modify Tumminaro’s payment system to include Keena’s PIN challenge technique for authenticating an agent branch. *Id.* That is, PayPal argues that Keena authorizes a vendor by sending a PIN challenge question that requests the vendor to provide a partial pin (e.g., the second and fourth digits of the vendor’s PIN). *Id.* at 63–64 (citing Ex. 1006 ¶¶ 51, 70). PayPal argues that, if the PIN challenge fails, this indicates that an unauthorized agent branch is requesting the top-up. *Id.* at 64 (citing Ex. 1003 ¶¶ 198–200).

Turning to rationale to combine, PayPal contends that there is sufficient motivation to combine the relevant teachings of Tumminaro and Keena. Pet. 24. PayPal argues that a person of ordinary skill in the art would have been motivated to modify Tumminaro’s payment system to include Keena’s PIN challenge technique because “Tumminaro recognizes the need for uniquely identifying parties.” *Id.* at 27 (emphasis in original omitted) (citing Ex. 1005 ¶¶ 34, 201, 501; Ex. 1006 ¶ 51; Ex. 1003 ¶ 11). According to PayPal, modifying Tumminaro to include Keena’s PIN verification “enhances security,” “aligns with Tumminaro’s three-level security blanket and reduces the potential for fraud.” *Id.* (citing Ex. 1005

¶¶ 203, 609–617, 619; Ex. 1003 ¶ 111). PayPal asserts that there would be a reasonable expectation of success in making this modification because it would “identify[] the parties as part of validating a transaction.” *Id.* (citing Ex. 1003 ¶ 111).

The fourth step of independent claim 1 recites “performing one or more of a limit check and a velocity check on the unbanked subscriber’s mobile wallet account, the limit check determining whether sufficient funds are available to make the deposit amount, the velocity check determining whether the unbanked subscriber has exceeded a specified number of transactions within a specified time period.” Ex. 1001, 29:63–30:3. PayPal contends that Tumminaro and Keena each teach performing a limit check to determine whether sufficient funds are available to make a deposit because Tumminaro’s agent branch or Keena’s vendor “will only deposit or top off the amount of cash physically received from the unbanked subscriber.” Pet. 65 (Ex. 1003 ¶ 202). As an example, PayPal argues that Keena teaches performing a limit check because it determines whether the vendor has sufficient funds to perform the mobile top-up method. *Id.* (citing Ex. 1006 ¶ 52).

In addition, PayPal contends it would have been obvious to a person of ordinary skill in the art to implement both limit and velocity checks because, as it explains above in its anticipation ground challenging independent claim 5, Tumminaro discloses both limit and velocity checks. Pet. 65. That is, Tumminaro discloses “a limit check” because it is capable of checking whether a payment method selected by a user (e.g., a pooled account) has a sufficient balance and whether he/she has set a per transaction limit. *Id.* at 45–46 (citing Ex. 1005 ¶¶ 335, 336, 598; Ex. 1003 ¶ 161).

PayPal also contends that Tumminaro discloses “a velocity check” because there are “velocity settings” parameters stored in each user profile that may restrict the number of transactions per day or the amount of money that may be transferred in a transaction. *Id.* at 46–47 (quoting Ex. 1005 ¶ 271) (citing Ex. 1005 ¶¶ 280, 434, Fig. 35).

The fifth step of independent claim 1 recites “crediting the unbanked subscriber’s mobile wallet account with the specified amount of funds when the agent bank is authorized to receive the deposited money.” Ex. 1001, 30:4–6. PayPal contends that Tumminaro teaches this limitation because, in the scenario where the pooled account serves as the unbanked user’s mobile wallet account, Tumminaro discloses depositing the funds into the pooled account. Pet. 66 (citing Ex. 1005 ¶¶ 447, 604; Ex. 1003 ¶ 203). PayPal reiterates that, when modifying Tumminaro’s payment system to include Keena’s mobile top-up method and PIN challenge technique, the resulting system uses the response from the vendor to the PIN challenge to determine “when the agent bank is authorized to receive the deposited money.” *Id.* (citing Ex. 1006 ¶ 51, Fig. 2C).

The sixth step of independent claim 1 recites “returning a notification to the agent branch confirming the deposit.” Ex. 1001, 30:7–8. PayPal contends that the combined teachings of Tumminaro and Keena account for this limitation because Keena discloses that the vendor receives a top-up confirmation message. Pet. 67 (citing Ex. 1006 ¶ 51, Fig. 2D). PayPal then asserts that it would have been obvious to a person of ordinary skill in the art to modify Tumminaro’s merchant POS to include sending Keena’s top-up confirmation message to the vendor because the resulting system “return[s] a notification to the agent branch confirming the deposit.” *Id.* at 67–68 (citing

Ex. 1003 ¶ 205). According to PayPal, modifying Tumminaro in this way would have been desirable, and recognized by a person of ordinary skill in the art as such, because “it would prevent the agent branch from erroneously trying to repeat the transaction.” *Id.*

The seventh step of independent claim 1 recites “notifying the subscriber that the specified amount of funds was deposited in the unbanked subscriber’s mobile wallet account over at least one of the plurality of channels connected to the monetary transaction system.” Ex. 1001, 30:8–12. PayPal contends that the combined teachings of Tumminaro and Keena account for this limitation because Keena discloses sending a top-up confirmation message to the subscriber. Pet. 68–69 (citing Ex. 1006 ¶ 51, Fig. 2E). PayPal then asserts that it would have been obvious to a person of ordinary skill in the art to modify Tumminaro’s payment system to include sending Keena’s top-up confirmation message to the unbanked subscriber’s mobile device so that the resulting system “notif[ies] the subscriber that the specified amount of funds was deposited in the unbanked subscriber’s mobile wallet account.” *Id.* at 69. According to PayPal, modifying Tumminaro to include this notification technique would have been desirable because “notifying the user that the deposit succeeded and funds are available allows the user to spend the money (e.g., to pay a bill) without worrying about a declined transaction for insufficient funds.” *Id.* PayPal reiterates that sending Keena’s top-up confirmation message to the subscriber using SMS serves as the “one of the plurality of channels connected to the monetary transaction system” for notifying the subscriber of the deposit. *Id.* at 70 (citing Ex. 1006 ¶ 51).

During trial, Fintiv contends that combined teachings of Tumminaro, Keena, and the background knowledge of a person of ordinary skill in that art fail to account for “performing one or more of a limit check and a velocity check,” as required by independent claim 1. PO Resp. 46–57; PO Sur-reply 15–21. Notwithstanding Fintiv’s arguments to the contrary, PayPal has shown by a preponderance of the evidence that the combined teachings of Tumminaro, Keena, and the background knowledge of a person of ordinary skill in that art account for all the limitations of independent claim 1.

a. “performing one or more of a limit check and a velocity check”

In its Patent Owner Response, Fintiv contends that Tumminaro’s disclosure of an agent physically counting cash is not a limit check “on the unbanked subscriber’s mobile wallet account.” PO Resp. 53–54 (citing Ex. 2007 ¶¶ 145, 146; Pet. 65). Fintiv also argues that Keena’s disclosure of a vendor determining whether sufficient funds are available to perform a top-up operation also is not a limit check “on the unbanked subscriber’s mobile wallet account.” *Id.* at 54–55 (citing Ex. 2007 ¶ 147). Lastly, Fintiv argues that PayPal’s cross-reference to the “limit check” for transferring funds required by independent claim 5 when addressing the “limit check” for depositing funds required by independent claim 1 is deficient because it fails to explain how “the limit check determines whether sufficient funds are available to make the deposit into the unbanked subscriber’s account.” *Id.* at 55–56 (citing Ex. 2007 ¶ 150, Pet. 45).

In its Reply, PayPal contends that, even if we were to adopt Fintiv’s proposed construction of the claim term “performing one or more of a limit check and a velocity check” as always requiring both a limit check and a

velocity check, the combined teachings of Tumminaro and Keena still account for this limitation. *See* Pet. Reply 25. PayPal argues that Tumminaro’s disclosure of an agent physically counting cash to determine whether the unbanked user can make the deposit teaches that a limit check is necessarily performed on an unbanked subscriber’s mobile wallet account “[b]ecause the limit check is performed on funds deposited by [the] unbanked subscriber *into* his mobile wallet *account* (i.e., by the load agent counting the cash).” *Id.* at 25–26. Lastly, PayPal argues that Fintiv does not rebut its arguments presented in the Petition that it would have been obvious to modify Tumminaro to implement both a limit check and velocity check because Tumminaro discloses that these two types of checks are applicable to all transactions, including deposits. *Id.* at 26 (citing Ex. 1005 ¶¶ 298, 598; Ex. 1037, 188:10–25, 222:3–8; Pet. 45–47).

In its Sur-reply, Fintiv contends that PayPal merely offers attorney argument in its Reply and does not rebut the testimony of Fintiv’s declarant, Mr. Johnson, on the issue as to whether a limit check includes an agent physically counting cash. PO Sur-reply 18 (citing Ex. 2007 ¶ 146). Fintiv further argues that PayPal does not explain adequately how an agent physically counting cash received to initiate a deposit transaction constitutes a limit check “on the unbanked subscriber’s mobile wallet account” required by independent claim 1. *Id.* at 18–19 (citing Pet. 65). Fintiv argues that, during the deposition of Mr. Johnson, PayPal elicited testimony regarding an example of a Google Wallet deposit limit, which, according to Fintiv, is consistent with the disclosure in the specification of the ’845 patent of placing “transaction limits” on user accounts. *Id.* at 19 (quoting Ex. 1001, 29:16–19) (citing Ex. 1037, 188:10–189:5). Lastly, Fintiv asserts that

PayPal advocates for the first time in the Reply that “Tumminaro’s checks are applicable to all transactions,” but the corresponding citations to Tumminaro do not describe the checks in the context of a deposit, as required by independent claim 1. *Id.* at 20–21 (quoting Pet. Reply 26) (citing Ex. 1005 ¶¶ 298, 598).

Based on the fully developed trial record, we agree with PayPal that the combined teachings of Tumminaro and Keena account for “performing one or more of a limit check and a velocity check,” as required by independent claim 1. Pet. 45–47, 65–66. As we explain in our claim construction analysis above, we construe the claim term “performing one or more of a limit check and a velocity check” as performing a limit check, a velocity check, or both a limit check and a velocity check. We further construe the claimed “limit check” as determining whether sufficient funds are available to complete a deposit into the unbanked subscriber’s mobile wallet account, without disavowing an agent physically counting cash presented for deposit. *See supra* Section II.B.2.

Applying our construction of the claim term “performing one or more of a limit check and a velocity check,” PayPal contends—and Fintiv does not dispute—that Tumminaro teaches this limitation because it discloses performing a velocity check. Pet. 46 (quoting Ex. 1005 ¶¶ 271, 280); *see also id.* at 65 (citing back to the arguments and evidence for limitation 5[h], which recites, in relevant part, “performing at least one of a limit check and a velocity check,” to support PayPal’s explanation as to how Tumminaro discloses performing a velocity check). Tumminaro discloses that each user profile stores parameter settings, including, among other things, “velocity settings.” Ex. 1005 ¶ 271. Tumminaro discloses that velocity settings

amount to “certain restrictions or limits on the account,” two examples being “how many transactions a day a user may perform or amount of money that may be transferred in a transaction.” *Id.* ¶ 280.⁹ Based on these disclosures, we find that Tumminaro teaches “performing one or more of a limit check and a velocity check” required by independent claim 1 because it discloses that its payment system is capable of performing a velocity check on the unbanked subscriber’s account (e.g., an account held in a pooled account or a prepaid debit card account).

Even if we were to adopt Fintiv’s proposed construction of the claim term “performing one or more of a limit check and a velocity check” as always requiring both a limit check and a velocity check, the combined teachings of Tumminaro and Keena still account for this limitation because they collectively teach performing both a limit check and a velocity check. Pet. 46, 65. As we explain above, Tumminaro teaches “performing . . . a velocity check” because it discloses that its payment system is capable of performing a velocity check on the unbanked subscriber’s account (e.g., an

⁹ In the Institution Decision, we expressed a concern that PayPal’s reliance on its arguments and evidence explaining how Tumminaro discloses “performing at least one of a limit check and a velocity check” required by independent claim 5 to teach “performing one or more of a limit check and a velocity check” required by independent claim 1 appears to be problematic because independent claim 5 is directed to transferring funds from the unbanked subscriber’s account to a specified recipient, whereas independent claim 1 is directed to depositing funds into the unbanked subscriber’s account. Dec. on Inst. 49 n.8. We no longer have the same concern because, during the preliminary phase of this proceeding, we did not appreciate that Tumminaro’s velocity settings are applicable to “transactions” generally, without differentiating between transfer and deposit transactions. Ex. 1005 ¶ 280.

account held in a pooled account or a prepaid debit card account).

See Ex. 1005 ¶¶ 271, 280.

In addition, applying our construction of the claimed “limit check” as determining whether sufficient funds are available to complete a deposit into the unbanked subscriber’s mobile wallet account, without disavowing an agent physically counting cash presented for deposit, we find that Tumminaro also teaches this limitation because it discloses performing a limit check. Tumminaro discloses depositing funds into an account held in a pooled account or a prepaid debit card account associated with the unbanked user. Ex. 1005 ¶¶ 196, 604. Tumminaro discloses accomplishing a deposit transaction via an agent branch using a merchant POS terminal. *Id.* ¶ 173. Dr. Chatterjee testifies that Tumminaro performs a limit check to determine whether sufficient funds are available to complete this deposit transaction into the unbanked subscriber’s account (e.g., an account held in a pooled account or a prepaid debit card account) because the agent operating the merchant POS terminal “will only deposit or top off the amount of cash physically received from the unbanked [user].” Ex. 1003 ¶ 201. We credit Dr. Chatterjee’s testimony on this particular issue because it is consistent with Tumminaro’s disclosure that “there is still a huge global population of people who rely primarily on cash transactions . . . to send and receive money.” Ex. 1005 ¶ 8; *see also id.* ¶ 36 (disclosing a “[n]eed for electronic payments to be accessible to banked and unbanked consumers”).

This concept of performing a limit check by determining whether an unbanked user provides sufficient funds to complete a deposit into his/her account also is present in Keena, which fairly suggests performing a limit check because it determines whether the vendor receives sufficient funds to

perform a mobile top-up method. *See* Ex. 1006 ¶ 52. Dr. Chatterjee testifies that Keena’s vendor performs a limit check to determine whether sufficient funds are available to complete this deposit transaction into the unbanked subscriber’s account (e.g., an account held in a pooled account or a prepaid debit card account) because the vendor “will only deposit or top off the amount of cash physically received from the unbanked [user].” Ex. 1003 ¶ 201. We credit Dr. Chatterjee’s testimony on this particular issue because it is consistent with Keena’s disclosure that its mobile payment platform 10 is accessible to “customers who do not have a . . . bank account and who, for example, can only pay in cash.” Ex. 1006 ¶ 52; *see also id.* ¶ 38 (disclosing that mobile stored value module 14, which is an extension of mobile payment platform 10, “offers an alternative payment option useful in situations where subscribers are not banked”).

We do not agree with Fintiv’s arguments that neither Tumminaro’s disclosure of an agent physically counting cash presented for deposit, nor Keena’s disclosure of a vendor determining whether sufficient funds are available to perform a mobile top-up method, teaches a limit check “on the unbanked subscriber’s mobile wallet account.” *See* PO Resp. 53–56; PO Sur-reply 18–19. Fintiv’s arguments in this regard attempt to import an extraneous feature into the “limit check” required by independent claim 1 by insisting there must be a check on information associated with the unbanked subscriber’s mobile wallet account as a prerequisite before initiating the deposit or mobile top-up. Neither the plain language of independent claim 1, nor the specification of the ’845 patent, support Fintiv’s narrow reading. In our view, Tumminaro’s agent counting cash received by an unbanked subscriber to determine whether sufficient funds are available to

complete a deposit is a prerequisite to initiating the deposit and, therefore, results in performing the limit check contemplated by the '845 patent on the unbanked subscriber's account (e.g., an account held in a pooled account or a prepaid debit card account). Similarly, Keena's vendor determining whether sufficient funds are available to perform a mobile top-up method is a prerequisite to initiating the top-up and, therefore, results in performing the limit check contemplated by the '845 patent on the unbanked subscriber's account (e.g., an account held in a pooled account or a prepaid debit card account). Nothing more is required.

Lastly, we do not agree with Fintiv's argument that the example of a Google Wallet deposit limit elicited during the deposition of Mr. Johnson is consistent with the limit check contemplated by the '845 patent. *See* PO Sur-reply 19. During the oral argument, counsel for Fintiv conceded that the example of a Google Wallet deposit limit is not present in the specification of the '845 patent and that "Google Wallet comes much, much later on." Tr. 53:23–54:9.

b. Summary

In summary, PayPal has demonstrated by a preponderance of the evidence that the subject matter of independent claim 1 would have been obvious over the combined teachings of Tumminaro, Keena, and the background knowledge of a person of ordinary skill in the art.

3. Claims 2 and 3

Claim 2 depends from independent claim 1, and further recites "wherein the monetary transaction system application provides a web interface that allows subscribers to perform the same functions provided by the monetary transaction system application." Ex. 1001, 30:13–17.

PayPal contends that Tumminaro teaches this limitation because its payment system is capable of using a web interface to handle transaction requests submitted by a web browser client. Pet. 70 (citing Ex. 1005 ¶¶ 34, 39, 353; Ex. 1003 ¶ 208).

Claim 3 depends from independent claim 1, and further recites “wherein the monetary transaction system application is provided on a prepaid or postpaid phone.” Ex. 1001, 30:18–20. PayPal contends that Tumminaro teaches this limitation because its payment system is capable of interfacing with prepaid phones from multiple carriers. Pet. 71 (citing Ex. 1005 ¶¶ 260, 353; Ex. 1003 ¶ 209).

During trial, Fintiv does not address separately PayPal’s arguments and supporting evidence as to how the combined teachings of Tumminaro, Keena, and the background knowledge of a person of ordinary skill in the art account for the additional limitations of dependent claims 2 and 3. *See* PO Resp. 46–57; PO Sur-reply 15–21. We have reviewed PayPal’s arguments and supporting evidence as to how the combined teachings of Tumminaro, Keena, and the background knowledge of a person of ordinary skill in the art account for the additional limitations of these dependent claims, and we agree with and adopt PayPal’s analysis. *See* Pet. 70–71. Accordingly, PayPal has demonstrated by a preponderance of the evidence that the subject matter of dependent claims 2 and 3 would have been obvious over the combined teachings of Tumminaro, Keena, and the background knowledge of a person of ordinary skill in the art.

III. CONCLUSIONS¹⁰

Based on the fully developed trial record, PayPal has demonstrated by a preponderance of the evidence that claims 1–3 and 5–7 of the '845 patent are unpatentable. A summary of our conclusions is set forth in the table below.

Claims	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
5, 7	102(b)	Tumminaro	5, 7	
5–7	103(a)	Tumminaro, background knowledge of a person of ordinary skill in the art	5–7	
1–3	103(a)	Tumminaro, Keena, background knowledge of a person of ordinary skill in the art	1–3	
Overall Outcome			1–3, 5–7	

¹⁰ Should Fintiv wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Fintiv's attention to the April 2019 Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Fintiv chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Fintiv of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

IV. ORDER

In consideration of the foregoing, it is
ORDERED that claims 1–3 and 5–7 of the '845 patent have been
shown to be unpatentable; and

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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