

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*.

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

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 (“Prelim. Resp.”). Based on the authority delegated to us by the Director under 37 C.F.R. § 42.4(a), we may not institute an IPR unless the information presented in the Petition and any response thereto shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a) (2020). Taking into account Fintiv’s Preliminary Response, we conclude that the information presented in the Petition establishes that there is a reasonable likelihood that PayPal would prevail in challenging at least one of claims 1–3 and 5–7 of the ’845 patent as unpatentable. Pursuant to § 314, we hereby institute an *inter partes* review as to these claims of the ’845 patent.

A. Real Parties in Interest

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

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).

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.

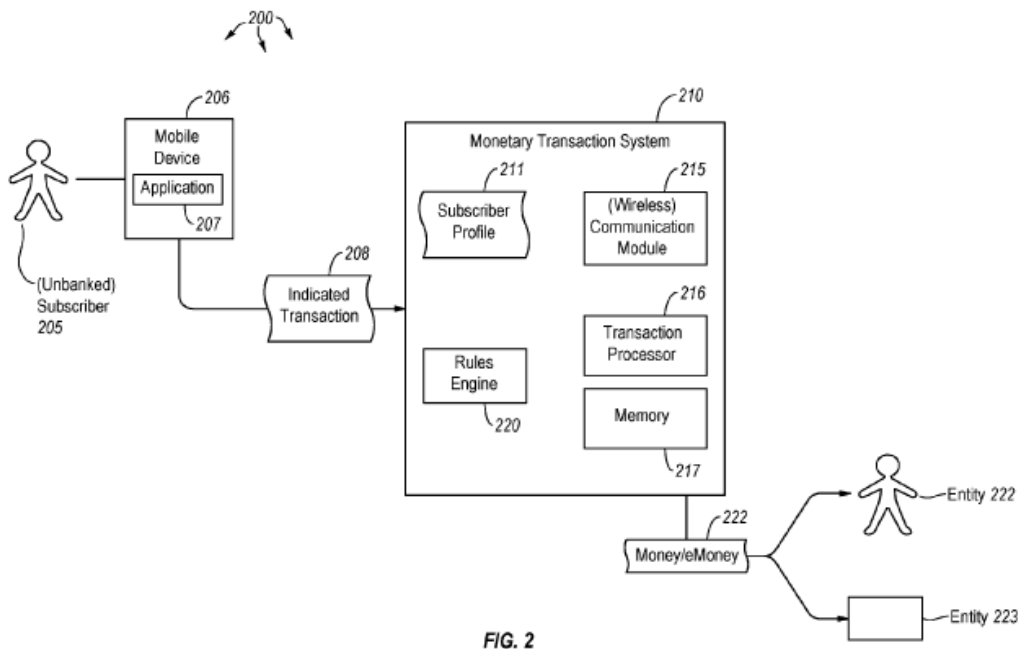


Figure 2 illustrates monetary transaction system 200 that includes unbanked subscriber 205 using mobile device 206 that runs mobile wallet application 207 to conduct indicated transaction 208 with entity 222 or 223. *Id.* at 13:62–14:32. Using mobile device 206 that runs mobile wallet application 207,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

D. Challenged Claims

Of the 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.

Id. at 31:12–32:26.

E. Asserted Prior Art References

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

Name ¹	Reference	Dates	Exhibit Nos.
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).

II. ANALYSIS

A. Claim Construction

In an IPR based on a petition filed on or after November 13, 2018, such as here, 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) (2019). 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) means “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) means “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) means “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) means “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).

In the Preliminary Response, Fintiv appears to agree with PayPal’s proposed construction of “unbanked subscriber” as “one that does not have [(or have access to)] a financial institution account,” with one exception. Prelim. Resp. 9–11. Relying on the testimony of its declarant, Kai Johnson, Fintiv contends that a financial institution in the context of the ’845 patent “is broader than banks and credit unions,” and would be understood by a person of ordinary skill in the art “to encompass any institution that provides services to customers who maintain a financial account with the institution,” including “entities that manage debit card accounts (including prepaid debit card accounts)” and “institutions that manage Automated Clearing House (ACH) and/or ATM [(automated teller machine)] transactions.” *Id.* at 10 (citing Ex. 2001 ¶ 48). The Preliminary Response does not otherwise address claim construction explicitly. *See id.* at 1–11.

For purposes of institution, the only claim term that requires construction is “unbanked subscriber” because there appears to be a dispute between the parties regarding its scope and meaning. *See 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))). It is well-settled that “the specification may reveal a special definition given to a claim term by the patentee In such cases, the [patentee’s] lexicography governs.” *Phillips*, 415 F.3d at 1316 (citing *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)). Although the patentee is free to define the specific claim terms used to describe his or her invention, “this must be done with reasonable clarity, deliberateness, and precision.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Upon reviewing the specification of the ’845 patent, it provides an explicit definition of the claim term “unbanked subscriber.” That is, the specification 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. 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. At first glance, the construction that PayPal proposes appears consistent with this explicit definition. However, PayPal uses the language “a financial institution account,” whereas the specification uses the language “a bank account or credit union account.” We decline to adopt PayPal’s construction because it does not use the same terminology as the specification to define an “unbanked subscriber.” Because we decline to adopt PayPal’s proposed construction, we need not address Fintiv’s argument as to whether the “financial institution” term added by PayPal’s proposed construction “encompass[es] any institution that provides services to customers who maintain a financial account with the institution,” including “entities that manage debit card accounts (including prepaid debit card accounts)” and

“institutions that manage Automated Clearing House (ACH) and/or ATM transactions.” Prelim. Resp. 10.

B. Anticipation by Tumminaro

PayPal contends that claims 5 and 7 of the '845 patent are unpatentable under 35 U.S.C. § 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. Sandeep Chatterjee to support its positions. *See* Ex. 1003.

Based on the preliminary record, we determine that PayPal has shown that there is a reasonable likelihood that it would prevail in challenging at least one of claims 5 and 7 the '845 patent as unpatentable. We begin our analysis with the principles of law that generally apply to an asserted ground based on anticipation, followed by an assessment of the level of skill in the art, an 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.” *Paulsen*, 30 F.3d at 1480 (citing *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)). “[T]he dispositive question regarding anticipation[, therefore, i]s whether one 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.

For purposes of institution, there is sufficient evidence in the record that enables us to determine the knowledge level of a person of ordinary skill in the art. 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 the Preliminary Response, Fintiv does not address the level of skill in the art. *See* Prelim. Resp. Fintiv’s declarant, however, appears to agree with PayPal’s assessment of the level of skill in the art. *See* Ex. 2001 ¶¶ 28, 29. To the extent necessary, and for purposes of institution, we adopt PayPal’s assessment of the level of skill in the art because it is consistent with the ’845 patent and the asserted prior art.

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.

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

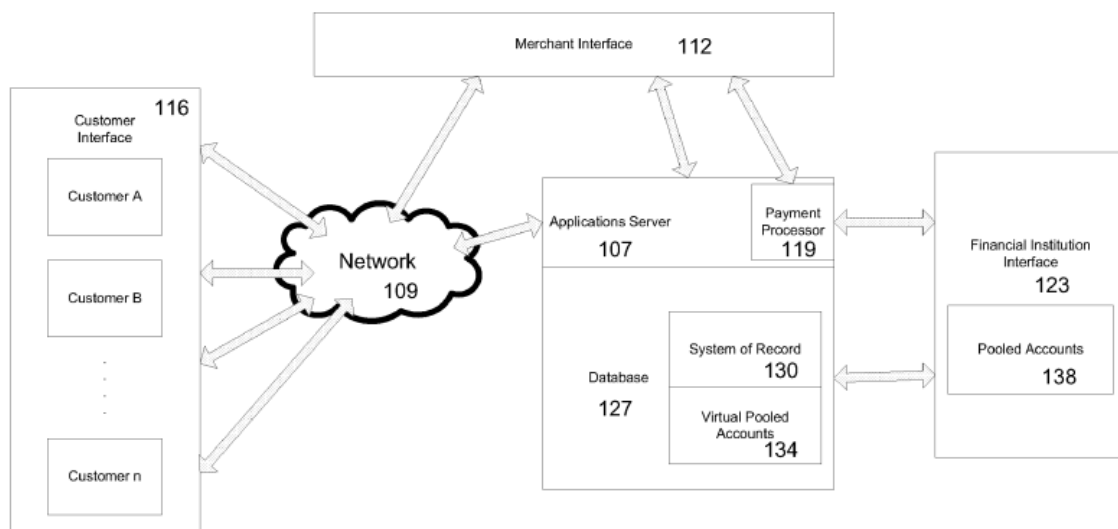


Fig. 1

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.

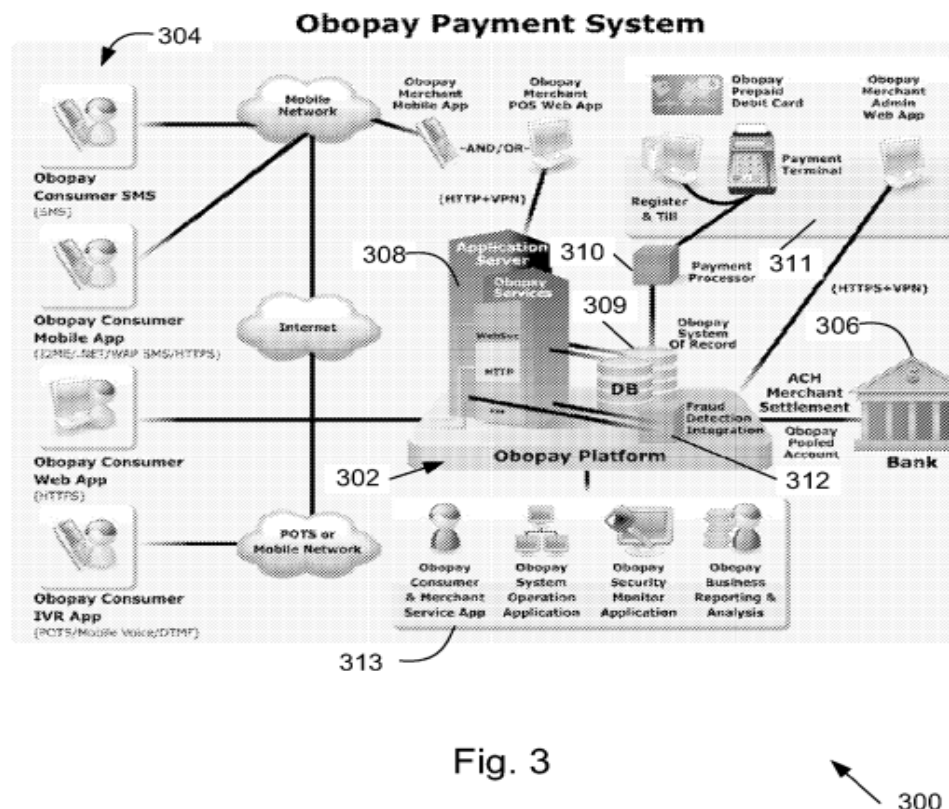


Fig. 3

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 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 pay friends, shop, and transfer funds using his/her mobile device. 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 has a profile associated therewith maintained in a profile database and, therefore, 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 information retrieved from the user's profile stored in a "user profile database" and 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 non-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 basically a “mobile wallet.” Pet. 39–40 (quoting Ex. 1005 ¶ 882). Relying on the testimony of Dr. Chatterjee, PayPal then asserts that each of the transfers implemented by Tumminaro’s payment system, including transferring money between two non-card users, constitutes a transfer between mobile wallets. *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 a pooled account or prepaid debit card over any of the available channels, including, among other things, 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 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, validating his/her account, checking the account balance, and checking the personal identification number (“PIN”). *Id.* (citing Ex. 1005 ¶¶ 347–48; 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., 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, 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. *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 the 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 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” were transferred to the recipient. Pet. 51 (citing Ex. 1005 ¶¶ 348, 353, Fig. 16; Ex. 1003 ¶ 174).

Based on the preliminary record, we discern no deficiency in PayPal’s characterizations of Tumminaro. In addition, for purposes of institution, we are persuaded by Dr. Chatterjee’s testimony concerning the relevant disclosures in Tumminaro. At this stage of the proceeding, Fintiv argues that Tumminaro does not disclose the following two limitations: (1) “unbanked subscriber”; and (2) “a specified payment method” that is referred to later in independent claim 5 as “the selected payment method.” See Prelim. Resp. 11–26. We address each argument in turn.

a. “unbanked subscriber”

In its Preliminary Response, Fintiv contends that, when applying PayPal’s proposed construction of the claim term “unbanked subscriber,” PayPal has failed to meet its burden of demonstrating that Tumminaro discloses this term. Prelim. Resp. 11. According to Fintiv, Tumminaro fails to disclose the claim term “unbanked subscriber” because unbanked users of Tumminaro’s payment system are capable of accessing either (1) a pooled account or (2) a reloadable prepaid debit account, and each of these two options provide access to a financial institution account. *Id.* at 12–21.

As an initial matter, based on the preliminary record, we decline to adopt PayPal’s proposed construction of the claim term “unbanked subscriber” because PayPal does not use the same terminology as the specification of the ’845 patent to define this term. *See supra* Section II.A. Instead, we preliminarily construe 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.” Ex. 1001, 12:25–27.

With this preliminary construction in mind, we turn to the relevant disclosures in Tumminaro relied upon by PayPal. *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 appears to draw a distinction between the terms “banked” and “unbanked.” Relying on this distinction, it is our view that Tumminaro uses the word “unbanked” as a term of art to describe an individual that does not have (or does not have access to) a bank account. This is consistent with our preliminary construction adopted for purposes of institution.

Our preliminary determination in this regard is further supported by the testimony of PayPal’s declarant, Dr. Chatterjee. Relying on extrinsic evidence, he testifies that “unbanked” consistently refers to “individuals that cannot get accounts at traditional financial institutions, and typically rely on

cash to perform transactions.” Ex. 1003 ¶ 81 (citing Ex. 1026, 4511; Ex. 1030, 4491; Ex. 1031). That is, we understand Dr. Chatterjee to testify that “unbanked” is a well-known term of art used to describe an individual that does not have (or does not have access to) a bank account. *See id.*

Based on the preliminary record, we are not persuaded by Fintiv’s argument that unbanked users of Tumminaro’s payment system are capable of accessing a pooled account (e.g., by using an ATM) and, therefore, they have access to a traditional bank account. *See* Prelim. Resp. 12–19. As we explain above, we understand Tumminaro to draw a distinction between a banked user (i.e., an individual that has (or has access to) a bank account) and an unbanked user (i.e., an individual that does not have (or does not have access to) a bank account). When making its payment system accessible to an unbanked user, Tumminaro discloses that the unbanked user may maintain money in a pooled account. *See, e.g.,* Ex. 1005 ¶¶ 23 (“[W]hen the first user is a no-card, registered user, the first account is in a pooled account, and the debiting and crediting include maintaining the money amount within the pooled account.”), 447 (“[F]or unbanked users, accounts can be created or held in a pooled account with the partner bank.”). Tumminaro further discloses that the pooled accounts may be virtual pooled accounts 134 that are “managed separately from the pooled accounts of the financial institution.” *Id.* ¶ 146; *see also id.* ¶ 194 (“The mobile payment service provider holds money in a pooled account for customers without cards is held in trust at the bank.”). In our view, Tumminaro discloses that the pooled accounts are not traditional bank accounts, but rather temporary

virtual accounts created for an unbanked user that he/she may use to interact with the payment system.³

Even if we were to agree with Fintiv that Tumminaro's payment system allows an unbanked user to make deposits and withdraws from his/her pooled account using an ATM, this would not change our preliminary view that the pooled account is not a traditional bank account. *See* Prelim. Resp. 14–17. The use of an ATM in this particular circumstance does not change the nature of the pooled account, which is nothing more than a temporary virtual account created for the unbanked user so that he/she may interact with Tumminaro's payment system. Stated differently, Tumminaro's unbanked user still remains an individual that does not have (or does not have access to) a bank account, even though he/she is allowed access to the payment system through the creation and use of a temporary virtual pooled account that may be managed via an ATM separately from a traditional bank account.

Based on the preliminary record, we also are not persuaded by Fintiv's argument that unbanked users of Tumminaro's payment system are capable of accessing a reloadable prepaid debit account (e.g., by using an

³ As a practical matter, we see no meaningful difference between Tumminaro's virtual pooled accounts and the "stored value accounts" disclosed in the specification of the '845 patent. Indeed, the "stored value accounts" may be "hosted by a mobile wallet platform or a third party" (Ex. 1001, 3:51–62) and "allow[] the owner (or 'subscriber') to pay for goods and services on the mFS platform from his or her mobile wallet account" (*id.* at 11:32–36). The specification explicitly contemplates creating "a stored value account for the unbanked subscriber." *Id.* at 27:41–50.

ATM) and, therefore, they have access to a traditional bank account. *See* Prelim. Resp. 19–20. Once again, as we explain above, we understand Tumminaro to draw a distinction between a banked user (i.e., an individual that has (or has access to) a bank account) and an unbanked user (i.e., an individual that does not have (or does not have access to) a bank account). When making its payment system accessible to an unbanked user, Tumminaro discloses that the unbanked user may maintain money in a reloadable prepaid debit account. *See, e.g.,* Ex. 1005 ¶¶ 278 (“[T]he user may sign up for with a particular banking partner to receive a card. This card may be a prepaid debit card.”), 196 (“In one embodiment of the present invention, an account holder adds money to a prepaid debit account in advance of purchases.”). Similar to our analysis of the pooled account, Tumminaro discloses that reloadable prepaid debit accounts are not traditional bank accounts, but rather temporary accounts created for an unbanked user that he/she may use to interact with the payment system.⁴ The unbanked user may add funds to a prepaid debit card in advance of purchases and, if he or she desires, may access those pre-loaded funds via an ATM network. *See, e.g., id.* ¶ 264 (“Loading and unloading may be performed in any of the ways discussed in this application including through ACH, ATM, or credit card or interchange.”).

⁴ We take this opportunity to note that the specification of the ’845 patent explicitly contemplates using a prepaid debit card by stating that “the mobile wallet utilizes funds from a subscriber’s prepaid debit card . . . to exchange value on the mFS platform.” Ex. 1001, 11:39–42; *see also id.* at 23:10–13 (“The prepaid debit card . . . is linked to the subscriber’s account in the monetary transaction system 210.”).

In summary, for purposes of institution, we are persuaded that PayPal has presented sufficient evidence that would support a finding that an unbanked user of Tumminaro's payment system who is capable of accessing (1) a pooled account, (2) a reloadable prepaid debit account, or (3) both, discloses the "unbanked subscriber," as required by independent claim 5.

b. "a specified payment method"/"the selected payment method"

In its Preliminary Response, Fintiv contends that the plain meaning of "a specified payment method" and "the selected payment method," as recited in independent claim 5, "dictates that there must be more than one potential payment method available for selection in the unbanked subscriber's mobile wallet." Prelim. Resp. 23–24. Fintiv argues that PayPal relies on Tumminaro's pooled accounts and reloadable prepaid debit accounts to teach the selectable payment options required by independent claim 5, but, according to Fintiv, each of these options qualifies as financial institution accounts that, if available for selection by an "unbanked subscriber," would nullify his/her status as an "unbanked subscriber." *Id.* at 24–25.

Based on the preliminary record, PayPal presents sufficient evidence that would support a finding that Tumminaro's unbanked users may select from either a pooled account or a reloadable prepaid debit account when transferring funds to a specified recipient. *See* Pet. 43. As we explain above, Tumminaro's unbanked user is capable of accessing both a pooled account and a reloadable prepaid debit account. *See supra* Section II.B.4.a. 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 . . . prepaid debit card, the user would

typically pick one of the multiple accounts to use as a funding source.”

Ex. 1003 ¶ 157. We preliminarily credit Dr. Chatterjee’s testimony in this regard because he appears to consider the relevant disclosures of Tumminaro together with the knowledge of a person of ordinary skill in the art. *See Paulsen*, 30 F.3d at 1480.

Fintiv’s arguments to the contrary are predicated on the notion that Tumminaro’s pooled accounts and reloadable prepaid debit accounts qualify as traditional bank accounts, which, by definition, cannot be available to an “unbanked subscriber.” *See* Prelim. Resp. 23–25. For the same reasons we identify above when addressing the claimed “unbanked subscriber,” this argument is not persuasive because Tumminaro’s pooled accounts and reloadable prepaid debit accounts are not traditional bank accounts, but rather temporary (and in the case of pooled accounts—also virtual) accounts created for an unbanked user that he/she may use to interact with the payment system. *See supra* Section II.B.4.a.

c. Summary

In summary, PayPal has shown a reasonable likelihood that it would prevail on its assertions that the subject matter of independent claim 5 is anticipated by Tumminaro.

5. Claim 7

Because PayPal has demonstrated a reasonable likelihood of success in demonstrating that at least one claim of the ’845 patent is unpatentable, we institute on all challenged claims and all grounds raised in the Petition. *See* 37 C.F.R. § 42.108(a) (2021). Therefore, at this stage of the proceeding, it is not necessary for us to provide an assessment of dependent claim 7

under this anticipation ground. Nevertheless, we address this dependent claim separately.

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 basically is a “mobile wallet” that allows an account holder to “move money in seconds around the world.” Pet. 51–52 (emphasis omitted) (quoting Ex. 1005 ¶¶ 440, 882) (citing Ex. 1005 ¶ 202).

Based on the preliminary record, PayPal’s arguments and supporting evidence with respect to dependent claim 7 are sufficient for purposes of institution. At this stage of the proceeding, Fintiv does not address separately PayPal’s arguments and supporting evidence as to how Tumminaro discloses or describes the limitation of this dependent claim. *See* Prelim. Resp. 11–26. When considering PayPal’s unrebutted arguments and supporting evidence, PayPal has demonstrated a reasonable likelihood that it would prevail on its assertions 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.

Based on the preliminary record, we determine that PayPal has shown that there is a reasonable likelihood that it would prevail in challenging at least one of claims 5–7 of the '845 patent as unpatentable. 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).⁵ *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.

⁵ In its Preliminary Response, Fintiv does not present arguments or evidence of secondary considerations. *See* Prelim. Resp.

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 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 requires the user to specify or select a particular 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 (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 a 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 P2P transfer request. *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 this “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) 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). That is, PayPal argues that, even though Tumminaro’s Figure 16 illustrates the “notifying” step occurring before the “transferring” step, 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).

Based on the preliminary record, we discern no deficiency in PayPal’s characterizations of Tumminaro, the general background knowledge in the art, or in PayPal’s reasoning as to why a person of ordinary skill in the art would have been prompted to modify the teachings of this reference. In addition, for purposes of institution, we are persuaded by Dr. Chatterjee’s testimony concerning the relevant disclosures in Tumminaro. At this stage of the proceeding, Fintiv relies on the same arguments presented above in the anticipation ground of 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 all the limitations of this same claim. *See* Prelim. Resp. 11–26. For the same reasons we identify above, those arguments are not persuasive. *See supra* Section II.B.5.a and b.

In summary, PayPal has shown a reasonable likelihood that it would prevail on its assertions 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 asset 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 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 ¶ 606).

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 to respect to its anticipation ground challenging dependent claim 7 equally apply to its obviousness ground challenging this claim. *See* Pet. 52. That is, PayPal contends that Tumminaro discloses this limitation because the MCAP basically is a “mobile wallet” that allows an account holder to “move money in seconds around the world.” *Id.* at 51–52 (emphasis omitted) (quoting Ex. 1005 ¶¶ 440, 882) (citing Ex. 1005 ¶ 202).

Based on the preliminary record, PayPal's arguments and supporting evidence with respect to dependent claims 6 and 7 are sufficient for purposes of institution. At this stage of the proceeding, 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 limitations of these dependent claims. *See* Prelim. Resp. 11–26. When considering PayPal's un rebutted arguments and supporting evidence, PayPal has demonstrated a reasonable likelihood that it would prevail on its assertions 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.

Based on the preliminary record, we determine that PayPal has shown that there is a reasonable likelihood that it would prevail in challenging at least one of claims 1–3 of the '845 patent as unpatentable. 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 method and 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 mobile 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 mobile 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 with respect to its anticipation ground challenging independent claim 5 equally apply to its obviousness ground challenging 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 ¶¶ 290–92, 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, 26:61–62. 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 these types of deposits are only available to certain users, such as a user 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 a vendor. *Id.* That is, PayPal argues that Keena authorizes a vendor by sending a PIN challenge question that may ask 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 vendor 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 an agent branch “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 one or both of 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. *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 subscriber 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 in this way 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).

Based on the preliminary record, we discern no deficiency in PayPal’s characterizations of Tumminaro, Keena, and the general background knowledge in the art, or in PayPal’s reasoning as to why a person of ordinary skill in the art would have been prompted to modify the teachings of these references. In addition, for purposes of institution, we are persuaded by Dr. Chatterjee’s testimony concerning the relevant disclosures in Tumminaro and Keena. At this stage of the proceeding, Fintiv argues that the combined teachings of Tumminaro and Keena fail to account for “performing . . . a limit check . . . on the unbanked subscriber’s mobile wallet account, the limit check determining whether sufficient funds are available to make the

deposit amount,” as recited in independent claim 1.⁶ Prelim. Resp. 27–34.

We address this argument below.

- a. “performing . . . a limit check . . . on the unbanked subscriber’s mobile wallet account, the limit check determining whether sufficient funds are available to make the deposit amount”*

In its Preliminary Response, Fintiv contends that “[t]he specification of the ’845 patent discloses several examples of limit checks,” but “[n]one of these examples suggest the performance of a limit check on the subscriber’s mobile wallet account is met by an agent simply counting physical cash.”

Prelim. Resp. 28 (citing Ex. 1001, 15:61–62, 23:45, 29:16; Ex. 2001 ¶ 90).

As further support for this argument, Fintiv directs us to the ’064 application, to which the ’845 patent claims entitlement to an earlier filing date. *Id.* at 29. According to Fintiv, Figure 7 of the ’064 application indicates that step 3 of the deposit transaction where the “[a]gent counts the cash” is not the same as step 5 where the platform terminal “performs limit[] . . . checks.” *Id.* at 29–30 (citing Ex. 2003, Fig. 7; Ex. 2001 ¶ 93).

Fintiv then contends that the combined teachings of Tumminaro and Keena do not account for the claimed “limit check” for two reasons. Prelim. Resp. 31. First, Fintiv argues that an agent branch physically receiving cash

⁶ Fintiv also argues that “performing one or more of a limit check and velocity check on the unbanked subscriber’s mobile wallet account,” as recited in independent claim 1, “requires performing at least one limit check and at least one velocity check.” Prelim. Resp. 26–27; *see also id.* at 32 (arguing the same). We need not address this argument because, even if we were to agree with Fintiv that this limitation requires performing at least one limit check and at least one velocity check, PayPal provides arguments and evidence explaining how the combined teachings of Tumminaro and Keena accounts for both limit and velocity checks. Pet. 65–66.

is not a limit check “on the unbanked subscriber’s mobile wallet account” because, when topping off the cash physically received for deposit, there is no check on the unbanked subscriber’s mobile wallet account. *Id.* (citing Ex. 2001 ¶ 96). Second, Fintiv argues that Keena’s disclosure of the vendor having sufficient funds to perform the mobile top-up method does not teach a limit check because it only determines the sufficiency of funds of the vendor—it does not perform a limit check on the unbanked subscriber’s mobile wallet account. *Id.* (citing Ex. 2001 ¶ 97).

As an initial matter, we look to the plain language of independent claim 1 and the specification of the ’845 patent to determine what it means to perform a limit check when depositing funds into the unbanked subscriber’s mobile wallet account. In our view, the plain language of independent claim 1 is controlling because it explicitly states that performing “the limit check” involves nothing more than “determining whether sufficient funds are available to make the deposit amount.” Ex. 1001, 29:65–67. The specification reinforces our preliminary determination in this regard because, when describing the data flow for performing a subscriber deposit using a mobile wallet as illustrated in Figure 3, it states that “[t]he monetary transaction may then use rules engine 220 to perform a limit check (*to determine whether sufficient funds are available*) . . . on the unbanked subscriber’s mobile wallet account (step 340).” *Id.* at 15:60–65 (emphases added), Fig. 3 (step 340). Stated differently, neither the plain language of independent claim 1 nor the specification of the ’845 patent indicates that determining whether sufficient funds are available when depositing funds into the unbanked subscriber’s

mobile wallet account precludes physically counting cash presented for deposit.

With this in mind, based on the preliminary record, we are persuaded that PayPal has presented sufficient evidence that would support a finding that the combined teachings of Tumminaro and Keena account for “performing . . . a limit check . . . on the unbanked subscriber’s mobile wallet account, the limit check determining whether sufficient funds are available to make the deposit amount.” Pet. 65. Tumminaro discloses depositing funds into a pooled account or prepaid debit card account associated with the unbanked user. Ex. 1005 ¶¶ 196 (“In one embodiment of the present invention, an account holder adds money to a prepaid debit account in advance of purchases.”), 604 (“At times, account holders may add funds to the pooled account.”). Tumminaro discloses accomplishing this deposit transaction via an agent branch in the form of a merchant’s POS terminal. *Id.* ¶ 173 (“Merchants may use the POS terminals 311 for financial transactions such as adding funds to a debit card for an account holder.”). Relying on the testimony of Dr. Chatterjee, PayPal contends that Tumminaro performs a limit check to determine whether sufficient funds are available to proceed with this deposit transaction because the merchant operating the POS terminal “will only deposit or top off the amount of cash physically received from the unbanked [user].” Pet. 65 (Ex. 1003 ¶ 202).

This concept of proceeding with the deposit transaction only when the unbanked user provides sufficient cash for deposit to a vendor also is present in Keena, which fairly suggests performing a limit check because it determines whether the vendor receives sufficient funds to perform the mobile top-up method. *See* Ex. 1006 ¶ 52 (“The mobile commerce system

authenticates that the distributor is a legitimate distributor and that there is sufficient funds or credits in the distributors account to pay for the value of the token.”). Bottom line, consistent with our preliminary view of the “limit check” required by independent claim 1, Tumminaro and Keena each teach or fairly suggest determining whether sufficient funds are available when depositing funds into the unbanked subscriber’s mobile wallet account by physically counting cash presented for deposit.

At this stage of the proceeding, we are not persuaded by Fintiv’s arguments that the combined teachings of Tumminaro and Keena fail to account for the “limit check” required by independent claim 1. *See* Prelim. Resp. 29–31. Fintiv’s arguments are predicated on the notion that the specification of the ’845 patent and, more specifically, Figure 7 of the ’064 application indicate that physically counting cash presented for deposit is not the same as the “limit check” required by claim 1. *See id.* at 28–30. As we explain above, the specification of the ’845 patent does not preclude the “limit check” required by independent claim 1 from including physically counting cash presented for deposit. We address Fintiv’s reliance on Figure 7 of the ’064 application below.

For convenience, Fintiv’s annotated version of Figure 7 of the ’064 application is reproduced below.



Prelim. Resp. 29. Fintiv's annotated version of Figure 7 of the '064 application is directed to a deposit transaction that involves eight steps. Of particular importance to Fintiv's position are steps 3 and 5. Ex. 2003, 95.⁷ 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."

We fail to see why steps 3 and 5 must be mutually exclusive, as asserted by Fintiv. See Prelim. Resp. 29–30. Indeed, it seems logical, if not

⁷ 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.

required, that the agent first determines whether the funds presented for deposit are sufficient by physically counting cash presented for deposit (i.e., effectively performing a limit check) prior to initiating the deposit transaction process on the Platform terminal.⁸ This holds true even when the platform terminal itself performs another limit check at step 5 of the deposit transaction process, especially if the platform terminal is seeking to maintain compliance with anti-money laundering regulations. *See, e.g.*, Ex. 1003 ¶ 202 (Dr. Chatterjee testifying that implementing a limit check for a deposit transaction would “safeguard against fraud and maintain compliance with [anti-money laundering] regulations”).

b. Summary

In summary, PayPal has shown a reasonable likelihood that it would prevail on its assertions 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.

⁸ Fintiv also contends that PayPal’s reliance on its arguments and evidence explaining how Tumminaro discloses the limit and velocity checks required by independent claim 5 to teach the limit and velocity checks required by independent claim 1 fails to consider that 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 own account. Prelim. Resp. 32–33. At this stage of the proceeding, PayPal’s reliance on its arguments and evidence explaining how Tumminaro discloses the limit and velocity checks required by independent claim 5 to teach the limit and velocity checks required by independent claim 1 appears to be problematic because PayPal does not account for how independent claims 1 and 5 differ in scope. We encourage the parties to develop this issue further during the course of trial.

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).

Based on the preliminary record, PayPal’s arguments and supporting evidence with respect to dependent claims 2 and 3 are sufficient for purposes of institution. At this stage of the proceeding, Fintiv does not address separately PayPal’s arguments and supporting evidence as to how the combined teachings of Tumminaro and Keena, together with the background knowledge of a person of ordinary skill in the art, account for the limitations of these dependent claims. *See* Prelim. Resp. 27–34. When considering PayPal’s unrebutted arguments and supporting evidence, PayPal has demonstrated a reasonable likelihood that it would prevail on its assertions 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. CONCLUSION

Taking into account Fintiv's Preliminary Response, we conclude that the information presented in the Petition demonstrates that there is a reasonable likelihood that PayPal would prevail in challenging at least one of claims 1–3 and 5–7 of the '845 patent as unpatentable. Accordingly, we institute an IPR as to all challenged claims and all the grounds raised in the Petition. *See* 37 C.F.R. § 42.108(a) (2021). At this stage of the proceeding, we have not made a final determination with respect to the patentability of the challenged claims or the construction of any claim term.

IV. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), an IPR is hereby instituted as to all of the challenged claims and all of the grounds raised in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), notice is hereby given of the institution of a trial; the trial will commence on the entry date of this decision.

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Patent 8,538,845 B2

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