

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

FINTIV, INC.,
Patent Owner.

IPR2023-00399
U.S. Patent No. 9,208,488

PETITIONER'S REPLY

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I. INTRODUCTION

The Petition shows that claims 1-22 (the “Challenged Claims”) of U.S. Patent No. 9,208,488 (“the ’488 patent”) are unpatentable. Patent Owner’s Response (“POR”) does not overcome the Petition’s evidence and arguments as set forth below. The Board should find the Challenged Claims unpatentable.

II. CLAIM CONSTRUCTION¹

Patent Owner states that only “mobile device,” “mobile wallet application,” “hardware SIM card,” and “payment handler” require construction. POR, 12-29. Despite claiming that all other terms should be given their plain and ordinary meaning (POR, 10), Patent Owner attributes specific meaning to three other terms. POR, 10-12. This is the antithesis of plain and ordinary meaning because it attempts to replace a POSITA’s understanding with a specific meaning. The Board should view Patent Owner’s arguments as an implicit request for claim construction and decline to adopt Patent Owner’s proposed constructions as under-developed and unsupported by the record.

A. “Integration Tier...Including Web Services Communication Mechanisms”

There is no basis in the claim or specification to construe this term to require

¹ Petitioner addresses the language of claim 1 in Section II. Independent claims 11 and 22 contain similar language.

the “web services communication mechanisms” to be “included in part of the integration tier.” POR, 10; APPL-1021, ¶¶10-11. Claim 1 does not contain any explicit or implicit requirement that the claimed “web services communication mechanisms” **must** be “included in part of the integration tier.” APPL-1021, ¶11. The specification also does not support Patent Owner’s interpretation.

The specification states that integration tier 101 “can also include a communication (e.g., Web services) API and/or other communication mechanisms to accept messages from channels 111.” APPL-1001, 9:48-51. The word “include” **does not require** the “web services communication mechanisms” to be “included in” or to be “part of” the integration tier. APPL-1021, ¶13. It only requires that the “web services communication mechanisms” **interface** with the integration tier. APPL-1021, ¶13. Indeed, the specification notes that there are “web services communication mechanisms” that are external to, *i.e.*, not part of, the integration tier entirely. APPL-1021, ¶¶13-14. For example, “[n]otification services 102 can be configured through a web services API.” APPL-1001, 9:62-63. As shown in Fig. 1, the notification services 102 is **outside** of the integration tier 101. APPL-1021, ¶14. As such, no specific construction is required. To the extent the Board construes this term, a more appropriate construction is that the integration tier interfaces with the “web services communication mechanisms,” where the “web services communication mechanisms” may be external to the integration tier. APPL-1021,

¶15.

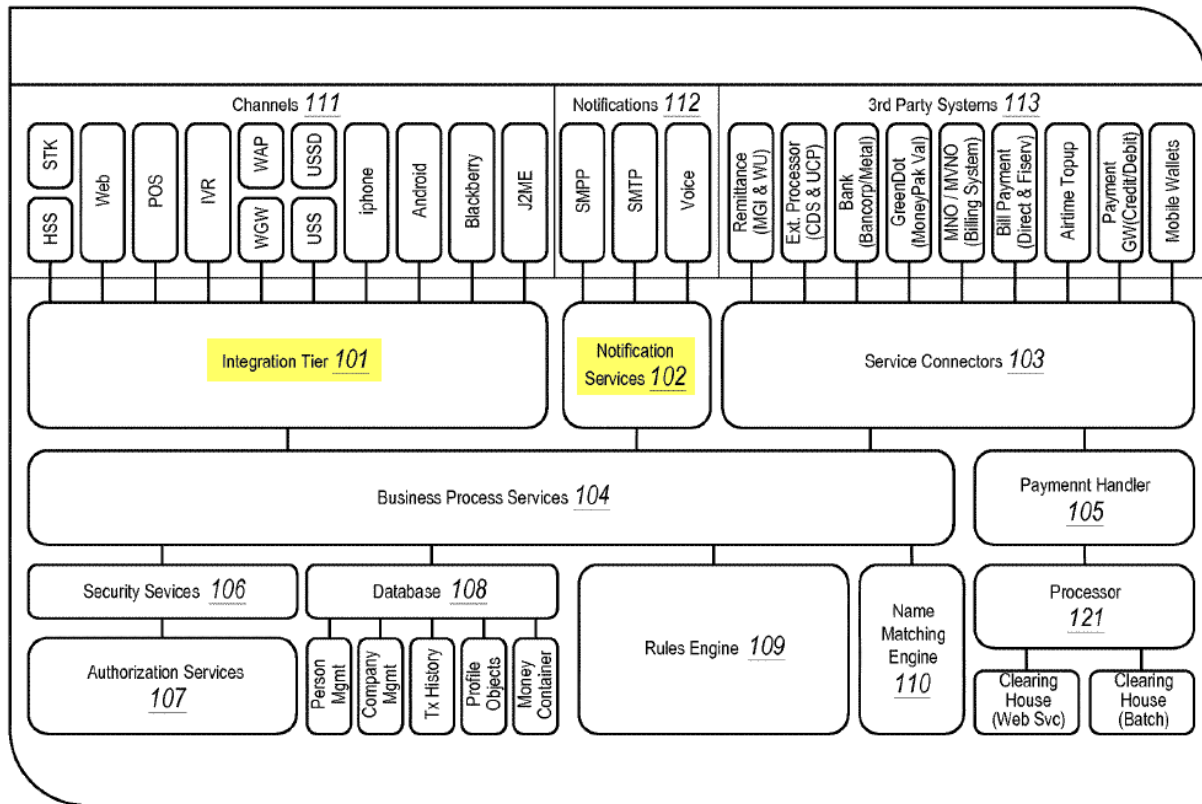


FIG. 1

APPL-1001, Fig. 1 (annotated)

B. “Web Services Communication Mechanisms for Interfacing with a Mobile Wallet Application”

Patent Owner states that “web services communication mechanisms” must “interface with the mobile wallet application...resid[ing] on the mobile device.” POR, 11. Patent Owner’s expert, on the other hand, is attempting to read in a number of additional, unrequired imitations into the term, such as claiming that the term “involves a machine-to-machine interaction over the Internet using Web protocols” and amounts to “a computer-to-computer function invoked automatically, and not at

the request of user (like clicking on a hyperlink).” EX2003, ¶¶ 46, 45; APPL-1021, ¶¶16-18.

There is no support in claim 1 to support these additional limitations. APPL-1021, ¶¶19-20. The specification, in turn, contains no discussion of “web services communication mechanisms.” The specification contains only two instances of “web services,” neither of which support Patent Owner’s or its expert’s proposed limitations. *See* APPL-1001, 9:48-51 (integration tier includes “communication (Web services) API and/or other communication mechanisms to accept messages from channels 111.”), 9:62-63 (“[n]otification services 102 can be configured through a web services API.”); APPL-1021, ¶21. On the contrary, Fig. 1 depicts channels or services that interface with the “web services communication mechanisms” that are not machine-to-machine or are not invoked automatically; they are instead triggered by user interaction. APPL-1021, ¶21. Voice notifications that use the notification services 102, for example, are not a machine-to-machine interaction. APPL-1021, ¶21. And, IVR, or Interactive Voice Response, is not automatic and only operates in response to user requests or user input. APPL-1021, ¶21.

The only purported support for Patent Owner’s expert’s additional limitations is his reliance on multiple extrinsic documents, none of which were considered during prosecution. APPL-1022, 55:14-16; EX2003, ¶ 46 (citing EX2009 to 2015);

APPL-1021, ¶22. There is no indication that the patentee intended the claims to be limited as Patent Owner's expert suggests and it is improper to import these additional limitations from extrinsic documents into the claims. *Seabed Geosolutions (US) Inc. v. Magseis FF LLC*, 8 F.4th 1285, 1287 (Fed. Cir. 2021) ("If the meaning of a claim term is clear from the intrinsic evidence, there is no reason to resort to extrinsic evidence."); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) ("[W]hile 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.'"); *EPOS Techs. Ltd. v. Pegasus Techs. Ltd.*, 766 F.3d 1338, 1341 (Fed. Cir. 2014) ("[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.").

As such, no specific construction is required. To the extent the Board construes this term, a more appropriate construction is that the "web services communication mechanisms" "interface with a mobile wallet application that resides on a mobile device." APPL-1021, ¶23.

C. "Different Communication Channels"

Patent Owner's proposed interpretation attempts to read in several additional limitations into the meaning of the term. Specifically, Patent Owner argues that

“different communication channels” must (1) “interface with the ‘web services communication mechanisms,’” and (2) “connect the integration tier to different device types outside the integration tier.” POR, 11. None of these limitations are supported. APPL-1021, ¶¶24-25. Claim 1 does not explicitly or implicitly exclude communication channels from its scope that may not interface with the “web services communication mechanisms.” APPL-1021, ¶26. The specification similarly does not support excluding communication channels that may not interface with the “web services communication mechanisms.” APPL-1021, ¶27. On the contrary, the ’488 patent states that “[n]otification services 102 can be configured through a web services API.” APPL-1001 at 9:62-63. Fig. 1 depicts that communication channels utilized by notification services 102 (notifications 112) **do not directly** interface with the integration tier, even though the notification services are configured through the web services API (*i.e.*, “web services communication mechanisms”). APPL-1021, ¶28. Thus, communication channels that interface, even indirectly, with the “web services communication mechanisms” still interface with the “web services communication mechanisms.” APPL-1021, ¶27. Patent Owner’s expert agreed, testifying that an interface occurs when communications are established, even if those communications go through multiple interconnections. APPL-1022 at 58:10-13 (“[W]hen you speak of the interface, there is going to be more than one interface because there has to be an interface at each end of the communication.”), 82:17-

83:10 (testifying that in the embodiment of the monetary transaction system of Fig. 1 of the '488 patent, there are a “number of intermediaries” between an external device (e.g., an Android phone) and internal components of the monetary transaction system), 75:7-19 (explaining that Dill’s communication channels in Fig. 9 involve multiple hardware and software interfaces); APPL-1021, ¶27.

As such, no specific construction is required. To the extent the Board construes this term, a more appropriate construction would not exclude communication channels that may not interface with the “web services communication mechanisms.” APPL-1021, ¶29.

D. “Mobile Device”

The Board correctly construed “mobile device” to mean a “physical device that is mobile, such as a phone or tablet.” Inst. Dec. 10-11; APPL-1021, ¶30.

E. “Mobile Wallet Application”

The Board correctly interpreted “mobile wallet application” to mean a “wallet application installed on a SIM card,” as required by the claims. Inst. Dec. 12; APPL-1021, ¶31.

F. “Hardware SIM Card”

Patent Owner argues that “hardware SIM card” must be construed as a “secure, tamper-resistant chip on a mobile device that is separate from the mobile device’s main memory that enables the mobile device to access the cellular

network.” POR, 16. Patent Owner is wrong. The ’488 patent does not define the term “hardware SIM card,” and certainly does not contain any of the limitations that Patent Owner seeks to import into the term. APPL-1021, ¶¶32-33.

Claim 1 recites “a mobile wallet application installed on a hardware SIM card” (limitation 1.3B). Claim 1 does not contain any explicit or implicit requirements for what constitutes a hardware SIM card, and certainly does not support any of the limitations that Patent Owner proposes. APPL-1021, ¶34.

The specification similarly does not support Patent Owner’s proposed construction. The ’488 patent does not define a “hardware SIM card.” It instead states that “a mobile wallet application [can be] installed on a SIM card or elsewhere on a mobile device.” APPL-1001 at 7:1-3. The only other mentions of a “SIM card” in the ’488 patent similarly describe a mobile wallet application installed on a “SIM card.” APPL-1001, 9:33-36, 12:12-13. There is no discussion about what hardware should or could be part of a hardware SIM card or what features or functionality must or may be implemented or supported by a hardware SIM card. There is no discussion in the ’488 patent of a SIM card that is secure or tamper-resistant or one that is discrete from the mobile device’s main memory. There is also no discussion of a SIM card enabling the mobile device to access the cellular network. APPL-1021, ¶35. These additional limitations Patent Owner is improperly importing into the term are all from documents that were not part of the prosecution history of the

'488 patent. POR, 16-19 n. 2-11 (citing EX2021 to EX2025). There is no reason to import into the term all the additional requirements that Patent Owner suggests. APPL-1021, ¶35; *Seabed Geosolutions*, 8 F.4th at 1287 (“If the meaning of a claim term is clear from the intrinsic evidence, there is no reason to resort to extrinsic evidence.”). A POSITA would have understood “hardware SIM card” to mean a SIM card implemented in hardware. APPL-1021, ¶36.

G. “Payment Handler”

Petitioner acknowledges that the District Court for the Western District of Texas found that the term “payment handler” is a means-plus-function limitation and held the term indefinite. POR, 20-21. Petitioner was not a party to the District Court litigation and, in this IPR, neither party has argued that this term is a means-plus-function limitation.² The Petition demonstrated how the prior art renders obvious a “payment handler” and Patent Owner does not dispute this. Pet., 35-37 (limitation 1.6).

III. THE DILL-VADHRI-AKASHIKA COMBINATION RENDERS CLAIMS 1-22 OBVIOUS

Patent Owner presents two types of substantive challenges to the Petition: (1)

² APPL-1023 is the deposition transcript of Mr. Johnson. Patent Owner submitted Mr. Johnson's declaration (EX2016) in support of its construction of “payment handler.”

those based exclusively on its improper claim constructions; and (2) those based on an unduly narrow reading of the Dill reference. Patent Owner's arguments addressed in Sections III.A, III.B, and III.E.3 below are premised on a claim construction that seeks to import unsupported limitations into the claims. If the Board rejects Patent Owner's proposed constructions (which it should), the Petition's analysis is un rebutted.

A. Dill teaches an “integration tier configured to manage mobile wallet sessions with a mobile device including web services communications” [Limitations 1.3A-1.3B]

The Petition shows how Dill's transfer options module 145 is the claimed “integration tier.” Pet., 21-22. Transfer options module 145 *interfaces* with the web interface 137, the claimed “web services communication mechanisms.” Pet., 22-23. As explained above, there is no requirement in the claims or the '488 patent that the “web services communication mechanisms” be “included in part of the integration tier,” as Patent Owner contends. Section II.A. The more appropriate interpretation of this limitation is that the integration tier *interfaces* with the “web services communication mechanisms,” where the “web services communication mechanisms” may be external to the integration tier. Section II.A. Patent Owner's arguments to the contrary are based exclusively on Patent Owner's improper claim construction.

Patent Owner further argues that mapping Dill's transfer options module 145

to the “integration tier” and Dill’s web interface 137 to the “web services communication mechanisms,” and mapping the connection from web interface 137 to transfer options module 145 to one of the “different communication channels” would “subsume” one of the communication channels into the integration tier. POR, 39-40. This is contrary to Dill’s disclosure. The communication channel between Dill’s transfer options module 145 and web interface 137 is how the two components interface with one another. This does not present the problem that Patent Owner creates because there is no requirement in the claims or in the ’488 patent that the claimed “web services communication mechanisms” be “included in part of the integration tier,” as Patent Owner contends. POR, 10. The remaining argument about an “interface to be a shared boundary across which information is passed” (POR, 40-41) is a further attempt to add additional limitations into the claim. There is no basis for these additional limitations and the Board should reject the invitation to do so.

B. Dill teaches “web services communication mechanisms for interfacing with a mobile wallet application...[and] a plurality of different device types over a plurality of different communication channels” [Limitations 1.3B-1.3C]

As explained above, the Petition shows how Dill’s transfer options module 145 is the claimed “integration tier.” Pet., 21-22. Transfer options module 145 interfaces with web interface 137, the claimed “web services communication mechanisms.” Pet., 22-23. The interface between transfer options module 145 and

web interface 137 is used to facilitate “money transfer transactions [that] are initiated ‘from a web site of the money transfer facilitator’ as well as other channels.” Pet., 22; *see also* APPL-1005, [0101] (“The transfer options module 145 can be adapted to receive transaction information for a money transfer transaction from a sender 105 through at least one or the interfaces 136-138[.]”). In other words, Dill’s transfer options module 145 interfaces with web interface 137 to receive transaction information to conduct money transfer transactions. Pet., 22-23.

The Petition provides two examples of how transfer options module 145, interfacing with web interface 137, further interfaces with a plurality of different device types over a plurality of different communication channels. First, Dill’s transfer options module 145 is “coupled” with an IVR system 136 and other interfaces 138, which are the claimed “plurality of different device types.” Pet., 25. The two-headed arrows between these devices and transfer options module 145 are the claimed “plurality of different communication channels.” Pet., 25 (showing communication channels in Dill’s Fig. 9). Second, Dill’s transfer options module 145 utilizes mobile network 115, which is another one of a plurality of different communication channels. Pet., 25; APPL-1005, [0052], Fig. 9. This additional communication channel is used to interface with a user’s mobile device configured to run Dill’s mobile wallet 125. Pet., 21-22, 31-32; APPL-1005, [0010], [0094].

Patent Owner’s challenge is primarily based on its erroneous claim

construction that the “web services communication mechanisms” must be “included in part of the integration tier.” Section II.A. As the proposed claim construction is improper, Patent Owner’s arguments based on its proposed construction must fail. Patent Owner’s arguments are also based on a misunderstanding of the Petition. The Petition did not map Dill’s IVR 136 and Other Interfaces 138 to “web services communication mechanisms”; it instead mapped IVR 136 and Other Interfaces 138 to a plurality of different device types. Pet., 25. The Petition identified a plurality of different device types (at least IVR 136, Other Interfaces 138, and a user’s mobile device) and a plurality of different communication channels (two-headed arrows between them). Pet., 25. Dill’s transfer options module 145 and web interface 137 interface with these devices using these channels. Patent Owner’s arguments are incorrect.

C. Dill teaches “a notification services engine configured to interface with the integration tier” [Limitation 1.4A]

The Petition maps Dill’s transfer options module 145 to the claimed “integration tier” and consistently maintains that mapping. Pet., 21-22; *see also, e.g.*, Pet., 22 (“As discussed in [1.3A], Dill’s transfer options module 145, the “*integration tier*,...”), 24 (same), 26 (same). The transfer options module 145 and/or mobile application 145 may be used to send notifications of a transaction to parties of the transaction. Pet., 27; APPL-1005, [0069], [0101]; APPL-1003, ¶104. As such, a POSITA would have understood “transfer options module 145 and/or mobile

application 145” to be the claimed “*notification services engine*.” Pet., 27-28. This mapping is appropriate despite Patent Owner’s criticism because the transfer options module 145 and mobile application 145 are part of the money transfer facilitator 140. APPL-1005, Fig. 9. As explained in the Petition and by Dr. Houh, a POSITA would have understood that “components of the money transfer facilitator 140”—transfer options module 145 and mobile application 145—“interface with each other to send the notification[s].” Pet., 28; APPL-1005, [0090], [0101]; APPL-1003, ¶114. Patent Owner’s challenge is without merit.

**D. Dill teaches “web services communication mechanisms”
[Limitation 1.3B]**

The Petition explained how Dill’s transfer options module 145, the claimed “integration tier,” “facilitates communications between mobile wallets 125, 130 within a mobile wallet application 121.” Pet., 22. These communications include web interface 137 and are initiated “from a web site of the money transfer facilitator.” Pet., 22-23. A POSITA would have understood web interface 137 to be the claimed “web services communication mechanisms.” Pet., 22-23 (mapping Dill’s web interface 137 to the “web services communication mechanism” in limitation 1.3) (citing APPL-1003, ¶94) (“Since Dill’s transfer options module 145 facilitates communications over web sites interfacing with mobile wallets 125, 130 within a mobile wallet application 121, and Dill teaches that these communications include web services, a POSITA would have understood Dill to teach an integration

tier configured to manage mobile wallet sessions ‘including web services communication mechanisms for interfacing with a mobile wallet application.’”). Patent Owner’s argument against Dill’s disclosure is based entirely on its overly narrow, unsupported proposed construction. There is no requirement in the claims or in the specification to require the “web services communication mechanisms to involve “machine-to-machine” interactions or exclude events triggered by a user. Section II.B. The Board should reject Patent Owner’s proposed construction and, as such, find that the Petition’s analysis is unrebutted.

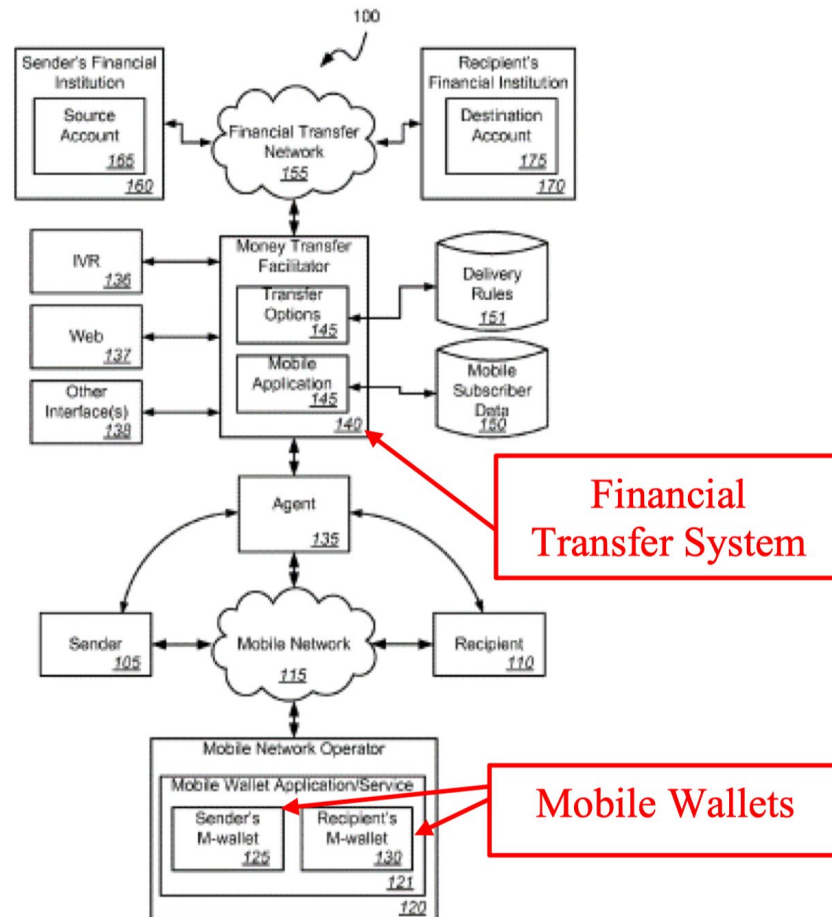
E. Dill teaches the claimed “mobile wallet application” limitations

Patent Owner argues that Dill does not disclose a “mobile wallet application” installed on a mobile device, or a “mobile wallet application” that interfaces with “web services.” POR, 52-56, 46-49. Patent Owner is wrong.

1. Dill teaches mobile devices having a mobile wallet application

First, the Petition explained that Dill’s sender 105 has a mobile wallet application 125 (“Senders M-wallet”) and the receiver has a mobile wallet application 130 (“Recipients M-wallet”), as show in Fig. 9 below. Pet., 16 (Dill’s “money transfer facilitator system 140 [] ‘receive[s] transaction information from a mobile wallet application 121 via a mobile network 115’ and communicates with mobile wallets 125, 130”) (citing APPL-1005, [0100]), 46 (Dill’s “transfer facilitator system 140 serves as a financial transfer system for mobile wallets 125, 130,” as

shown in Fig. 9.), 21-22 (explaining types of transactions that may be conducted with the sender's mobile wallet 125 and recipients mobile wallet 130, e.g., depositing funds at the agent branch 135) (citing APPL-1005, [0051], [0053], [0055], [0077], Figs. 5, 9; APPL-1003, ¶¶88-91), 31-32 (APPL-1005, [0101], [0082], [0084], [0106], [0094]; APPL-1003, ¶¶ 124-127).



APPL-1005, Fig. 9 (annotated).

Pet., 47

Further, as shown in the Petition, the sender and recipient's mobile wallets 125, 130 are maintained by the mobile wallet application 121 of the transfer options

module 145 over the mobile communications network 115. Pet., 21-22 (citing APPL-1005, [0053], [0057]; APPL-1003, ¶¶89-90), 22-23 (citing APPL-1005, [0101], Fig. 9; APPL-1003, ¶¶92-94); Inst. Dec. 24-25.

As the Board correctly noted, Dill expressly discloses that the mobile wallets 125, 130 are *executed by* (and thus installed on) the sender and recipient's mobile devices. Inst. Dec. 27 (citing APPL-1005, [0010], [0094], claim 13; Pet., 6, 23, 32). For example, Dill's ¶ 10 provides that "[t]he mobile device *can execute* a mobile wallet application." Likewise, Dill's claim 13 recites "a *mobile device* communicatively coupled with the mobile communications network and *executing a mobile wallet application...*" Patent Owner and its expert argue that the description of a "mobile device executing the mobile wallet application 121" is a typographical error in Dill's ¶ 94, and that Dill's ¶ 94 describes a "pull transaction" that is allegedly not encompassed by the claims. POR, 55-56. Even if Dill's ¶ 94 contains a typographical error with regard to the reference symbol for the mobile wallet application *executing* on the mobile device (e.g., mobile wallet 125 or mobile wallet 130) and describes a "pull transaction," that does not change the fact that Dill expressly discloses that the mobile wallets 125, 130 are *executed on* (and thus installed on) the sender and recipient's mobile devices, as shown in Fig. 9 above. APPL-1005, [0010] ("The mobile device *can execute* a mobile wallet application."), claim 13 ("a *mobile device...executing a mobile wallet application...*"), Pet., 22

(describing transactions with mobile wallets 125, 130); *see also* APPL-1022, 46:14-16 (Dr. Shamos admitting that “there is a disclosure in Dill that something he calls a mobile wallet application can run on a mobile device.”). Therefore, Dill expressly teaches a mobile wallet application installed on a customer's mobile device (e.g., sender's mobile wallet 125 installed on the sender's mobile device, and recipient's mobile wallet 130 installed on the recipient's mobile device), as recited in limitation 1.3B. As described in Section III.E.3 below, Dill teaches a mobile wallet application installed on a hardware SIM card of a customer's mobile device, as recited in limitation 1.3B.

2. Dill teaches web services that interface with a mobile wallet application [Limitation 1.3B]

As described in Section III.B above, the Petition explained how Dill's transfer options module 145, the claimed “integration tier,” “facilitates communications between mobile wallets 125, 130 within a mobile wallet application 121,” and the transfer options module 145 interfaces with web interface 137, the claimed “web services communication mechanisms.” Pet., 22. The interface between transfer options module 145 and web interface 137 is used to facilitate “money transfer transactions [that] are initiated ‘from a web site of the money transfer facilitator’ as well as other channels.” Pet., 22. Rehashing its incorrect argument that Dill does not disclose a “web services communication mechanism,” Patent Owner further argues that Dill does not disclose that the web interface 137 interfaces with a mobile wallet

application on a wireless device. POR, 46-49. Patent Owner is wrong.

The Petition showed that transfer options module 145, the claimed “integration tier,” communicates transaction information with the mobile wallet applications 125, 130 of the sender and recipient’s mobile devices over interfaces 136-138, which include web interface 137. Pet., 21-22 (transfer options module 145 interfaces with mobile wallets 125, 130 over interfaces 136-18) (citing APPL-1005, [0101], [0053], [0051]; APPL-1003, ¶¶88-91). For example, Dill discloses that “a sender 105 can access the services of the money transfer facilitator 140 via a web site of the money transfer facilitator 140 and initiate a money transfer from a source account 165 owned by the sender 105,” and the “transfer options module 145 [is] communicatively coupled with the one or more interfaces 136-138,” including web interface 137. APPL-1005, [0051], [0101]; *see also* APPL-1005, [0054] (money transfer facilitator 140 may receive a transaction request over the mobile network or from a website of the money transfer facilitator 140). Further, Dill discloses that “[t]he transfer options module 145 can be adapted to receive transaction information for a money transfer transaction from a sender 105 through at least one o[f] the interfaces 136-138,” including web interface 137. APPL-1005, [0101]; *see also* APPL-1005, [0104] (notification of a transfer may be provided “[v]ia one of the interfaces 136-138, e.g., by logging onto a website”). Thus, as shown in the Petition, Dill teaches that the transfer options module 145—the claimed “integration tier”—

interfaces with the mobile wallets 125, 130 of the sender and recipient's mobile devices through any one of the interfaces 136-138 in Dill's Figure 9, which includes the web interface 137. Pet., 22-23 (citing APPL-1005, [0101], [0104], [0054], [0051], [0015], [0033], [0047], Fig. 9; APPL-1003, ¶¶92-94).

Thus, Dill teaches "an integration tier...including web services communication mechanisms for interfacing with a mobile wallet application," as recited in limitation 1.3B. Pet., 22-23.

3. Dill teaches a "mobile wallet application installed on a hardware SIM card" [Limitation 1.3B]

As discussed in Section III.E.1 above, Dill discloses that the sender and recipient's mobile devices respectively execute a mobile wallet application 125 ("Senders M-wallet"), 130 ("Recipients M-wallet"), and thus each have a mobile wallet application installed on their respective mobile device. Patent Owner argues that Dill does not disclose a mobile wallet application installed on a hardware SIM card. POR, 30-35. Patent Owner is wrong.

The Petition showed that Dill teaches that its software instructions, including the mobile wallet application, may be implemented on any type of "machine-readable mediums suitable for storing electronic instructions" (APPL-1005, [0106]), which a POSITA would have understood to include a hardware SIM card based on conventional teachings as represented by Bykov. Pet., 23-24 (citing APPL-1005, [0106]; APPL-1003, ¶ 95). As evidenced by Bykov, SIM cards are commonly used

to execute code for mobile transactions in mobile devices. Pet., 23-24 (citing APPL-1013, [0027]-[0028]; APPL-1003, ¶ 96). For example, Bykov discloses that:

[i]n the example of a payment module, a module provided by a financial institution may execute sensitive code and store sensitive financial data with its appropriate security measures. **A user may obtain this module from their financial institution and plug into a SIM card slot (if the module is in SIM form) of their cellular phone and use the phone for financial transactions** transparent to the main functionality of the phone....

APPL-1013, [0028] (cited in Pet., 24).

As evidenced by the conventional teachings of Bykov, the Petition explained that a POSITA would understand that Dill teaches that the mobile wallet applications, which are executed on a mobile device for conducting financial transactions, would be installed on a hardware SIM card because Dill teaches that the mobile wallet applications may be implemented on any type of “machine-readable mediums suitable for storing electronic instructions,” i.e., a hardware memory (APPL-1005, [0106]). Pet., 23-24; APPL-1003, ¶96 (“A POSITA would have understood that the ‘machine readable mediums’ referred to by Dill to execute its systems includes a hardware SIM card, which is commonly used to execute code for mobile transactions in mobile devices, as evidenced by Bykov.”) (citing APPL-1013, [0027]-[0028]); *see also* APPL-1003, ¶97. Therefore, Patent Owner is incorrect to argue that Dill is “insufficiently specific” to teach installation of a mobile

wallet application on a hardware SIM card. POR, 32-33.

Even Patent Owner's expert agrees that if a mobile device executes a mobile wallet over a cellular network, the mobile device has a SIM card for the mobile wallet. APPL-1022, 29:4-7 ("[I]f [the device] has cellular capability, then it has a SIM card. And then it would be a mobile device with a mobile wallet or at least with a mobile wallet application."), 40:9-10 ("If [the device] has a cellular connection, it has a SIM card."). As discussed in Section III.E.1 above, Dill's money transfer facilitator system 140 receives transaction information from a mobile wallet application 121 via a mobile network 115 and communicates with mobile wallets 125, 130. APPL-1005, [0100]; *see also* APPL-1005, [0052] ("The system 100 can also include a mobile network 115, such as a cellular or other wireless network, communicatively coupled with the agent 135 and/or the money transfer facilitator 140."); Pet., 25 (citing APPL-1005, [0052]). Thus, as shown in the Petition, a POSITA would have understood that Dill's mobile wallet applications are installed on a hardware SIM card, as was conventional in the art. Pet., 23-24.

Patent Owner argues that "Bykov does not disclose use of the 'SIM form' financial institution card over a cellular network." POR, 34. This argument is wrong for two reasons. First, claim 1 does not recite the use of a SIM card for a financial institution card over a cellular network. Second, the Petition cited Bykov as a conventional teaching of how a POSITA would understand Dill's mobile wallet

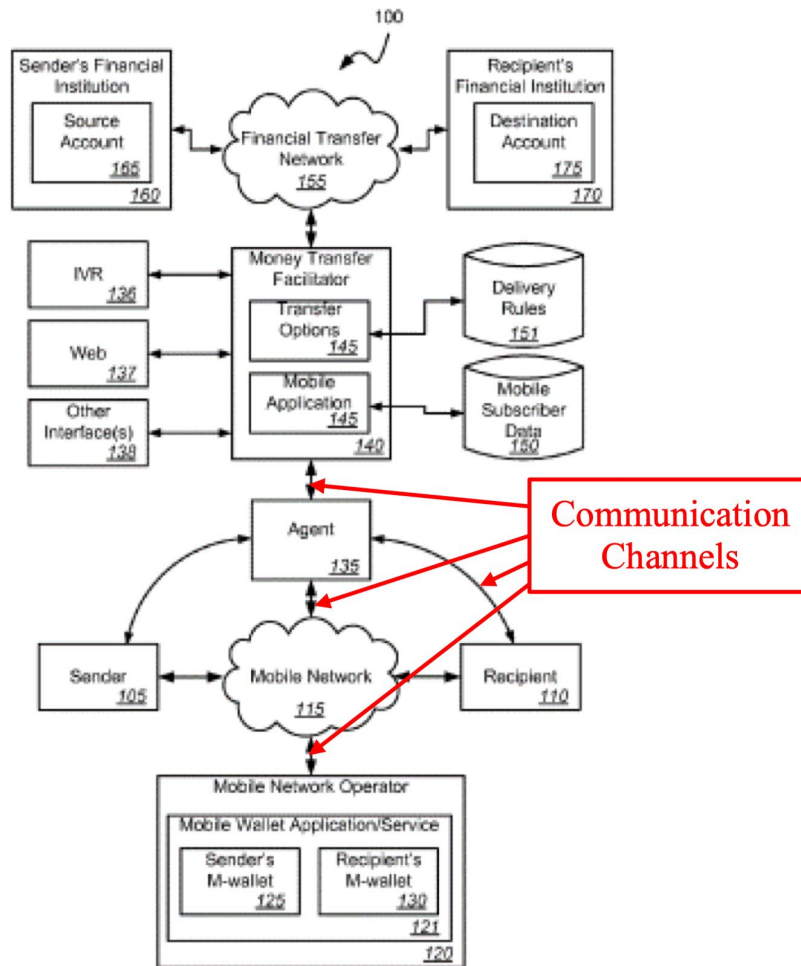
applications to be stored on a hardware SIM card because Dill teaches the mobile wallet applications as being executed on a mobile device (*see* Section III.E.1 above) and as being stored on a hardware component. Pet., 22-24 (citing APPL-1005, [0101], [0106]).

F. Dill teaches “the computing system receiving communication from an agent terminal over one of a plurality of communication channels” [Limitation 1.10A]

Patent Owner did not contest that Dill and Vadhri renders obvious limitation 1.10A. Pet., 43-46. However, in IPR2023-00398 involving U.S. Patent 10,438,196, the child of the '488 patent, Patent Owner argued that Dill does not teach “receiv[ing] communication from the agent terminal over at least one of the plurality of channels connected to the computing system,” which is similar to limitation 1.10A of the '488 patent. *See* Patent Owner Response (Paper 18), 37-39 in IPR2023-00398 (“the '196 IPR”). To the extent Patent Owner raises such an argument in this proceeding, Petitioner explains below why the Petition has shown that limitation 1.10A of the '488 patent is obvious.

The Petition showed that Dill's transfer options module 154 (“integration tier”) of the money transfer facilitator 140 receives communications from the agent 135 (“agent terminal”) through at least one of a plurality of communication channels, as shown in Fig. 9 below. Pet., 43-44 (Dill's agent 135 teaches the claimed “agent terminal”) (citing APPL-1005, [0051]; APPL-1003, ¶¶168-170), 43-45 (citing

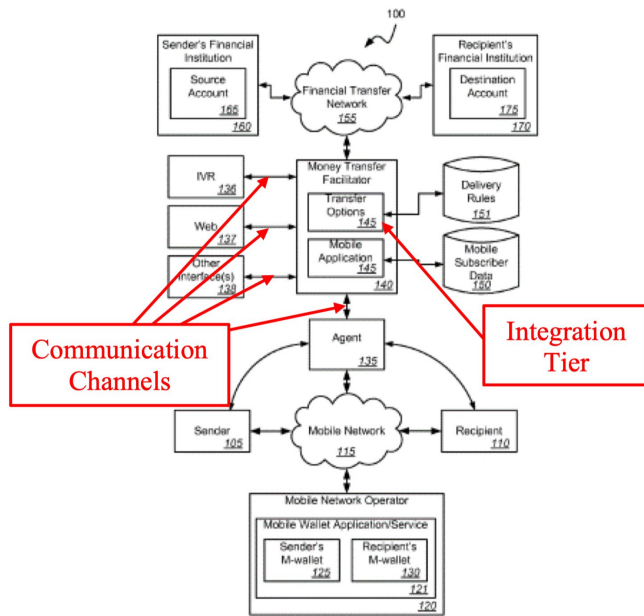
APPL-1005, [0051], [0070], [0090], [0032], [0052]; APPL-1003, ¶¶168-173). For example, Dill's agent 135 may communicate with the money transfer facilitator 140 through "wired or wireless" communication channels to "direct funds in the transfer." APPL-1005, [0090]; APPL-1003, ¶172; *see also* Pet., 52-53 ("Dill's financial transfer system is configured to send communications from 'the sender, the recipient, or both...us[ing] any of a variety of channels to initiate a transfer, receive notification of the transfer, and/or direct funds in the transfer.'") (quoting APPL-1005, [0090]).

**APPL-1005, Fig. 9 (annotated).**

Pet., 45

Despite this disclosure, Patent Owner argued in the '196 IPR that Dill does not teach that the transfer options module 145 receives a communication from the agent 135 over a communication channel through web interface 137. '196 IPR POR, 37-39. Patent Owner is wrong.

Dill discloses many communication channels that interface with the money transfer facilitator 140, as shown in the following annotations of Dill's Fig. 9 below.



APPL-1005, Fig. 9 (annotated).

Pet., 25

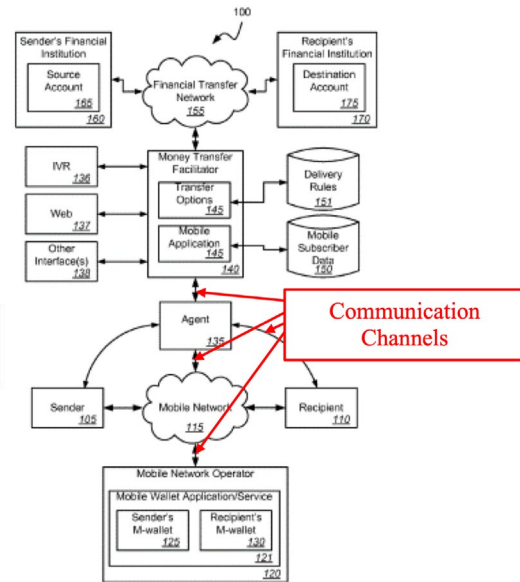


FIG. 9

APPL-1005, Fig. 9 (annotated).

Pet., 45

Some of these communication channels interface with the web interface 137 and teach the claimed “web services communication mechanisms for interfacing with...a plurality of different device types over a plurality of different communication channels,” as recited in limitations 1.3B-1.3C. Pet., 22-25. Limitations 1.3B-1.3C do not require that *all* the communication channels “must” interface with the web services communication mechanisms. Therefore, the communication channel between the agent 135 and the money transfer facilitator 140 (“computing system”) teaches “one of a plurality of channels” recited in limitation 1.10A. Pet., 44-45, 17-19 (money transfer facilitator 140 teaches the claimed “computing system”). As shown in the Petition, it would have been obvious to implement Vadhri’s cloud computing environment with Dill’s financial transfer

system as a “cloud-based transaction platform.” Pet., 45-46. Patent Owner did not contest this. Consequently, Dill and Vadhri render obvious “the computing system” (Dill’s money transfer facilitator 140) “receiving communication from an agent terminal” (Dill’s agent 135) “over one of a plurality of channels connected to the cloud-based transaction platform.” Pet., 43-46. As discussed in Section III.B above, all the communication channels in Dill’s Fig. 9 are represented as two-headed arrows, meaning that communications occur in both directions between connected elements. Thus, Dill’s agent 135 interfaces with the web interface 137 through these communication channels. Pet., 43-45.

As shown above, Dill teaches each of the limitations of claim 1 that Patent Owner incorrectly alleged are missing for claim 1. Dill likewise teaches the corresponding limitations of independent claims 11 and 22. Pet., 76-79, 81-83. Patent Owner did not address any of the dependent claims of the ’488 patent in its Response.

IV. DR. HOUH IS A POSITA

The Board determined that a POSITA would have had “a working knowledge of mobile payment systems and techniques.” Inst. Dec. 9. Dr. Houh’s declaration details his experience “setting up accounting systems and integrating on-line payment systems on numerous occasions.” APPL-1003, ¶18. In 1994, while at Agora, Dr. Houh “integrated web payment systems with various web sites.” APPL-

1003, ¶18. While at Einstein's Workshop, Dr. Houh "created the [company's] initial web site and integrated it with online payment solutions." APPL-1003, ¶19. His role involved the "integration with and setup of mobile shopping terminals" and the setup of the "accounting system, built the web site, integrated various web payment mechanisms with the web site, set up mobile payment systems, and also set up a mobile point of sale system." APPL-1003, ¶19. Patent Owner, however, alleges that Dr. Houh is not a POSITA because he "lacked a working knowledge of mobile wallets" and did not set up any websites with an "integrated payment system." POR, 7-8. This ignores Dr. Houh's testimony, and it is outside the accepted definition of a POSITA in this case. Further, Patent Owner's expert admitted that knowledge of mobile payment systems—which Dr. Houh has experience with (APPL-1003, ¶19)—includes knowledge of a mobile wallet. APPL-1022, 21:5-7 ("Q: ...[D]oes knowledge of mobile payment systems include knowledge of a mobile wallet? A: Yes.").

V. CONCLUSION

The Board should find the Challenged Claims unpatentable.

Respectfully submitted,

Dated: January 12, 2024
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CERTIFICATE OF WORD COUNT

Under 37 C.F.R. § 42.24, the undersigned attorney for the Petitioner, Apple Inc., declares that the argument section of this Reply has 5,579 words, according to the word count tool in Microsoft Word™.

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PETITIONER'S EXHIBIT LIST

APPL-1001	U.S. Patent 9,208,488
APPL-1002	File History of U.S. Patent 9,208,488
APPL-1003	Declaration of Henry Houh, Ph.D.
APPL-1004	<i>Curriculum Vitae</i> of Henry Houh, Ph.D.
APPL-1005	U.S. Patent Publication No. 2009/0265272 to Dill et al. ("Dill")
APPL-1006	U.S. Patent Publication No. 2010/0133334 to Vadhri ("Vadhri")
APPL-1007	U.S. Patent Publication No. 2009/0217047 to Akashika et al. ("Akashika")
APPL-1008	Designing System for Internet Commerce" by G. Winfield Treese et al. (2003) ("Treese")
APPL-1009	U.S. Patent Publication No. 2013/0332352 to Imrey et al. ("Imrey")
APPL-1010	U.S. Patent Publication No. 2014/0032758 to Barton et al. ("Barton")
APPL-1011	U.S. Patent Publication No. 2008/0167988 to Sun et al. ("Sun")
APPL-1012	U.S. Patent No. 7,865,141 to Liao et al. ("Liao")
APPL-1013	U.S. Patent Publication No. 2009/0055322 to Bykov et al. ("Bykov")
APPL-1014	U.S. Patent Publication No. 2004/0196858 to Tsai et al. ("Tsai")
APPL-1015	U.S. Patent Publication No. 2012/0117178 to Price et al. ("Price")
APPL-1016	Director Katherine K. Vidal, "Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation," June 21, 2022

APPL-1017	United States District Court – National Judicial Caseload Profile (June 2022), available at: https://www.uscourts.gov/statistics/table/na/federal-court-management-statistics/2022/06/30-2
APPL-1018	Scheduling Order, <i>Fintiv, Inc. v. PayPal Holdings, Inc.</i> , No. 6:22-cv-00288, ECF No. 33 (W.D. Tex. Nov. 30, 2022)
APPL-1019	Order Regarding Joint Motion to Amend Scheduling Order, <i>Fintiv, Inc. v. PayPal Holdings, Inc.</i> , No. 6:22-cv-00288, ECF No. 49 (W.D. Tex. Nov. 30, 2022)
APPL-1020	Joint Claim Construction Statement, <i>Fintiv, Inc. v. PayPal Holdings, Inc.</i> , No. 6:22-cv-00288, ECF No. 53 (W.D. Tex. Dec. 8, 2022)
APPL-1021 (NEW)	Supplemental Declaration of Dr. Henry Houh
APPL-1022 (NEW)	Deposition Transcript of Dr. Michael I. Shamos in IPR2023-00399 ('488 patent) (Dec. 20, 2023)
APPL-1023 (NEW)	Deposition Transcript of Mr. Kai Johnson (Dec. 15, 2023)

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that a true and correct copy of the foregoing was served on the Patent Owner as detailed below:

Date of service January 12, 2024

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Documents served **Petitioner's Reply and
Exhibits APPL-1021 to APPL-1023**

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