

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

**PETITION FOR *INTER PARTES* REVIEW
UNDER 35 U.S.C. § 312 AND 37 C.F.R. § 42.104**

I. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8	1
A. Real Party-in-Interest.....	1
B. Related Matters.....	1
C. Lead and Back-up Counsel and Service Information	1
II. INTRODUCTION.....	2
III. STANDING	2
IV. NOTE	2
V. BACKGROUND.....	2
VI. LEVEL OF ORDINARY SKILL IN THE ART	3
VII. CLAIM CONSTRUCTION.....	4
VIII. The DILL-VADHRI-AKASHIKA COMBINATION RENDERS CLAIMS 1-22 OBVIOUS	5
A. Overview of Dill.....	6
B. Overview of Vadhri.....	8
C. Overview of Akashika.....	10
D. Motivation to Combine Dill, Vadhri, and Akashika	12
E. The Challenged Claims are Obvious.....	16
1. Claim 1	16
[1.0] A computing system for facilitating management of a mobile wallet, including:	16
[1.1] one or more processors;.....	17
[1.2] system memory;.....	18

[1.3A] an integration tier configured to manage mobile wallet sessions with a mobile device and	19
[1.3B] [an integration tier configured to manage mobile wallet sessions with a mobile device and] including web services communication mechanisms for interfacing with a mobile wallet application installed on a hardware SIM card.....	22
[1.3C] [an integration tier configured to manage mobile wallet sessions and] ... as well as with a plurality of different device types over a plurality of different communication channels,.....	24
[1.3D] [an integration tier configured to manage mobile wallet sessions with a mobile device]... the integration tier being configured to receive binary and text messages from the mobile device;.....	26
[1.4A] a notification services engine configured to interface with the integration tier and	27
[1.4B] [a notification services engine configured to interface with the integration tier and] to send Short Message Peer-to-Peer (SSMP) messages, Short Messaging Service (SMS) messages and Simple Mail Transfer Protocol (SMTP) messages over the different communication channels to different devices,.....	29
[1.4C] [a notification services engine configured to interface with the integration tier and to send Short Message Peer-to-Peer (SSMP) messages, Short Messaging Service (SMS) messages and Simple Mail Transfer Protocol (SMTP) messages over the different communication channels to different devices] including the mobile device, to interface with the mobile wallet application installed on the hardware SIM card;.....	31
[1.5A] service connectors that are each configured to connect the computing system to a different third party system;	32
[1.5B] each of the service connectors being configured as a	

separate module for integrating a corresponding external service to the computing system;.....	34
[1.6] a payment handler that exposes a common API for interacting with different payment processors;.....	35
[1.7] a security services engine that performs subscriber authentication utilizing a database-based Access Control List (ACL);.....	37
[1.8] a rules engine configured to enforce constraints on financial transactions performed with the mobile wallet application, the mobile wallet application being associated with a mobile wallet account; and	40
[1.9] one or more computer-readable storage media having stored thereon computer-executable instructions that are executable by the one or more processors to cause the computing system to perform a transaction for a customer using the mobile wallet which is owned by another entity than the customer, comprising the following:	42
[1.10A] the computing system receiving communication from an agent terminal over one of a plurality of communication channels connected to the cloud-based transaction platform,.....	43
[1.10B]...the agent communication indicating that a customer desires to perform a transaction comprising a mobile wallet transaction using a third party mobile wallet;.....	46
[1.10C]...the mobile wallet transaction comprising at least one of a mobile wallet transfer in which funds are transferred from the mobile wallet of the customer to a third party mobile wallet, a mobile wallet withdrawal in which funds are withdrawn from the third party mobile wallet and provided to the customer, or a mobile wallet deposit in which funds are deposited into the third party mobile wallet;.....	48
[1.11] the computing system sending the agent communication	

to the third party mobile wallet platform;.....	49
[1.12A] the computing system determining whether the mobile wallet transaction comprises the mobile wallet withdrawal and	49
[1.12B] ... when the mobile wallet transaction is determined to comprise the mobile wallet withdrawal, generating and providing a perishable withdrawal code to the consumer, which is presented to the agent terminal to facilitate processing of the mobile wallet withdrawal;	50
[1.13] the computing system receiving communication from the third party mobile wallet platform confirming processing of the transaction, the transaction comprising at least one of the mobile wallet transfer, the mobile wallet withdrawal or the mobile wallet deposit; and.....	52
[1.14] the computing system sending communication to the agent terminal over one of a plurality of communication channels connected to the cloud-based transaction platform, the communication indicating confirmation of the processing of the transaction.....	52
2. Claim 2	56
[2.0] The computing system of claim 1, wherein a new transaction is performed by the computing system for a second, different customer using a second, different third party mobile wallet.	56
3. Claim 3	56
[3.0] The computing system of claim 1, wherein the transaction further comprises the customer of confirmation of the processing of the transaction using the third party mobile wallet over at least one of the plurality of communication channels connected to the cloud-based transaction platform.....	56
4. Claim 4	59

	[4.0] The computing system of claim 1, wherein the third party mobile wallet is provided by a third party mobile wallet provider.	59
5.	Claim 5	60
	[5.0] The computing system of claim 4, wherein each third party mobile wallet provider has their own point of sale (POS) processing system.	60
6.	Claim 6	61
	[6.0] The computing system of claim 5, wherein the third party mobile wallet providers' POS processing systems communicate with each other using the cloud-based transaction platform to process the transaction.	61
7.	Claim 7	61
	[7.0] The computing system of claim 1, wherein the transaction comprises the mobile wallet deposit for depositing funds into the third party mobile wallet which is owned by the entity different than the customer, including:.....	61
	[7.1] receiving communication from the agent terminal over one of the plurality of communication channels connected to the cloud-based transaction platform, the agent communication indicating that the customer desires to deposit a specified amount of funds into the third party mobile wallet; and.....	62
	[7.2] crediting the third party mobile wallet with the specified amount of funds.	64
8.	Claim 8	64
	[8.0] The computing system of claim 1, wherein the transaction comprises the mobile wallet withdrawal for withdrawing funds from the third party mobile wallet owned which is owned by the entity different than the customer, including: ..	64

[8.1]	receiving communication from the customer over one of the plurality of communication channels connected to the cloud-based transaction platform, the customer communication indicating that the customer desires to withdraw a specified amount of funds from the third party mobile wallet;.....	65
[8.2]	providing the perishable withdrawal code to the customer over at least one of the plurality of communication channels connected to the cloud-based transaction platform;.....	66
[8.3]	receiving communication from the agent terminal over at least one of the plurality of communication channels connected to the cloud-based transaction platform, the agent terminal communication indicating that the perishable withdrawal code has been presented to an agent; and	67
[8.4]	debiting the third party mobile wallet by the specified amount of funds.	67
9.	Claim 9	69
[9.0]	The computing system of claim 1, wherein the transaction comprises the mobile wallet transfer for transferring money from a mobile wallet account of the customer provided by a first mobile wallet provider to a third party mobile wallet of a recipient provided by a second mobile wallet provider, the method comprising:	69
[9.1]	receiving customer communication over one of the plurality of communication channels connected to the cloud-based transaction platform, the customer communication indicating that the customer desires to transfer a specified amount of funds to the recipient using a specified payment method from the mobile wallet account of the customer;	70
[9.2]	debiting the mobile wallet account by the specified amount of funds; and	70

[9.3]	transferring the specified amount of funds from the cloud-based transaction platform to the second third party mobile wallet platform for delivery to the specified recipient, the specified amount of funds being transferred over at least one of the plurality of channels connected to the third party mobile wallet platform.....	70
10.	Claim 10	71
[10.0]	The computing system of claim 1, wherein the claimed method also includes performing a new transaction comprising a mobile wallet purchase at an agent terminal using a third party mobile wallet managed by a third party mobile wallet platform, including:.....	71
[10.1]	receiving communication from the customer over one of the plurality of channels connected to the cloud-based transaction platform, the customer communication indicating that the customer desires to purchase an item for a specified amount of funds using a specified payment method from a third party mobile wallet;	72
[10.2]	returning a secure, perishable purchase code to the customer over at least one of the plurality of channels connected to the cloud-based transaction platform;	73
[10.3]	receiving communication from the agent terminal over at least one of the plurality of channels connected to the cloud-based transaction platform, the agent terminal communication indicating that the purchase code has been presented to an agent;.....	75
[10.4]	debiting the third party mobile wallet by the specified amount of funds; and	75
[10.5]	crediting an agent account by the specified amount of funds.....	75
11.	Claim 11	76
[11.0]	At a computer system including at least one processor	

	and a memory, a computer-implemented a method for performing a transaction for a customer using a third party mobile wallet owned by another entity than the customer, the method comprising the following:.....	77
	[11.8B] [an integration tier configured to manage mobile wallet sessions with a mobile device] on which a mobile wallet application is installed and.....	79
12.	Claim 12	79
13.	Claim 13	80
	[13.0] The computer-implemented method of claim 11, wherein the third party mobile wallet platform comprises a third party processor.	80
14.	Claims 14-21	80
15.	Claim 22	81
	[22.0] One or more computer-readable hardware storage devices having stored thereon computer-executable instructions that are executable by the one or more processors of a computing system to cause the computing system to perform a transaction for a customer using a third party mobile wallet owned by another entity than the customer, comprising the following:	82
IX. DISCRETIONARY DENIAL IS INAPPROPRIATE.....		83
X. CONCLUSION		85
CERTIFICATE OF WORD COUNT		86
CERTIFICATE OF SERVICE		87

PETITIONER’S EXHIBIT LIST¹

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

¹ Citations to APPL-1002 use page numbers added per 37 C.F.R. § 42.63(d)(2)(ii).

Citations to other exhibits use page numbers in their original publications.

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)

I. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8

A. Real Party-in-Interest

Apple Inc. is the real party-in-interest.

B. Related Matters

The '488 Patent is involved in: *Fintiv, Inc. v. PayPal Holdings, Inc.*, 6-22-cv-00288 (W.D. Tex.) ("PayPal litigation"). Petitioner is not a party to that case and the defendant in that case had no knowledge of this IPR prior to its filing. The '488 Patent is the parent of U.S. Patent No. 10,438,196, which has been challenged in a concurrently-filed IPR (IPR2023-00398).

C. Lead and Back-up Counsel and Service Information

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II. INTRODUCTION

Apple Inc. (“Petitioner”) requests *inter partes* review (IPR) and cancellation of claims 1-22 (the “Challenged Claims”) of U.S. 9,208,488 (“the ’488 patent,” APPL-1001).

III. STANDING

Petitioner certifies the ’488 patent is eligible for IPR and Petitioner is not barred or estopped from requesting an IPR.

IV. NOTE

All **bold**, ***bold italics***, and **bold underline** has been added. Text in *italics* signifies claim language.

V. BACKGROUND

The ’488 patent is directed to performing a transaction using a “third party mobile wallet,” a “third party point of sale (POS) system,” and making a purchase facilitated by a “third party mobile wallet provider.” APPL-1001, Abstract. The ’488 patent provides for “a cloud-based transaction platform” that “receives communication from a specified POS system implemented at an agent terminal

over a communication channel....indicat[ing] that a customer has initiated a mobile wallet transaction using their third party mobile wallet.” APPL-1001, 1:64-2:4; APPL-1003, ¶28. An example of the platform is below:

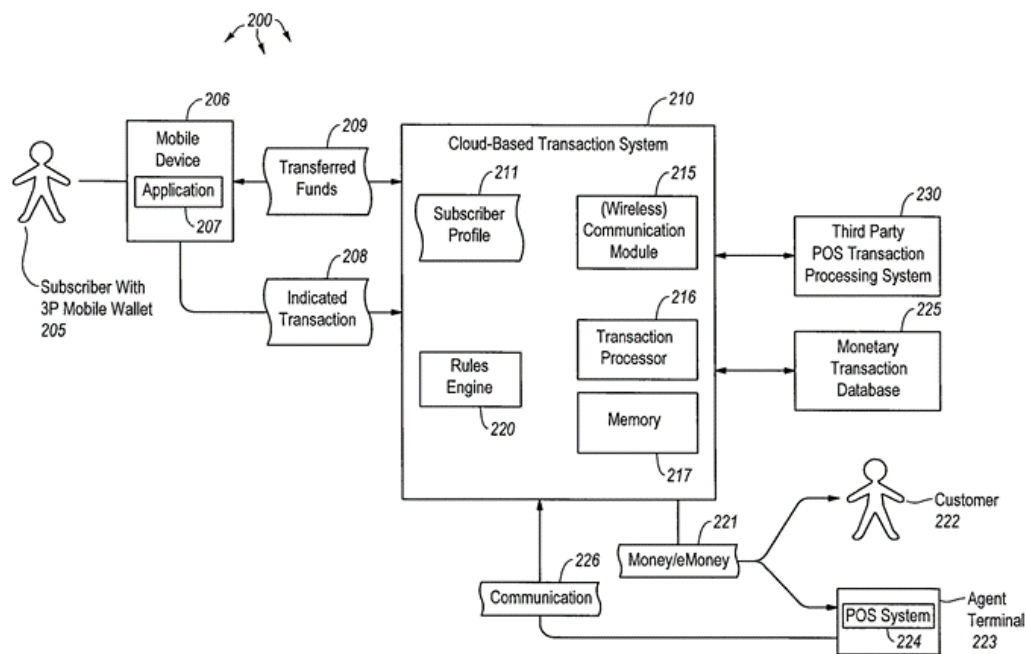


FIG. 2

APPL-1001, Fig. 2.

Financial transactions using mobile wallets were well-known before the '488 Patent. APPL-1003, ¶40;² APPL-1005, Abstract, [0002], [0010]; APPL-1006, [0001], [0047]-[0050].

VI. LEVEL OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art (“POSITA”) in November 2011, the assumed priority date of the '488 patent, would have had a working knowledge of mobile payment systems and techniques pertinent to the '488 patent. A POSITA

² The declaration of Dr. Henry Houh (APPL-1003) supports the Petition.

would have had a bachelor's degree in electrical engineering, computer science, or equivalent training, and approximately two years of work experience in software development with a basic knowledge of accounting. Lack of work experience can be remedied by additional education, and vice versa. APPL-1003, ¶¶21-23.

VII. CLAIM CONSTRUCTION

Claim terms are given their ordinary and accustomed meaning as would have been understood by a POSITA at the priority date in view of the entire disclosure. Petitioner maintains that all other terms, not addressed below, require no specific construction for this proceeding.³

“debiting the third party mobile wallet by the specified amount of funds” (claims 8-10, 19-21)

A POSITA would have understood that there are various types of mobile wallets: (1) where a mobile device holds value (such as on a secure chip) and (2) where the value is stored in an external account. APPL-1001, 9:9-19; APPL-1011, [0009], [0022]; APPL-1003, ¶¶43-44. The '488 patent refers to the first type of mobile wallet. APPL-1001, 9:9-19; APPL-1003, ¶44. For example, the specification states that the “term ‘mobile wallet’ or ‘mobile wallet account’ refers

³ Petitioner does not concede that any term not construed herein meets the statutory requirements of 35 U.S.C. § 112.

to a stored value account or prepaid access account (PPA) that allows the owner (or ‘subscriber’) to pay for goods and services on the mFS platform from his or her mobile wallet account.” APPL-1001, 9:9-19; APPL-1003, ¶44.

Although not defined, “stored value” in mobile wallets is well-known and refers to a value stored on a mobile device (such as in a secure memory). *E.g.*, APPL-1011, [0009], [0022] (“Mobile communication devices...are characterized by secure memory usable for storing value and a controller which manages the secure memory,” “stored value represented by data on the mobile communication device”); APPL-1003, ¶45. The ’488 patent does not provide technical details of how its mobile wallet is debited other than to say that “[t]he cloud-based transaction platform then debits the customer’s third party mobile wallet by the specified amount of funds to complete the purchase.” APPL-1001, 2:32-36; APPL-1003, ¶45. A POSITA would have understood “debit the mobile wallet by the specified amount of funds” to include “*transferring the specified amount of funds from the stored value on a mobile device.*” APPL-1003, ¶46.

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

The combination of Dill, Vadhri, and Akashika renders claims 1-22 obvious. APPL-1003, ¶47. These claims represent nothing more than a predictable combination of well-known features. Dill teaches a financial transfer system for supporting “flexible payment options” for transactions between mobile wallets.

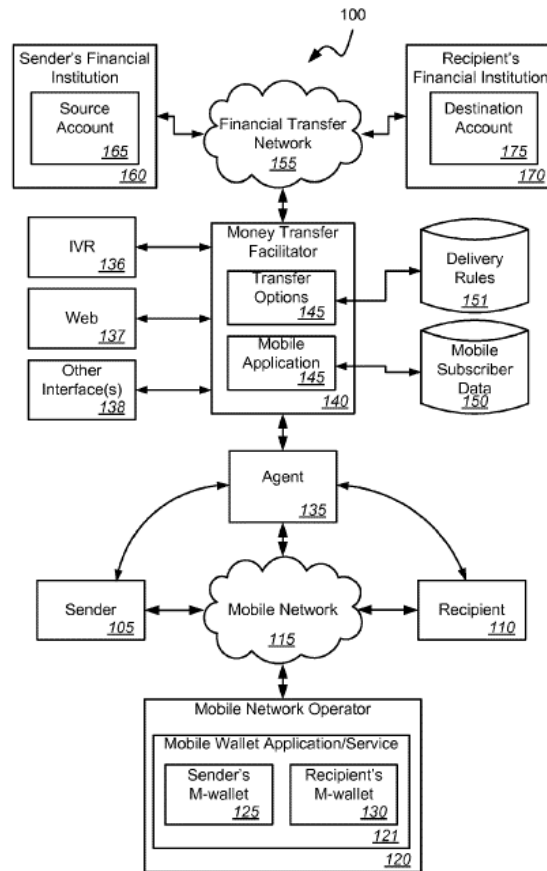
APPL-1005, Abstract, [0005], [0010]. While Dill does not specifically disclose an API server or a cloud computing environment, they were well-known in financial transaction systems, per Vadhri, and a POSITA would have been motivated to integrate them into Dill's system to improve security and flexibility. APPL-1003, ¶¶57-63. A POSITA would have been motivated to include an access control list (ACL), per Akashika, into Dill's networks to improve security of financial data. APPL-1003, ¶¶64-69.

Dill, Vadhri, and Akashika were not cited or relied on by the Examiner during prosecution.

A. Overview of Dill

Dill—U.S. 2009/0265272 (APPL-1005)—was filed June 3, 2009, published October 22, 2009, and is prior art under pre-AIA §§ 102(a)-(b), (e). Like the '488 patent, Dill teaches a financial transfer system for supporting “flexible payment options” for a financial transaction. APPL-1005, Abstract, [0002], [0010]. Dill's system facilitates transactions between mobile devices and includes “a mobile communications network and a mobile device communicatively coupled with the mobile communications network” where the “mobile device can execute a mobile wallet application.” APPL-1005, [0010], [0005].

Fig. 9 depicts one embodiment of Dill's system:



APPL-1005, Fig. 9.

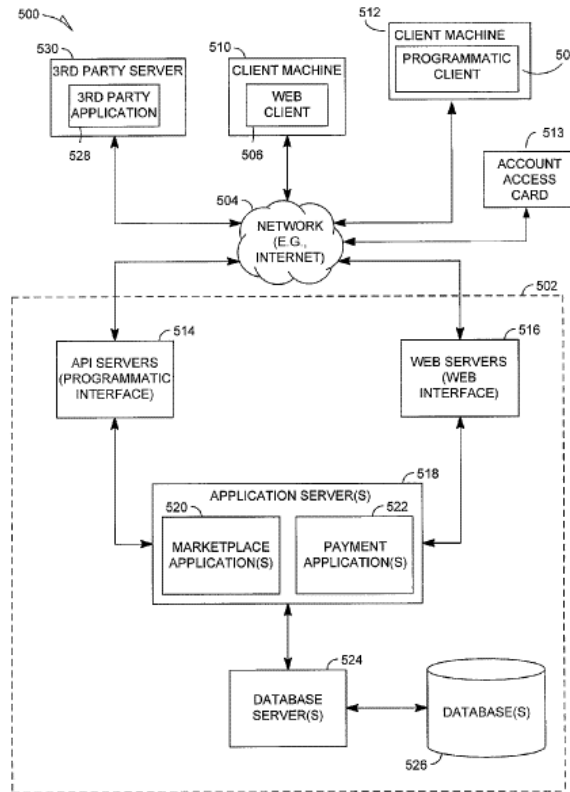
System 100 includes a money transfer facilitator system 140 that receives transaction information from a mobile wallet application 121 including mobile wallets 125, 130. APPL-1005, Fig. 9, [0100]. The money transfer facilitator system 140 includes a transfer options module 145 and a mobile application 145 that are coupled with interfaces 136-138 and an agent 135 for conducting transfers. APPL-1005, Fig. 9, [0101]. The transfer options module 145 and mobile application 145 conduct transactions between senders and recipients through communication channels and send notifications of request and transactions. APPL-1005, Fig. 9, [0100]-[0104].

Dill is analogous art to the '488 patent because it is from the same field of endeavor. Dill “relates to financial transfers” just as the '488 patent is “directed to performing a transaction.” APPL-1005, [0002]; APPL-1001, Abstract. Both systems manage transactions with third-party systems, including mobile wallets. APPL-1001, Abstract; APPL-1005, [0003]-[0005]. Dill is also reasonably pertinent to the particular problem of the '488 patent, e.g., increasing flexibility of payments in financial systems (APPL-1001, 6:16-24; APPL-1005, [0002]).

B. Overview of Vadhri

Vadhri—U.S. 2010/0133334 (APPL-1006)—was filed December 3, 2008, published June 3, 2010, and is prior art under §§ 102(a)-(b), (e). Vadhri discusses “systems and methods for accessing a value holding account.” APPL-1006, [0001]. A networked system 502 (also called a “network-based marketplace or publication system”) manages payments between applications and accounts, like the financial transaction systems of the '488 patent and Dill. APPL-1006, [0047]-[0050]. Vadhri teaches methods for accessing a value-holding account within the networked system 502 that include “access[ing] the payment applications via the API server (e.g., using API calls) or through the web servers 516 to engage in account access operations.” APPL-1006, [0054].

Fig. 5 depicts Vadhri’s networked system 520 with API servers 514:



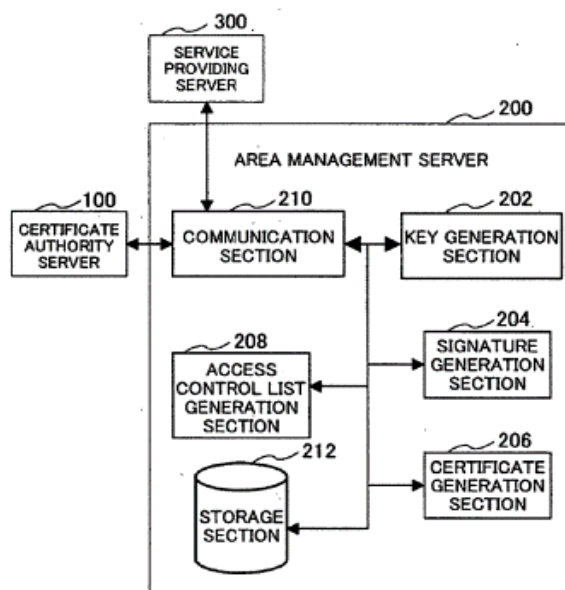
APPL-1006, Fig. 5.

The use of the API server provides a programmatic interface for payment applications to access services of the marketplace. APPL-1006, [0052]. This interface allows use of seller applications, such as eBay, and “enable[s] sellers to author and manage listings...in an off-line manner, and to perform batch-mode communications between the programmatic client 508 and the network system.” APPL-1006, [0052]. Vadhri teaches the use of a secure temporary code to provide additional security by limiting the amount of time that a code is available and describes how to determine the validity of a code and notify the user accordingly. APPL-1006, [0015], Fig. 4, [0048]. Vadhri also teaches the integration of a “‘cloud computing’ environment” in its transaction systems. APPL-1006, [0089].

Vadhri is analogous art to the '488 patent and is from the same field of endeavor. Vadhri discloses “systems and methods for accessing a value holding account” and supports “a transaction to [] goods and services,” similar to the embodiments of the '488 patent. APPL-1006, [0001], [0057]; APPL-1001, Abstract. Vadhri is also reasonably pertinent to the particular problem of the '488 patent, as both are concerned with increasing accessibility of payment systems (*e.g.*, APPL-1001, 11:61-12:16; APPL-1006, [0002]).

C. Overview of Akashika

Akashika—U.S. 2009/0217047 (APPL-1007)—was filed November 18, 2008, published August 27, 2009, and is prior art under §§ 102(a)-(b), (e). Akashika discloses a security system that protects data on a secure chip including “the remaining amount or the settlement information of electronic money.” APPL-1007, [0007]. The system includes an area management server with an access control list (ACL) generation section to create an ACL that sets access rights to the secure data for each user. APPL-1007, [0060]. These features are shown in Fig. 3:



APPL-1007, Fig. 3.

The access rights set by the ACL include access to the secure chip as well as read, write, and frequency of access restrictions and executing script data (such as ECMAScript or JavaScript) on the secure chip. APPL-1007, [0017], [0062], [0070]. “[U]nauthorized access to the secure chip 500 can be prevented” using the ACL. APPL-1007, [0117].

Akashika is analogous art to the ’488 patent and is from the same field of endeavor. Akashika discloses “service providing system” that includes a secure chip to store “settlement data” for financial transactions. APPL-1007, [0003]-[0006]. Similarly, embodiments of the ’488 patent are directed to financial transactions. APPL-1001, Abstract. Akashika is also reasonably pertinent to the particular problem of the ’488 patent, as both are concerned with securely storing data for transactions (*e.g.*, APPL-1001, 7:40-45; APPL-1007, [0003]-[0006]).

D. Motivation to Combine Dill, Vadhri, and Akashika

First, a POSITA would have been motivated to incorporate Vadhri's API server into Dill's financial network system as Dill recognizes the need for flexible financial systems that may be used by different parties. APPL-1003, ¶58; APPL-1005, [0004] ("there is a need in the art...to facilitate flexible payment options for the transactions"). The use of APIs in payment systems was well-known in the art. APPL-1003, ¶59; APPL-1008 ("Treese"), p.417.

Vadhri is analogous art to Dill because it teaches a financial system similar to Dill's financial network system that is configured for enhanced flexibility in sharing data between different parties using its API server. APPL-1006, [0056] ("[t]he applications themselves are communicatively coupled (e.g., via appropriate interfaces) to each other and to various data sources, so as to allow information to be passed between the applications or so as to allow the applications to share and access common data"). The API server allows for increased flexibility by providing access to "various services and functions provided by the marketplace" through its interface, including access for third-party marketplaces such as eBay, as well as features such as managing listings offline and batch-mode communications. APPL-1006, [0052]. A POSITA would have understood that Vadhri's API server uses a common API (which as discussed above allows for additional payment

options without requiring additional servers (APPL-1008, p.417)) and allows for interaction with different payment processors (e.g., eBay). APPL-1003, ¶60.

Second, a POSITA would have been motivated to combine Vadhri's API server with Dill's system to yield the predictable result of increased access for clients and additional payment options. APPL-1003, ¶61. The use of payment APIs to add new payment systems was well-known. APPL-1008, p.417. For example, Treese states that "[i]nternet payment technology is changing rapidly, with debit cards, electronic funds transfer, and electronic checks gaining acceptance." APPL-1008, p.417. A "payment API" adds "new payment systems and additional implementations of old ones...without the necessity of updating any content servers." APPL-1008, p.417. It would have been obvious to include this technology (via Vadhri's API server) into Dill's system based on the recognized need for flexibility. APPL-1003, ¶61; APPL-1005, [0004]; APPL-1006, [0052].

Third, a POSITA would have been motivated to incorporate Vadhri's cloud computing environment into Dill's system to achieve the well-known and predicable benefits of cloud computing: more support and options for users of the financial system. APPL-1003, ¶62; APPL-1010, [0067]-[0069], APPL-1005, [0004]. A POSITA would have understood that integration of Vadhri's environment into Dill's system would "provid[e] customers with computational resources, data storage services, networking capabilities, and computer platform

and application support” and “security systems, development environments, user interfaces and the like.” APPL-1010, [0069], [0214]; APPL-1003, ¶62.

A POSITA would have had a reasonable expectation of success in implementing Vadhri’s cloud computing environment in Dill’s system because many examples of such integrations were available. APPL-1003, ¶¶63, 68; APPL-1010, [0069], [0214]); APPL-1006, [0089]). Additionally, both Dill and Vadhri include processors and a network used to implement such a cloud computing environment (APPL-1005, [0060]-[0061]; APPL-1006, [0089]). This combination would also have been within the skillset of a POSITA because a POSITA would have had the requisite knowledge of computer technologies and software development techniques to implement this design choice. APPL-1003, ¶63.

Fourth, a POSITA would have been motivated to incorporate Akashika’s ACL generator into Dill’s servers to provide enhanced security for financial transactions. APPL-1003, ¶64. Akashika’s teaches that an ACL provides “high security” for data such as “settlement information of electronic money or important personal information.” APPL-1007, [0007]. A POSITA would have understood that Dill’s system requires similar security protocols to protect clients and assets alike. APPL-1007, [0007]. This need is clearly shown by the numerous security protocols implemented in Dill’s system such as steps to validate Personal Identification Numbers (PINs), transaction identifiers, and recipient identifiers.

APPL-1005, [0004]-[0007]. Thus, Akashika and Dill are analogous art. Dill also highlights the need for security measures by defining and implementing rules for transactions. APPL-1005, [0102]-[0104]. A POSITA would have understood that security is a concern when sharing data (e.g., financial data) between parties, as taught by Vadhri. APPL-1003, ¶65; APPL-1006, [0056]. Therefore, a POSITA would have been motivated to implement the additional security protocols provided by Akashika's ACL generator into Dill's system, especially when providing the added flexibility afforded by Vadhri's API server. APPL-1003, ¶65.

The use of ACLs, like those of Akashika, to control access to sensitive systems was well-known in the art. APPL-1003, ¶66; APPL-1009, [0185]-[0186] ("Once added to the access control list, the individual may log into the system using standard, typically secure Internet protocols...[t]he method and system for adding third parties to an access control list is generally understood by those skilled in the art"). Thus, the benefits of implementing an ACL into Dill's financial system would have been obvious. APPL-1003, ¶66. In fact, a POSITA would have understood that the implementation of an ACL is merely an extension of the rules defined by Dill's money transfer facilitator. APPL-1005, [0102]-[0105]; APPL-1007, [0017]. As such, a POSITA would have had a reasonable expectation of success in implementing an ACL in Dill's system. APPL-1003, ¶¶66, 68.

A POSITA would have found it obvious, desirable, and predictable to implement Vadhri's API server, secure code, and cloud computing environment as well as Akashika's ACL into Dill's financial transfer system. APPL-1003, ¶67. The combination permits, but does not require physical incorporation of elements from Vadhri and Akashika into Dill. APPL-1003, ¶69.

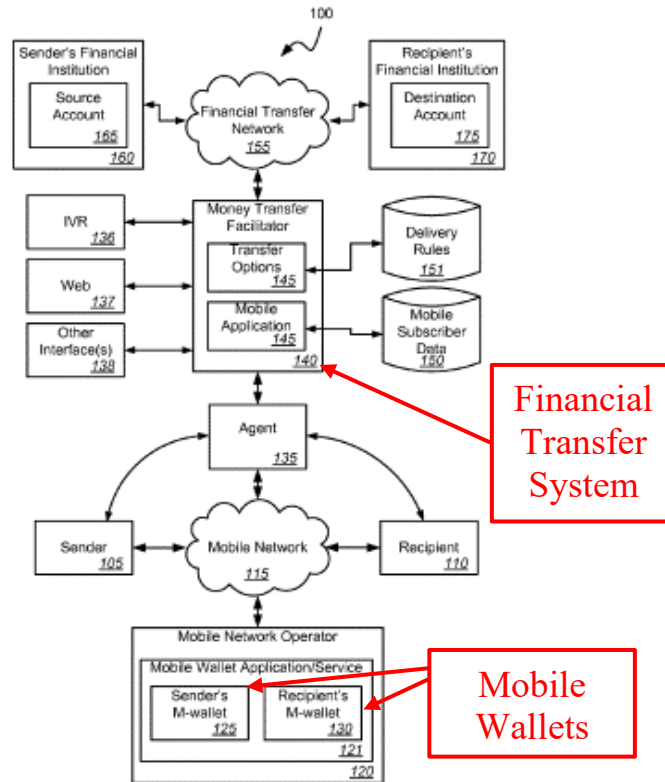
E. The Challenged Claims are Obvious

1. Claim 1

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

To the extent the preambles is limiting, Dill discloses it. First, Dill describes “systems, and machine-readable media [] for financial transfers utilizing a unique identifier to facilitate flexible payment options for the transaction.” APPL-1005, [0005]. Dill discloses, in Fig. 2, computer system 200 which is used to run its financial systems. APPL-1005, [0059]; APPL-1003, ¶¶70-71.

Second, Dill's system 100, which runs on computer system 200, uses a money transfer facilitator system 140 to “receive[] transaction information from a mobile wallet application 121 via a mobile network 115” and communicates with mobile wallets 125, 130 (APPL-1005, [0100]; APPL-1003, ¶¶72-74):

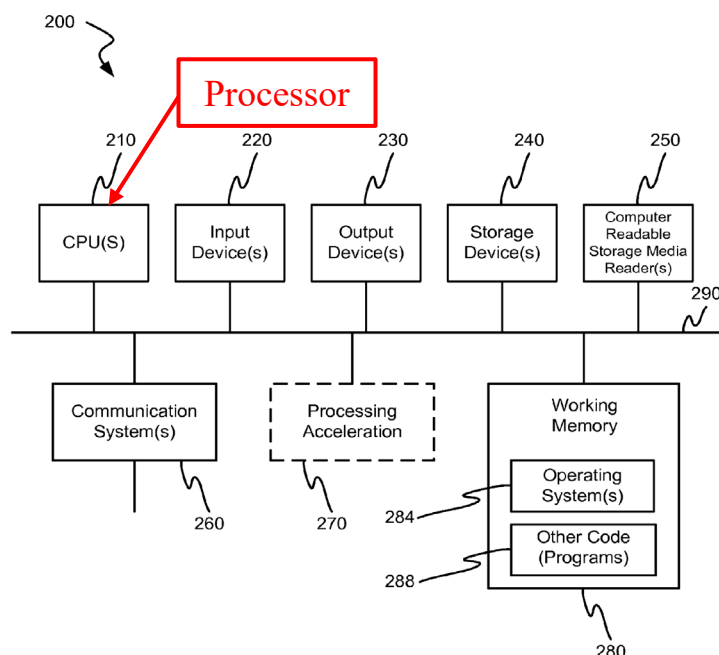


APPL-1005, Fig. 9 (annotated).

Accordingly, Dill's system 100, including money transfer facilitator system 140 that communicates with mobile wallets 125, 130 is the claimed "*computing system for facilitating management of a mobile wallet.*" APPL-1003, ¶¶75-76. Thus, Dill teaches the preamble. APPL-1003, ¶76.

[1.1] one or more processors;

As discussed in [1.0], Dill's computer system 200 provides functionality for its money transfer facilitator system 140 as well as other components of its system 100. APPL-1005, [0059]. Computer system 200 includes "one or more central processing units 210." APPL-1005, [0060]; APPL-1003, ¶¶77-79.



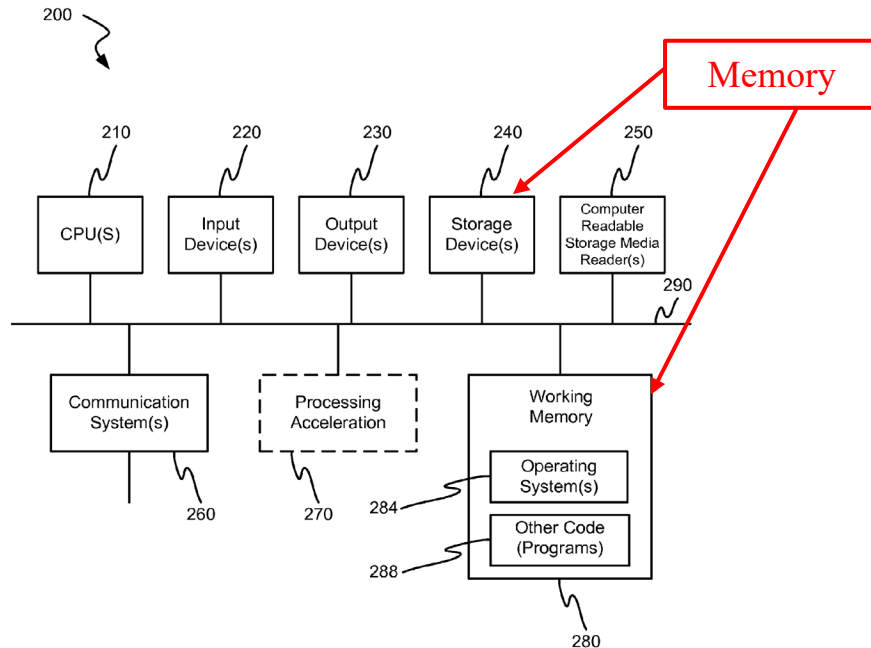
APPL-1005, Fig. 2 (annotated).

Dill’s central processing units 210 are the claimed “*one or more processors.*”

APPL-1003, ¶¶80-81. Thus, Dill teaches [1.1]. APPL-1003, ¶81.

[1.2] system memory;

Dill’s financial payment systems run on computer system 200 which includes one more storage devices 240 which are “disk drives, optical storage devices, solid-state storage device such as a random access memory (‘RAM’) and/or a read-only memory (‘ROM’)” as well as “working memory 280” in which programs such as the Operating System 284 and Programs 288 are stored. APPL-1005, [0060-0061]; APPL-1003, ¶¶82-84.



APPL-1005, Fig. 2 (annotated).

Storage devices 240 and/or working memory 280 are the claimed “*system memory*.”

APPL-1003, ¶84. Thus, Dill teaches [1.2]. APPL-1003, ¶85.

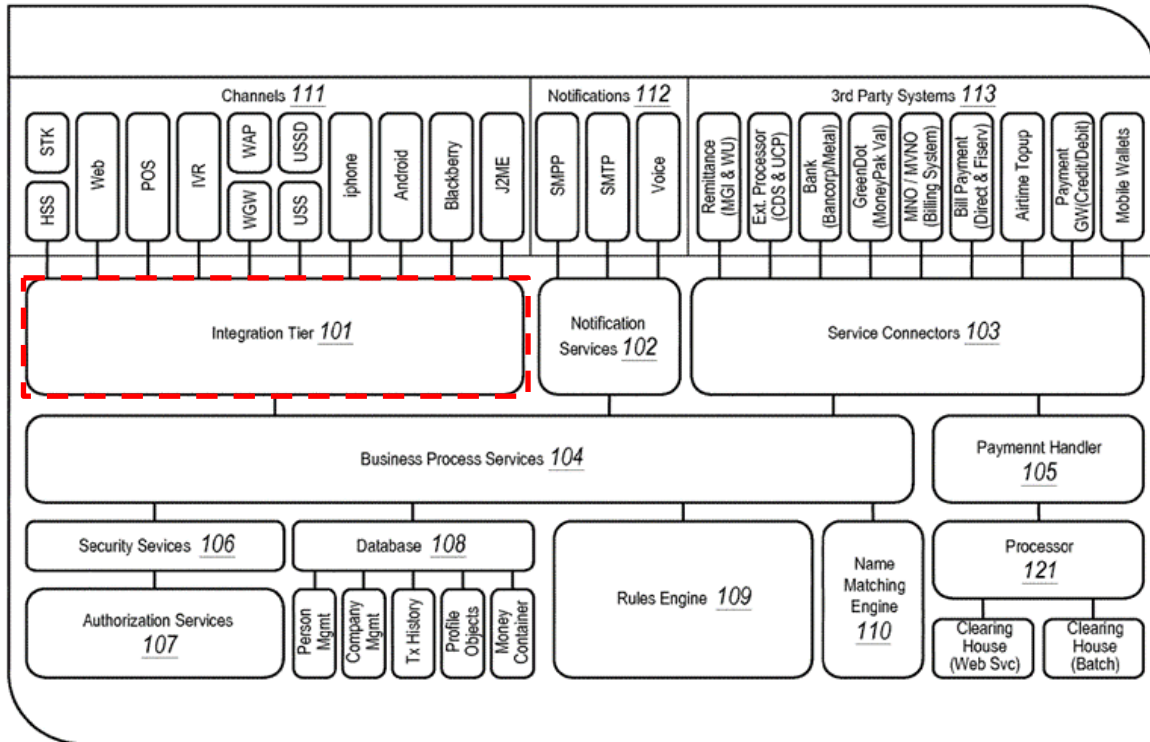
[1.3A] an integration tier configured to manage mobile wallet sessions with a mobile device and

Dill teaches an “*integration tier*” because it teaches system elements that are configured to manage transactions with a mobile wallet, similar to the ’488 patent.

APPL-1003, ¶¶86-87.

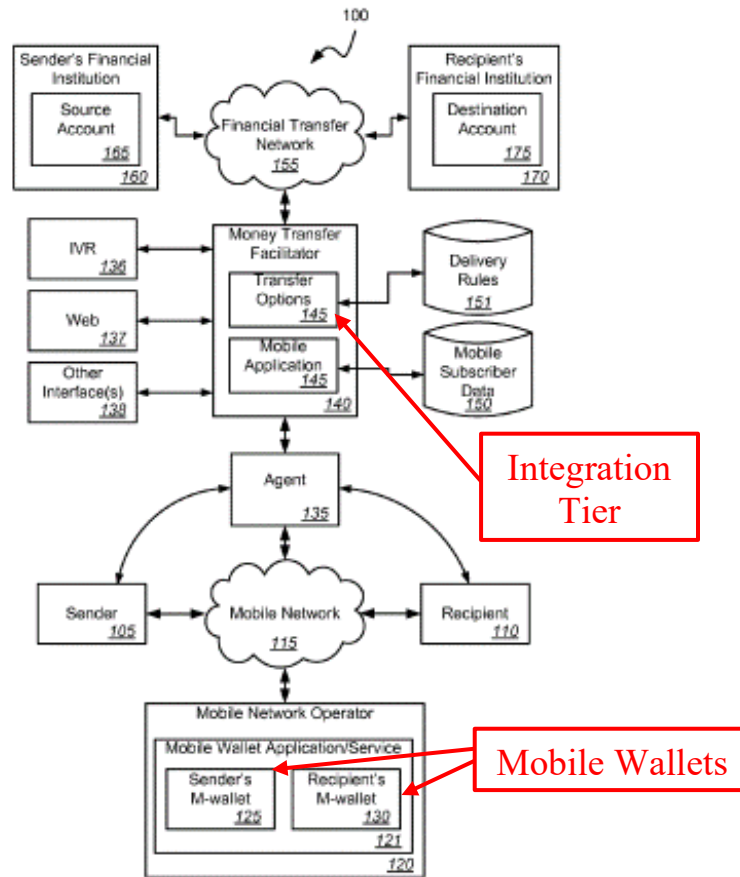
Although the ’488 patent does not define an “*integration tier*,” it includes an explanation of “*communication mechanisms*” for sending messages to and from the integration tier and shows the integration tier as an element within the “*platform functional architecture*” of its transaction system (shown in Fig. 1 below). APPL-1001, 9:45-63; APPL-1003, ¶87.

Platform Functional Architecture



APPL-1001, Fig. 1 (annotated).

A POSITA would have understood the integration tier to be an element of its transaction system. APPL-1003, ¶87. The '488 patent states that the “[i]ntegration tier 101 is configured to manage mobile wallet sessions and maintain integrity of financial transactions.” APPL-1001, 9:45-48. A POSITA would have understood “integration tier” to include system elements configured to manage mobile wallet sessions, such as Dill’s transfer options module 145. APPL-1003, ¶¶87-88.



APPL-1005, Fig. 9 (annotated).

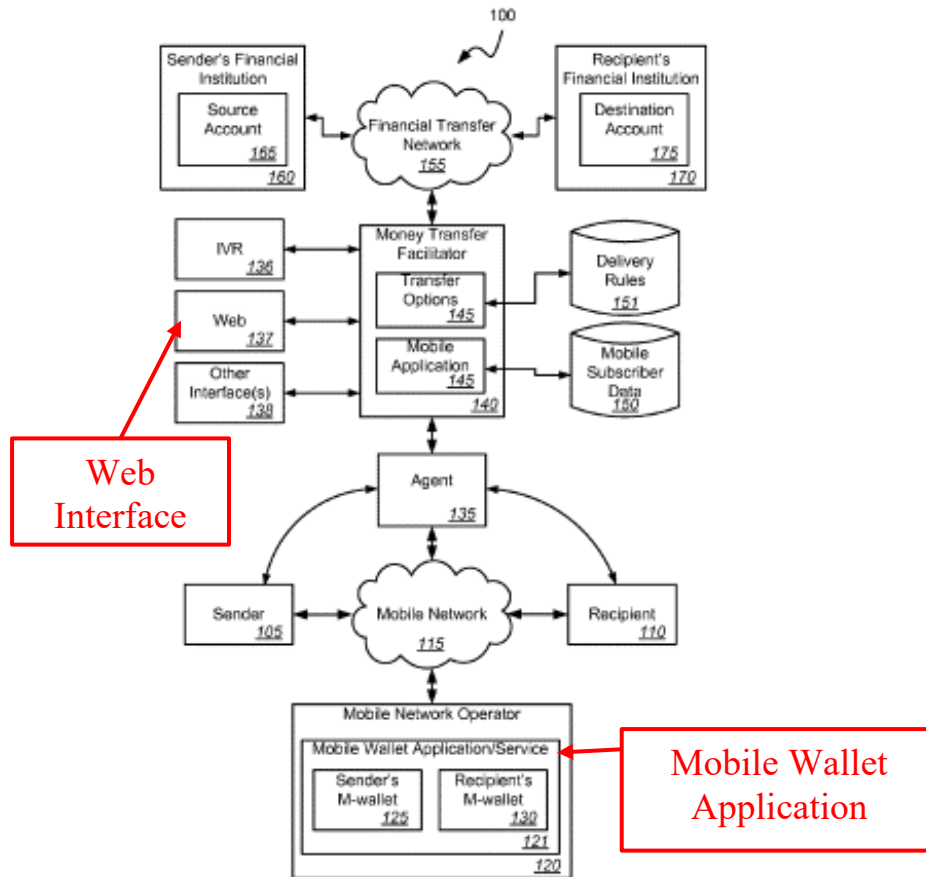
As discussed in [1.0], Dill's system 100 includes a money transfer facilitator system 140 that manages transactions with a mobile wallet. APPL-1005, [0100]. System 140 “conduct[s] money **transfer** transactions” and includes “a transfer options module 145 communicatively coupled with the one or more interfaces 136-138” that “can be adapted to receive transaction information for a money **transfer** transaction from a sender 105 through at least one or the interfaces 136-138, provide a notification of the transaction to a recipient of the transaction, and select one or more delivery options for completing the money **transfer** transaction.” APPL-1005, [0101]; APPL-1003, ¶88. Dill specifically teaches transactions

including depositing funds at the branch of an agent 135 using the sender's mobile device configured to run the sender's mobile wallet 125. APPL-1005, [0051], [0053], [0055], [0077], Figs. 5, 9. These transfers more broadly include "structured settlement[s] between unrelated entities such as the sending mobile wallet 125 and receiving mobile wallet 130." APPL-1005, [0057] APPL-1003, ¶89. In other words, Dill's transfer options module 145 sends and receives transaction details between mobile wallets 125, 130 within a mobile wallet application 121. APPL-1003, ¶90. A POSITA would have understood module 145 to be a system element configured to manage transactions with a mobile wallet, i.e., the claimed "integration tier configured to manage mobile wallet sessions with a mobile device." APPL-1003, ¶¶90-91. Thus, Dill teaches [1.3A]. APPL-1003, ¶91.

[1.3B] [an integration tier configured to manage mobile wallet sessions with a mobile device and] including web services communication mechanisms for interfacing with a mobile wallet application installed on a hardware SIM card

As discussed in [1.3A], Dill's transfer options module 145, the "integration tier," facilitates communications between mobile wallets 125, 130 within a mobile wallet application 121. APPL-1005, [0101], Fig. 9. Communications include a web interface 137 and money transfer transactions are initiated "from a web site of the money transfer facilitator" as well as other channels. APPL-1005, [0015], [0047], [0033], [0051], [0054], [0101]. "[N]otification of the transfer transaction and possibly instructions and/or options" may be provided to a client "[v]ia one of the

interfaces 136-138, e.g., by logging onto a website.” APPL-1005, [0104]; APPL-1003, ¶¶92-94.



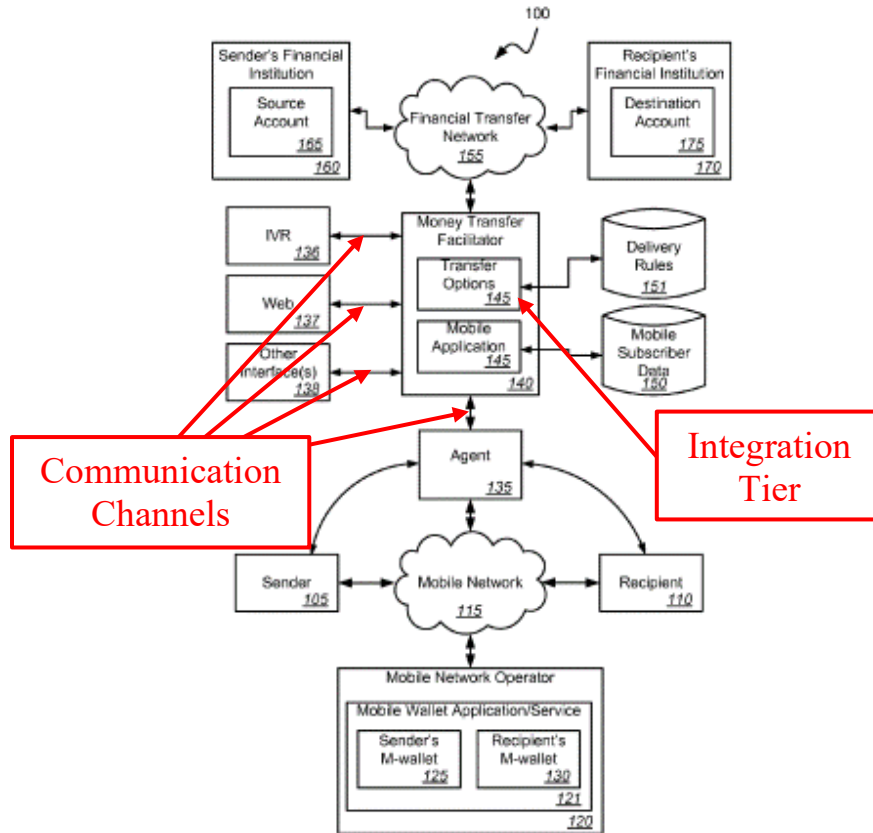
APPL-1005, Fig. 9 (annotated).

Dill’s mobile wallet application is installed on a hardware SIM card. APPL-1003, ¶95. Dill teaches “a mobile device communicatively coupled with the mobile communications network and executing a mobile wallet application.” APPL-1005, claim 1. Dill’s software instructions (including mobile wallet application) may be implemented on any type of “machine-readable mediums suitable for storing electronic instructions” which a POSITA would have understood to include a hardware SIM card. APPL-1005, [0106]; APPL-1003, ¶95. As evidenced by

Bykov, SIM cards are commonly used to execute code for mobile transactions in mobile devices. APPL-1013, [0027]-[0028]; APPL-1003, ¶¶96-97. Thus, Dill teaches [1.3B]. APPL-1003, ¶¶97-98.

[1.3C] [an integration tier configured to manage mobile wallet sessions and] ... as well as with a plurality of different device types over a plurality of different communication channels,

As discussed in [1.3A], Dill's transfer options module 145, the "*integration tier*," facilitates communications between mobile wallets 125, 130. APPL-1005, [0101]. The transfer options module 145 is "communicatively coupled with the one or more interfaces 136-138" to various devices and "receive[s] transaction information" including "provid[ing] a notification of the transaction to a recipient of the transaction, and select[ing] one or more delivery options for completing the money transfer transaction." APPL-1005, [0101]; APPL-1003, ¶¶99-100. These interfaces and various other communication channels are shown in Fig. 9:



APPL-1005, Fig. 9 (annotated).

Mobile network 115, over which the mobile device communicates, may be another type of wireless network (another “*communications channel*”). 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.”). Indeed, Fig. 9 shows interfaces 136-138, which represent a plurality of different device types (i.e., IVR system, web site, etc.), as well as different communication channels that are used to conduct transactions. APPL-1003, ¶¶101-102. Thus, Dill teaches [1.3C]. APPL-1003, ¶103.

[1.3D] [an integration tier configured to manage mobile wallet sessions with a mobile device]... the integration tier being configured to receive binary and text messages from the mobile device;

Dill's financial systems conducted by its transfer options module 145 (which is an "*integration tier*" as discussed in [1.3C]) support "money transfer transactions initiated by and/or conducted through a variety of channels including but not limited to a wireless communication channel including a wireless communication device." APPL-1005, [0032]; APPL-1003, ¶¶104-105.

Dill teaches a variety of communication interfaces connecting the transfer options module 145 and various sending and receiving devices including mobile devices such as "a web interface 137" and "other interfaces 138...adapted to receive transaction information for a money transfer transaction from a sender 105." APPL-1005, [0101]. A POSITA would have understood that the transfer options module 145 coupled to a web interface and "adapted to receive transaction information" through such an interface is "*configured to receive binary.*" APPL-1003, ¶¶106-107.

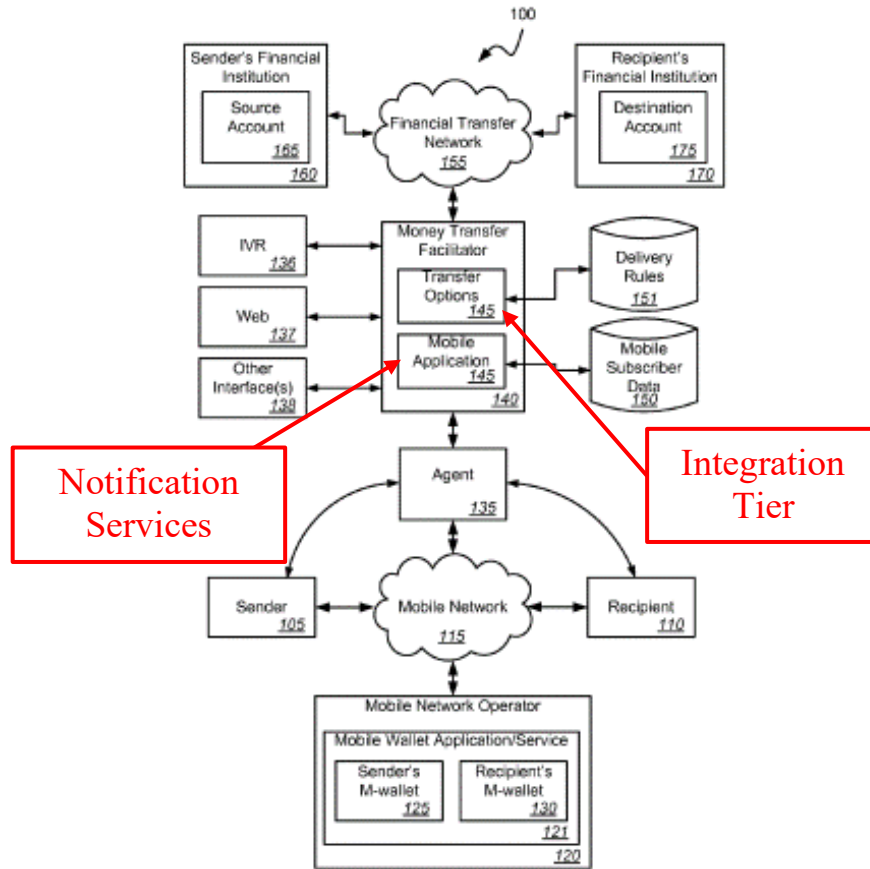
Dill's system is configured for transactions through a "web site" and a "web page" as well as notifications through "web page notification." APPL-1005, [0033], [0035]. A POSITA would have understood that transactions and notifications conducted through these formats mean that transfer options module 145 receives binary messages from a mobile device. APPL-1003, ¶107.

Additionally, communications may also be sent via SMS over the same interfaces 136-138. APPL-1005, [0104]; APPL-1003, ¶108. Accordingly, a POSITA would have understood that transfer options module 145 connected to the mobile network 114 via the exemplary interfaces as configured to receive text messages (e.g., via SMS) from a mobile device. APPL-1003, ¶109. Thus, Dill teaches [1.3D]. APPL-1003, ¶110.

[1.4A] a notification services engine configured to interface with the integration tier and

As discussed in [1.0], Dill’s money transfer facilitator system 140 manages a mobile wallet. APPL-1005, [0100], Fig. 9. The money transfer facilitator system 140 sends notifications of money transfers “to the recipient 110 and/or to any party associated with the designated destination (e.g., to a mobile network operator, a retailer, a bank, a service provider (e.g., payment service provider, auction service provider or Internet service provider) or any other party).” APPL-1005, [0037]. When system 140 sends notifications of money transfers, transfer options module 145 and/or mobile application 145 may be used to send the “notification of the transaction” to the recipient 110 and other parties of the transaction. APPL-1005, [0069], [0101]; APPL-1003, ¶¶111-112.

Since transfer options module 145 and/or mobile application 145 sends notifications, a POSITA would have understood this to be the claimed “*notification services engine*.” APPL-1003, ¶113. This arrangement is depicted in Fig. 9:



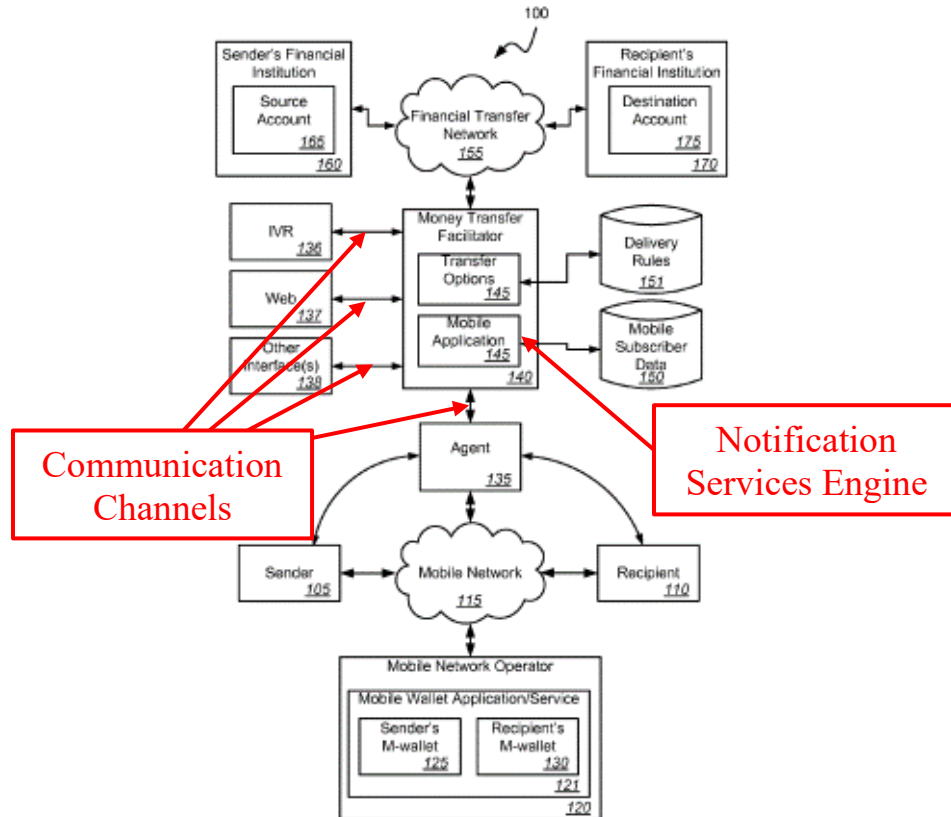
APPL-1005, Fig. 9 (annotated).

In other words, Dill provides notification from either mobile application 145 or transfer options module 145 and that the “notification can be directed to the recipient through a channel appropriate to that recipient.” APPL-1005, [0090]; APPL-1003, ¶114. A POSITA would have understood Dill to teach that the various components of the money transfer facilitator 140 interface with each other to send the notification. APPL-1003, ¶114. Thus, Dill teaches [1.4A]. APPL-1003, ¶115.

[1.4B] [a notification services engine configured to interface with the integration tier and] to send Short Message Peer-to-Peer (SSMP) messages, Short Messaging Service (SMS) messages and Simple Mail Transfer Protocol (SMTP) messages over the different communication channels to different devices,

Dill's mobile application 145 sends various types of messages to the recipient 110 and other parties of the transaction. APPL-1005, [0069], [0101]. Dill also details other types of requests, notifications, and other communications that mobile application 145 is configured to send to various devices. APPL-1005, [0050], [0067], [0069]; APPL-1003, ¶¶116-118.

“[N]otification can be provided to the recipient via a mobile device and mobile network 115” by “telephone call, telegram, email, SMS, U.S. postal letter, or other type of message.” APPL-1005, [0104]. A POSITA would have known that email on the Internet is delivered using the standard SMTP protocol. APPL-1003, ¶118. These notifications may be sent “[v]ia one of the interfaces 136-138, e.g., by logging onto a website, calling an IVR, visiting an agent location, etc. depending upon the notification and/or instructions provided.” APPL-1005, [0104]; APPL-1003, ¶119. These communication channels connected to the money transfer facilitator 140 and mobile application 145 are shown below:



APPL-1005, Fig. 9 (annotated).

Based on Dill's mobile device sending various types of messages including SMS messages and email messages, a POSITA would have also understood Dill to teach "a notification services engine configured to interface with the integration tier and] to send Short Message Peer-to-Peer (SSMP) messages, Short Messaging Service (SMS) messages and Simple Mail Transfer Protocol (SMTP) messages." APPL-1003, ¶120.

A POSITA would have seen the typo of "SSMP" and understood the abbreviation "SSMP" to mean "SMPP." APPL-1003, ¶121. A POSITA would have understood that Short Message Peer-to-Peer (SMPP) and Simple Mail Transfer

Protocol (SMTP) are “industry standard protocols” for delivering messages, as evidenced by Tsai and Price. APPL-1003, ¶121; APPL-1014, [0079]; APPL-1015, [0004]. Since Dill expressly discloses that its mobile application 145 sends various types of communications including messages (i.e., SMS messages), it would have been obvious to use the industry standard protocols of SMPP and SMTP to deliver these messages. APPL-1003, ¶122; APPL-1014, [0079]; APPL-1015, [0004].

Thus, Dill teaches [1.4B]. APPL-1003, ¶123.

[1.4C] [a notification services engine configured to interface with the integration tier and to send Short Message Peer-to-Peer (SSMP) messages, Short Messaging Service (SMS) messages and Simple Mail Transfer Protocol (SMTP) messages over the different communication channels to different devices] including the mobile device, to interface with the mobile wallet application installed on the hardware SIM card;

As discussed in [1.3A], Dill’s money transfer facilitator 140 facilitates communications between mobile wallets 125, 130 within a mobile wallet application 121. APPL-1005, [0101], Fig. 9; APPL-1003, ¶¶124-125. This communication process includes “send[ing] a message to the mobile wallet application 121 of the recipient 110 indicating success or failure of the transfer.” APPL-1005, [0082]. The messages are sent to the mobile wallet application 121 “via the recipient’s mobile device.” APPL-1005, [0084]. In other words, Dill’s money transfer facilitator 140 (e.g., the mobile application 145 within it) interfaces

with the mobile wallets 125, 130 through a mobile wallet application 121. APPL-1003, ¶¶126-127.

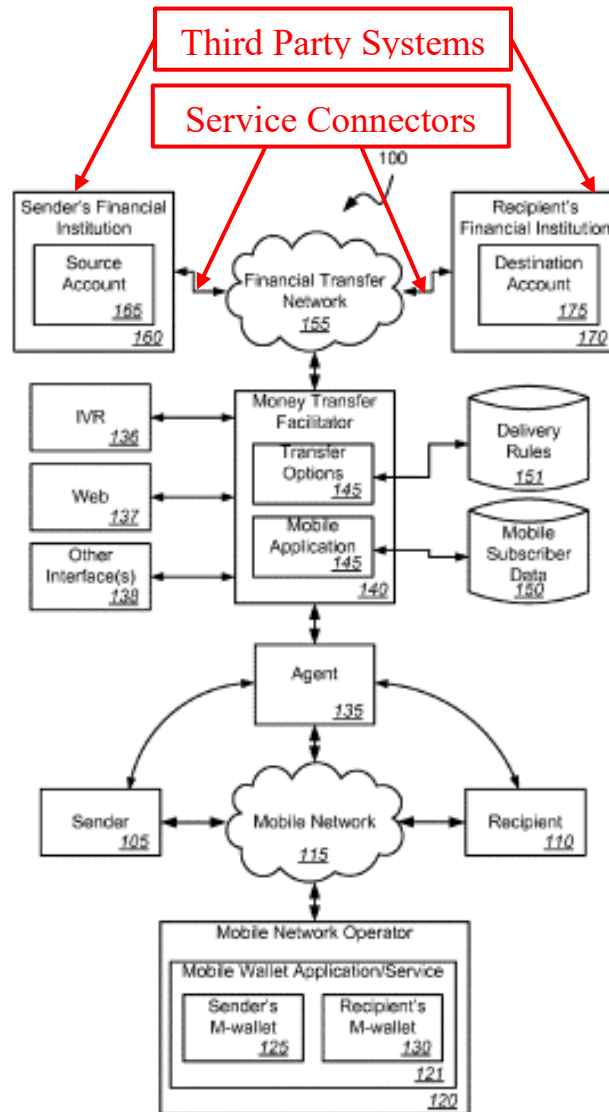
As discussed in [1.3C], mobile wallet application 121 may be installed on a SIM card. APPL-1005, [0106]. A POSITA would have also understood that Dill's mobile wallet application may be installed on mobile device 125, 130 based on Dill's disclosure that "[t]he mobile device can execute a mobile wallet application" as well as describing a user inputting information such as a PIN number into the mobile wallet application 121 using a mobile device 130. APPL-1005, [0010], [0094]; APPL-1003, ¶127. Thus, Dill teaches [1.4C]. APPL-1003, ¶127.

[1.5A] service connectors that are each configured to connect the computing system to a different third party system;

First, as discussed in [1.0], functions of Dill's money transfer facilitator 140 are configured to be carried out on a computer system 200. APPL-1005, [0059]; APPL-1003, ¶¶128-129.

Second, "the money transfer facilitator 140 may access a source account 165 of one financial institution 160 and/or a destination account 175 of the same or a different financial institution 170." APPL-1005, [0049]. Dill's money transfer facilitator 140 is connected to financial institutions 160, 170, which are "*different third party system[s]*." APPL-1003, ¶130. Dill also teaches other third-party systems connected to Dill's money transfer facilitator, such as eBay, PayPal, Western Union, and others. APPL-1005, [0090]; APPL-1003, ¶130.

Third, Dill’s money transfer facilitator 140 system is connected to financial institutions and third-party systems via “*service connectors*” (APPL-1003, ¶131):



APPL-1005, Fig. 9 (annotated).

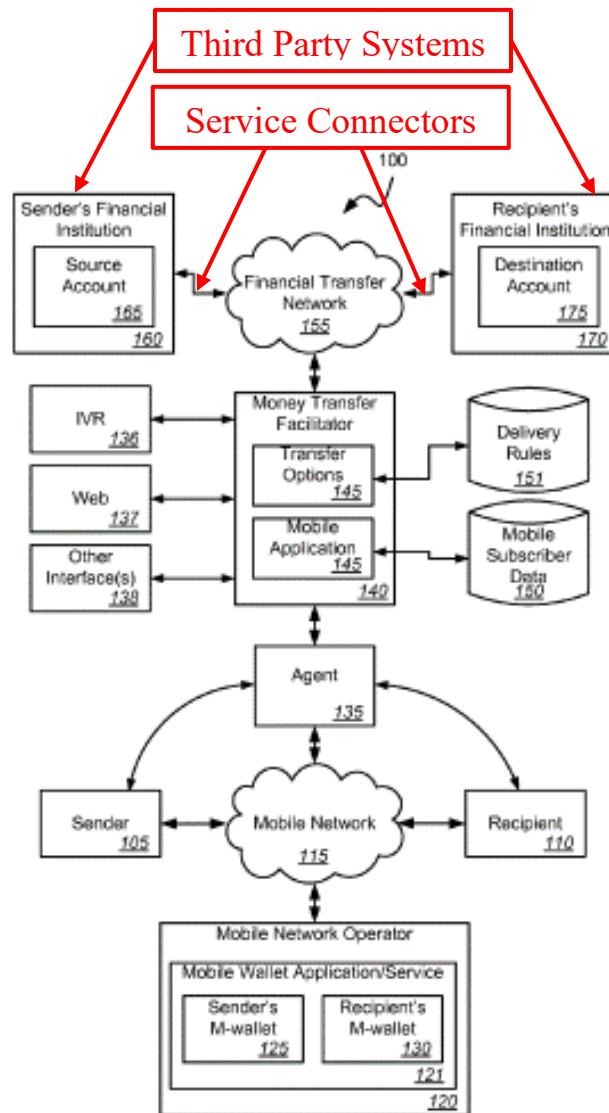
A POSITA would have understood that Dill’s communication channels are “*service connectors*” because money transfer facilitator 140 accesses financial institutions 160, 170 and third-party systems through the channels to “affect a

transfer.” APPL-1005, [0049]; APPL-1003, ¶132. Thus, Dill teaches [1.5A].

APPL-1003, ¶133.

[1.5B] each of the service connectors being configured as a separate module for integrating a corresponding external service to the computing system;

As discussed in [1.5A], money transfer facilitator 140 system is connected to financial institutions via “*service connectors*.” Each service connector is separately connected to a financial system. APPL-1005, Fig. 9; APPL-1003, ¶134.



APPL-1005, Fig. 9 (annotated).

Based on the separation between each service connector and associated financial system, a POSITA would have understood each service connector to be “*a separate module.*” APPL-1003, ¶134. These service connectors, as well as all channels in its system, are designed to provide service “appropriate to that recipient.” APPL-1005, [0090]. A POSITA would have understood that Dill’s service connectors—each separately providing support to external financial institutions—may be “*configured as a separate module for integrating a corresponding external service to the computing system.*” APPL-1005, [0090]; APPL-1003, ¶135. Thus, Dill teaches [1.5B]. APPL-1003, ¶135.

[1.6] a payment handler that exposes a common API for interacting with different payment processors;

First, Dill recognizes the need for “flexible payment options for the transactions” between different parties. APPL-1005, [0004]. To achieve this flexibility, money transfer facilitator 140 system is “communicatively coupled with the financial transfer network 155” and interacts with various payment systems, such as “Western Union or another money transfer facilitator service.” APPL-1005, [0049]; APPL-1003, ¶¶136-137.

Second, the use of APIs in payment systems was well-known in the art. APPL-1008, p.417; APPL-1003, ¶138. Treese states that “[t]he payment API permits new payment systems and additional implementations of old ones to be added. Catalog content is linked to the transaction engine, which operates as a

payment switch,[] so new payment systems can be added without the necessity of updating any content servers.” APPL-1008, p.417. Thus, a POSITA would have understood that a common payment API is used in the art to add new payment options without the necessity of updating payment servers to handle numerous additional proprietary interfaces. APPL-1003, ¶138.

Third, a POSITA would have understood Vadhri’s API server to be “*a payment handler that exposes a common API for interacting with different payment processors.*” APPL-1003, ¶139. Like Dill, Vadhri teaches a financial system that is configured for enhanced flexibility to allow parties “to share and access common data” and share data from one or more databases 526. APPL-1006, [0056].

Vadhri teaches that its API server allows for increased flexibility by providing access to “various services and functions provided by the marketplace” through its interface, including access for third-party marketplaces such as eBay, as well as features such as managing listings offline and batch-mode communications. APPL-1006, [0052]. A POSITA would have understood that Vadhri’s API server functions as “*a payment handler that exposes a common API for interacting with different payment processors*” because it uses a common API (which as discussed above allows for additional payment options without requiring additional servers and allows for interaction with different payment processors, such as eBay). APPL-1008, p.417; APPL-1003, ¶140.

Fourth, it would have been obvious to combine Vadhri's API server 514 to Dill's financial payment system to yield the predictable result of increased access for clients and an increase in available payment options. APPL-1003, ¶141. As discussed above, the use of payment APIs to add new payment systems without the necessity of adding additional servers was well-known in the art. APPL-1008, p.417. It would have been obvious for a POSITA to include this technology (via Vadhri's API server) into Dill's system based on the recognized need for flexibility. APPL-1003, ¶141; APPL-1005, [0004]; APPL-1006, [0052]. Thus, the combination of Vadhri and Dill teaches [1.6]. APPL-1003, ¶142.

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

First, a POSITA would have understood that financial transfer systems, such as Dill's, require security protocols to protect clients and assets alike. APPL-1007, [0007] ("a secure chip stores data, such as the remaining amount or the settlement information of electronic money or important personal information, and so high security for such data is required"); APPL-1003, ¶¶143-144. This need is clearly shown by the numerous security protocols implemented in Dill's financial transfer system (with Dill's money transfer facilitator 140), such as steps to validate Personal Identification Numbers (PINs), transaction identifiers, and recipient identifiers. APPL-1005, [0006]; APPL-1003, ¶144.

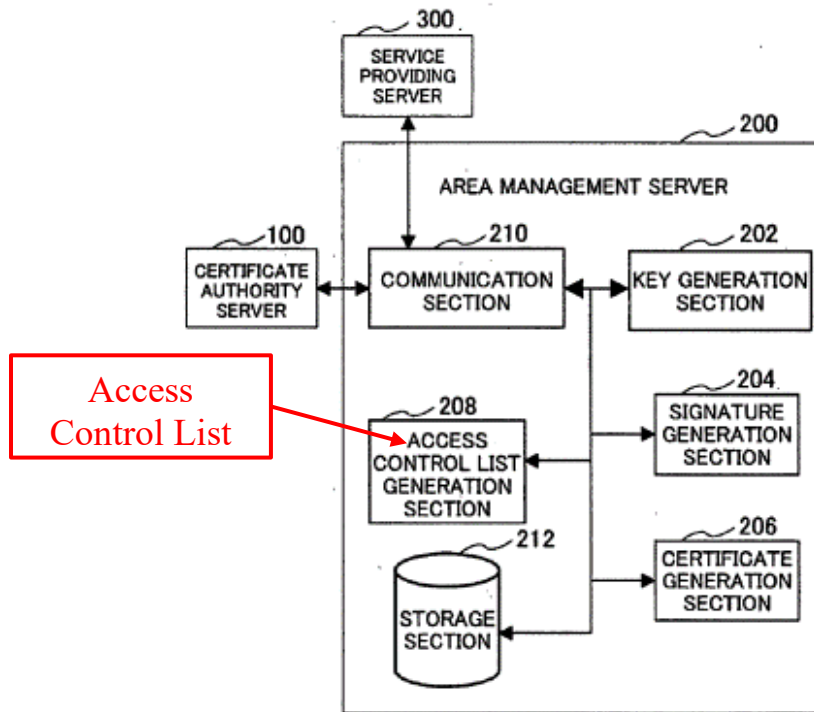
In recognizing the need for secure transactions, Dill authenticates subscribers by requiring a “unique customer identifier” with all payment requests which may include various data for identification including “a preferred customer number,” a “unique customer identifier issued by a money transfer facilitator or its agent,” a “stored value account identifier, bank account number and/or ABA routing number,” “a tax number” or “another unique identifier.” APPL-1005, [0035]; APPL-1003, ¶145.

A POSITA would have understood that security is a concern when sharing data (e.g., financial data) between parties, as taught by Vadhri. APPL-1006, [0056]; APPL-1003, ¶146. Therefore, a POSITA would have been motivated to implement additional security protocols when providing the added flexibility afforded by Vadhri’s API server with Dill’s financial system. APPL-1003, ¶146.

Second, the use of ACLs to control access to sensitive systems was well-known in the art. APPL-1009, [0185]-[0186] (“[t]he method and system for adding third parties to an access control list is generally understood by those skilled in the art” and includes an explanation of adding users to an ACL.); APPL-1003, ¶147.

Third, Akashika teaches a secure service providing server and methods to securely access data, such as that used in financial transactions. APPL-1007, [0005], [0010]. Akashika’s secure server includes an area management server 200 with an access control list generation section 208 (APPL-1003, ¶148):

FIG.3



APPL-1007, Fig. 3 (annotated).

The access rights set by Akashika’s ACL include access to the secure chip as well as “read permission, write permission, restriction on frequency of access permitted for the same area” and executing script data (such as ECMAScript or JavaScript) on the secure chip. APPL-1007, [0017], [0062], [0070]. The implementation of Akashika’s ACL achieves the well-known benefits of preventing “unauthorized access to the secure chip 500 can be prevented.” APPL-1007, [0117]; APPL-1009, [0185]-[0186]; APPL-1003, ¶149.

Fourth, the benefits of implementing an access control list as taught by Akashika into Dill’s money transfer facilitator 140 to assist in authenticating users would have been obvious to a POSITA. APPL-1003, ¶150. In fact, a POSITA

would have understood that the implementation of an ACL is merely an extension of the rules already defined by Dill's money transfer facilitator. APPL-1003, ¶150; APPL-1005, [0102]-[0105]; APPL-1007, [0017]. A POSITA would have found it obvious, desirable, and predictable to implement Akashika's ACL into Dill's money transfer facilitator 140. APPL-1003, ¶151. Thus, the combination of Dill and Akashika teaches [1.7]. APPL-1003, ¶152.

[1.8] a rules engine configured to enforce constraints on financial transactions performed with the mobile wallet application, the mobile wallet application being associated with a mobile wallet account; and

First, Dill teaches a “rules engine.” APPL-1003, ¶¶153-154. Money transfer facilitator 140 includes a transfer options module 145 which receives and implements “one or more delivery rules 151” that “include one or more rules defined by a recipient 110 of the money transfer transaction, one or more rules defined by a sender 105 of the money transfer transaction, and/or one or more rules defined by the money transfer facilitator.” APPL-1005, [0102].

A POSITA would have understood that by receiving and implementing rules, transfer options module 145 is the claimed “rules engine.” APPL-1003, ¶155. This is consistent with how the '488 patent describes the rules engine: “configured to enforce business constraints, such as for example, transactions and platform license constraints.” APPL-1003, ¶155; APPL-1001, 10:41-43.

Second, Dill's transfer options module 145 is "*configured to enforce constraints on financial transactions performed with the mobile wallet application.*" APPL-1003, ¶156. For example, transfer options module 145 may receive and implement various types of delivery rules, including examples of "defining restrictions or conditions of the delivery, and/or money transfer facilitator defined rules, e.g., rules defined by the money transfer facilitator based on various governmental and/or banking rules, service conditions, etc." APPL-1005, [0104]. Since these rules implemented by transfer options module 145 "defin[e] restrictions or conditions" of financial transactions (including those performed by its mobile wallet application 121), a POSITA would have understood it to be "*configured to enforce constraints on financial transactions performed with the mobile wallet application.*" APPL-1003, ¶156.

Third, a POSITA would have understood that Dill's rules apply to financial transactions performed with mobile wallet application 121 which is associated with mobile wallet 125, 130 and configured to support transactions with these mobile devices 125, 130. APPL-1005, [0050], [0087]; APPL-1003, ¶¶157-158. Since mobile wallet application 121 supports transactions with mobile devices including transferring money between mobile devices, a POSITA would have understood that Dill teaches "*the mobile wallet application being associated with a mobile wallet account.*" APPL-1003, ¶159. Thus, Dill teaches [1.8]. APPL-1003, ¶160.

[1.9] one or more computer-readable storage media having stored thereon computer-executable instructions that are executable by the one or more processors to cause the computing system to perform a transaction for a customer using the mobile wallet which is owned by another entity than the customer, comprising the following:

First, as discussed in [1.1] and [1.2], Dill's system includes processors and memory devices. APPL-1005, Fig. 2, [0059]-[0064]. Dill's financial system (including its money transfer facilitator system 140 discussed above) includes a computer system 200 "to provide the functions" of the money transfer facilitator system 140 and includes code stored within to run its programs. APPL-1005, [0059]; APPL-1003, ¶¶161-162.

Dill's computer system 200 includes a computer-readable storage media reader 250. APPL-1005, [0061]. The software stored and read from Dill's computer system include instructions to carry out financial transactions. APPL-1005, [0063]-[0065]. Thus, computer system 200 includes "*one or more computer-readable storage media having stored thereon computer-executable instructions which are executable by the one or more processors.*" APPL-1003, ¶163.

Second, computer system 200 implementing code as discussed above is configured to "*facilitate a transaction for a customer using the mobile wallet*" because it facilitates transactions between mobile wallets APPL-1005, [0053], [0063]-[0065]; APPL-1003, ¶¶164-165.

Third, computer system 200 is configured to perform transactions for a customer using the mobile wallet “*which is owned by another entity than the customer.*” For example, Dill teaches that its mobile wallets 125 and 130 are maintained by a mobile wallet service 121. APPL-1005, [0053]. A POSITA would have understood that mobile wallet service 121 is one example of an “*entity other than the customer*” that owns or maintains the mobile wallet of Dill (since mobile wallets 125 need not be enrolled in the same mobile wallet service and Dill “provide[s] a structured settlement between unrelated entities such as the sending mobile wallet 125 and receiving mobile wallet 130”). APPL-1005, [0057]; APPL-1003, ¶166. Thus, Dill teaches [1.9]. APPL-1003, ¶167.

[1.10A] the computing system receiving communication from an agent terminal over one of a plurality of communication channels connected to the cloud-based transaction platform,

First, Dill teaches that an agent 135 (“agent terminal”) may be in communication with its money transfer facilitator 140 (which is implemented by computer system 200). APPL-1005, [0051]. Since agent 135 may be a “retail outlet” and provides access to a financial network, a POSITA would understand agent 135 to be an “agent terminal” as claimed. APPL-1003, ¶¶168-169.

Indeed, Dill’s agent 135 is described to function just like the agent terminal of the ’488 patent: “[a]gent terminal 602 may be part of an agent network consisting of one or more agent terminals that communicate with cloud-based

transaction platform 601” and includes “stores and other commercial establishments” and an “agent company.” APPL-1001, 17:64-18:2, 8:19-24. The ’488 patent also describes “agents” as “representatives of the mFS [mobile financial services] transaction system or ‘program’ ... and may include large retailers, mobile network operators (MNO) airtime sales agents, gas stations, kiosks, or other places of business.” APPL-1001, 6:39-47; APPL-1003, ¶170.

Second, Dill teaches receiving communication with money transfer facilitator 140 from agent 135, and that “[t]he agent 135 of the money transfer facilitator 140 can in turn submit 365 this information and/or routing details for the transfer to the mobile application 145 of the money transfer facilitator 140” for a specified transaction. APPL-1005, [0070]; APPL-1003, ¶171.

Third, Dill teaches that the communications from the agent 135 (and other communications) are routed over communication channels in its financial transfer system. APPL-1005, [0090]. For the particular communications received by the money transfer facilitator 140 from the agent 135, Fig. 9 shows exemplary communication channels which may be used, as indicated below (APPL-1005, [0032], [0052]; APPL-1003, ¶¶172-173).

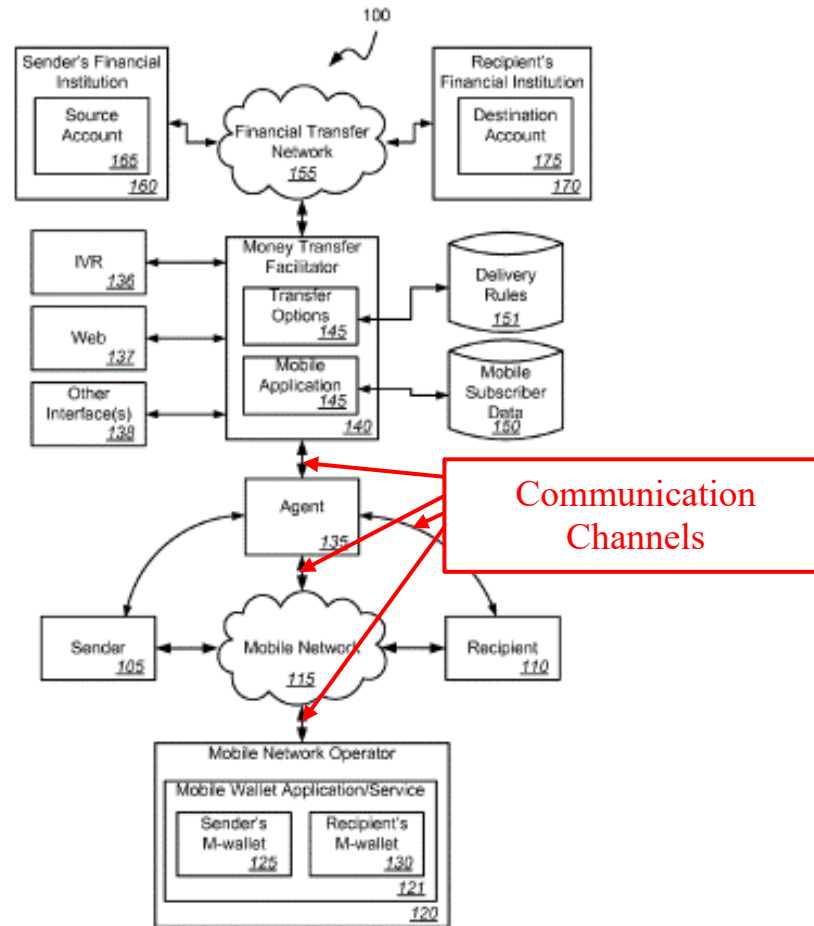


FIG. 9

APPL-1005, Fig. 9 (annotated).

Fourth, although the phrase “*the cloud-based transaction platform*” lacks antecedent basis, it would have been obvious to implement Vadhri’s cloud computing environment with Dill’s financial transfer system and receive the communications above with this “*cloud-based transaction platform.*” APPL-1003, ¶174. For example, Vadhri’s processors support performance of operations in a “‘cloud computing’ environment.” APPL-1006, [0089]. APPL-1003, ¶175.

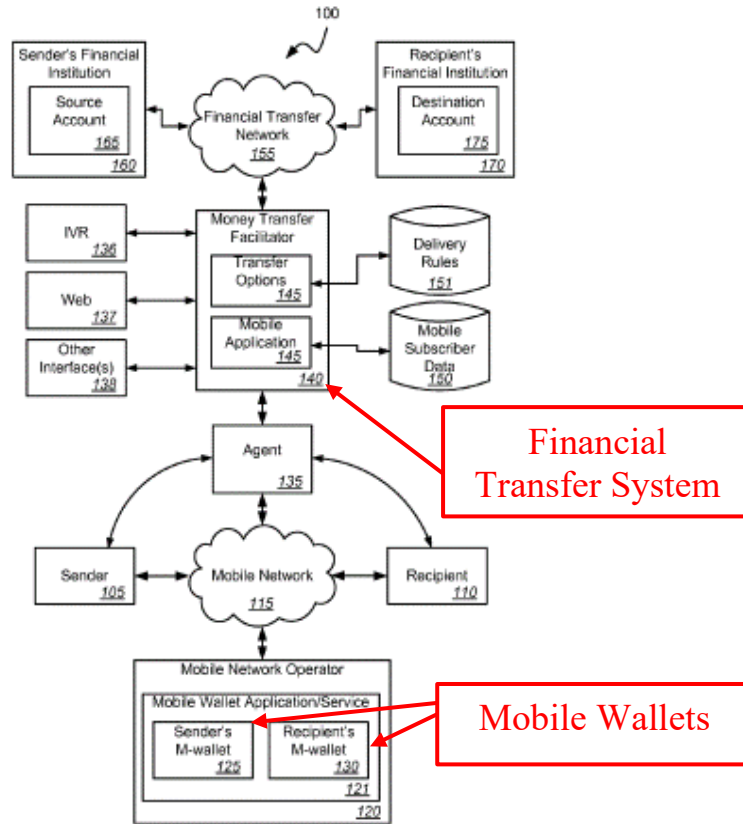
The benefits of cloud-based computing were well-known in the art before the '488 patent, as evidenced by Barton. APPL-1010, [0067]-[0069]. It would have been obvious for a POSITA to incorporate the cloud computing environment of Vadhri to Dill's financial system to achieve the well-known benefits of cloud computing as this would predictably result in a more flexible system. APPL-1005, [0004]. APPL-1003, ¶176. Thus, Dill teaches [1.10A]. APPL-1003, ¶177.

[1.10B]...the agent communication indicating that a customer desires to perform a transaction comprising a mobile wallet transaction using a third party mobile wallet;

As discussed in [1.10A], Dill teaches receiving agent communications from an agent with details for a transaction with a mobile wallet. APPL-1005, [0070].

As discussed in [1.4A], money transfer facilitator 140 is configured to receive transaction requests, including these agent communications. APPL-1005, [0069]. These requests from customers indicate desires for various types of transactions including “mobile-to-cash,” “cash-to-mobile,” and “mobile-to-mobile” options. APPL-1005, [0065]. Thus, Dill's money transfer facilitator 140 receives an “*agent communication indicating that a customer desires to perform a transaction comprising a mobile wallet transaction.*” APPL-1003, ¶¶178-179.

As discussed in [1.0], the transfer facilitator system 140 serves as a financial transfer system for mobile wallets 125, 130 (APPL-1003, ¶180):



APPL-1005, Fig. 9 (annotated).

Dill's transaction services include receiving requests and corresponding payment from mobile wallets 125, 130 which may be externally controlled and maintained. APPL-1005, [0057], [0069]; APPL-1003, ¶181. As such, Dill's transaction requests include *“perform[ing] a transaction comprising a mobile wallet transaction using a third party mobile wallet.”* APPL-1003, ¶182. Thus, Dill teaches [1.10B]. APPL-1003, ¶182.

[1.10C]...the mobile wallet transaction comprising at least one of a mobile wallet transfer in which funds are transferred from the mobile wallet of the customer to a third party mobile wallet, a mobile wallet withdrawal in which funds are withdrawn from the third party mobile wallet and provided to the customer, or a mobile wallet deposit in which funds are deposited into the third party mobile wallet;

As discussed in [1.10B], Dill's money transfer facilitator 140 is configured to conduct transactions between mobile wallets 125, 130 which may be external mobile wallets enrolled under another entity. APPL-1005, [0057]; APPL-1003, ¶183. These transactions may be "mobile-to-cash," "cash-to-mobile," and "mobile-to-mobile." APPL-1005, [0065], Figs. 3-8. A POSITA would have understood these transactions to be a "*mobile wallet transfer*," as well as a "*mobile wallet withdrawal*" and a "*mobile wallet deposit*." APPL-1003, ¶¶184-185.

Moreover, it was well-known in the art to use a mobile wallet on a mobile device to withdraw funds from an account of the mobile device user, as evidenced by Liao which teaches that a user may utilize "mobile wallet application software running on the controller module 200" to "withdraw money from a bank account." APPL-1012, 5:44-55, Fig. 3. A POSITA would have understood this type of withdrawal to be like Dill's transactions. APPL-1003, ¶186. Accordingly, a POSITA would have understood Dill to teach all of the claimed mobile wallet transfer types. APPL-1003, ¶187. Thus, Dill teaches [1.10C]. APPL-1003, ¶187.

[1.11] the computing system sending the agent communication to the third party mobile wallet platform;

As discussed in [1.10A], Dill teaches that a request to initiate a transaction (which may come from agent 135) is received by the money transfer transaction. APPL-1005, [0054]-[0055]; APPL-1003, ¶¶188-189. Dill teaches that after receiving this request, a destination for transferring funds is determined by communicating the request with a mobile wallet 130 which may be enrolled in an internal or external mobile wallet service. APPL-1005, [0055]. Thus, Dill teaches [1.11]. APPL-1003, ¶190.

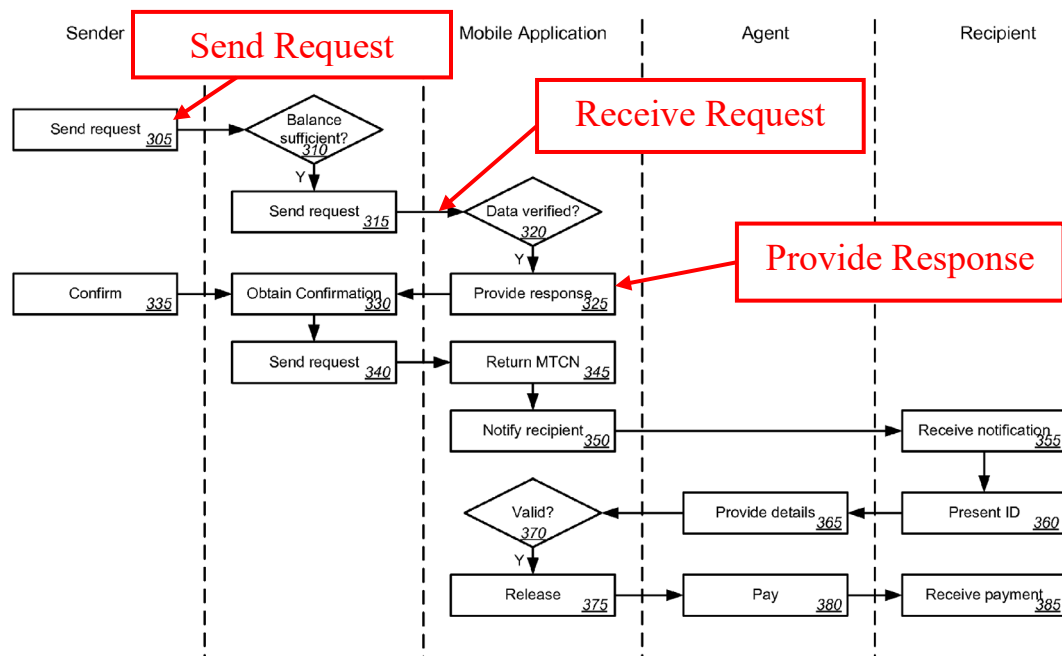
[1.12A] the computing system determining whether the mobile wallet transaction comprises the mobile wallet withdrawal and

As discussed in [1.10C], Dill teaches that its financial transfer system is configured to support various types of transaction between mobile wallets, including “structured settlements” between mobile wallets including “mobile-to-mobile” transactions. APPL-1005, [0057]-[0058]; APPL-1003, ¶¶191-192. Dill teaches that mobile wallet application 121 sends a transfer request to money transfer facilitator 140, which in turn indicates back to mobile wallet application 121 that funds are ready for transfer. APPL-1005, [0067]-[0069]; APPL-1003, ¶192. Since Dill’s money transfer facilitator 140 receives the request and determines whether the funds are ready for transfer from the mobile wallet, it determines “*whether the mobile wallet transaction comprises the mobile wallet*

withdrawal.” APPL-1003, ¶193. Thus, Dill teaches [1.12A]. APPL-1003, ¶193.

[1.12B] ... when the mobile wallet transaction is determined to comprise the mobile wallet withdrawal, generating and providing a perishable withdrawal code to the consumer, which is presented to the agent terminal to facilitate processing of the mobile wallet withdrawal;

First, as discussed in [1.12A], after receiving a transaction request, money transfer facilitator 140 “provide[s] 325 a response to the request from the mobile wallet application 121.” APPL-1005, [0067]; APPL-1003, ¶¶194-195. See Fig. 3:



APPL-1005, Fig. 3 (annotated).

Along with additional “information related to and/or describing fees, legal notices, etc.” that may be included in the request, Dill states that a “transaction identifier” may be assigned to the mobile wallet application. APPL-1005, [0069] APPL-1003, ¶196.

Second, Vadhri teaches “*generating and providing a perishable withdrawal code to the consumer.*” Vadhri teaches receiving a request including a temporary account code 103 that is securely sequenced and formed. APPL-1006, [0022]-[0023]; APPL-1003, ¶197. The temporary account code 103 (also labeled 203 in Fig. 2) is used to authorize the purchase of goods and/or services. APPL-1006, [0046]. Temporary account code 103 has an expiration that is earlier relative to a persistent account code 102. APPL-1006, [0027]; APPL-1003, ¶¶198-199. A POSITA would have understood Vadhri’s temporary account code 103 to be a “*perishable withdrawal code*” because it is securely generated account code that is used to increase security for various types of transactions including withdrawals and has a specified expiration. APPL-1003, ¶200.

Third, a POSITA would have been motivated to include Vadhri’s temporary account code as Dill’s transaction identifier for additional security by limiting the amount of time that the code is available. APPL-1006, [0015]. Thus, it would have been obvious to include the temporary account code 103 of Vadhri with the mobile application 145 of Dill for the purpose of a financial transaction, including a mobile wallet withdrawal. APPL-1003, ¶201.

Fourth, a POSITA would have understood that the temporary account code 103 of Vadhri would be “*presented to the agent terminal to facilitate processing of the mobile wallet withdrawal*” as taught by Dill. APPL-1003, ¶202. As discussed

above, it would have been obvious to include Vadhri's secure temporary codes as Dill's transaction identifier, which is used to "facilitate flexible payment deliver options for the transaction." APPL-1005, [0065]. Dill's transaction identifier is also presented to the agent 135 for a transaction. APPL-1005, [0091]. Therefore, the Dill-Vadhri combination teaches [1.12B]. APPL-1003, ¶203.

[1.13] the computing system receiving communication from the third party mobile wallet platform confirming processing of the transaction, the transaction comprising at least one of the mobile wallet transfer, the mobile wallet withdrawal or the mobile wallet deposit; and

First, Dill teaches that notification for a transaction may be sent to various parties, including messages from the mobile wallet 130 to the money transfer facilitator 140. APPL-1005, [0075]-[0076]. Dill emphasizes that notification of a transfer may be sent to various parties associated with the transfer, including to the money transfer facilitator. APPL-1005, [0090]; APPL-1003, ¶¶204-205.

As discussed in [1.10C], this transfer may include various transaction types including the claimed types. APPL-1005, [0057]-[0058]; APPL-1003, ¶206. Thus, Dill teaches [1.13]. APPL-1003, ¶207.

[1.14] the computing system sending communication to the agent terminal over one of a plurality of communication channels connected to the cloud-based transaction platform, the communication indicating confirmation of the processing of the transaction.

First, as discussed in [1.13], 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.” APPL-1005, [0090]. Dill’s payment system is configured to send messages over several communication interfaces 136-138, e.g., to an agent terminal. APPL-1005, [0070], [0090], [0101]. Any of these channels may be selected to send notification between parties. *Id.* Dill also provides a specific example of a sender 105 initiating a transaction with a recipient using a particular communication channel, such as a web site. APPL-1005, [0051]-[0052]. These communications are sent between “an agent 135 in communication with the money transfer facilitator 140.” APPL-1005, [0051]; APPL-1003, ¶¶208-210.

A POSITA would have understood Dill’s example of selecting a web site (or other communication sources) as teaching “*the computing system sending communication to the agent terminal over one of a plurality of communication channels.*” APPL-1003, ¶211.

Second, as discussed in [1.10A], it would have been obvious for a POSITA to incorporate the cloud computing environment of Vadhri to Dill’s financial system to achieve the well-known benefits of cloud computing as this would provide the predictable result of a more flexible system. APPL-1005, [0004]. Therefore, the Dill-Vadhri combination teaches communication channels “*connected to the cloud-based transaction platform.*” APPL-1003, ¶212.

Third, Dill also teaches sending confirmation of the transaction to the agent

135. As discussed in [1.3C], Dill teaches that many different types of communication channels may be used to complete a transaction, and that communication is directed to an agent over these channels. APPL-1005, [0037], [0051]. Dill teaches that after selecting a communication type and channel, transaction data is sent to the agent, including confirmation of processing the transaction. APPL-1005, [0070]; APPL-1003, ¶¶213-215.

Fourth, Dill teaches “*sending a notification communication from the computing system to the agent terminal using the particular channel, which is connected to the computing system.*” As discussed above in [1.10A], Dill’s communication channels are connected to Dill’s money transfer facilitator 140 which includes computer system 200 (and are therefore “*connected to the computing system*”). APPL-1005, [0059]; APPL-1003, ¶¶216-217.

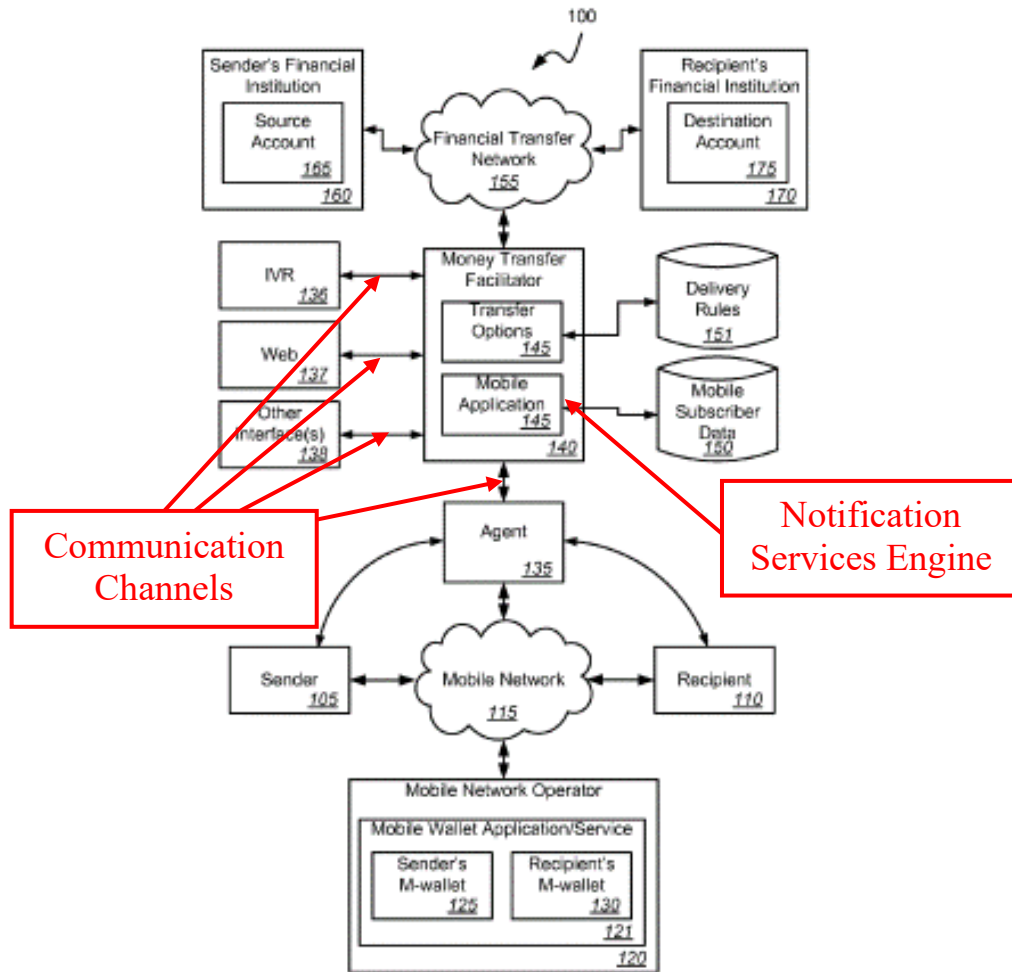


FIG. 9

APPL-1005, Fig. 9 (annotated).

Fifth, Dill teaches “*the communication indicating confirmation of the processing of the transaction.*” APPL-1003, ¶220. Dill teaches sending a notification from the computing system to the agent terminal. This notification provides confirmation of the processing of the transaction. APPL-1005, [0098]; APPL-1003, ¶218. As discussed in [1.3C], Dill teaches that its notifications may also be sent to all parties of a transaction, including the agent terminal. APPL-1005, [0037]; APPL-1003, ¶219. Thus, Dill teaches [1.14]. APPL-1003, ¶221.

2. Claim 2

[2.0] The computing system of claim 1, wherein a new transaction is performed by the computing system for a second, different customer using a second, different third party mobile wallet.

As discussed in [1.10C], Dill teaches that its financial transfer system is configured to support “structured settlements” between mobile wallets including “mobile-to-mobile” transactions. APPL-1005, [0057]-[0058]; APPL-1003, ¶¶222-223. A POSITA would have understood these transactions to be conducted between various mobile wallets, and not just a single set. APPL-1003, ¶223. For example, Dill states that its financial transfer system may include multiple mobile networks 115 and mobile network operators 120, each executing a mobile wallet service 121 with mobile wallets 125, 130. APPL-1005, [0052]. A POSITA would have understood that Dill’s financial system supports transactions between different sets of mobile wallets 125, 130. APPL-1005, [0052]; APPL-1003, ¶224. Thus, Dill teaches [2.0]. APPL-1003, ¶224.

3. Claim 3

[3.0] The computing system of claim 1, wherein the transaction further comprises the customer of confirmation of the processing of the transaction using the third party mobile wallet over at least one of the plurality of communication channels connected to the cloud-based transaction platform.

This claim is missing one or more words. It appears as though at least a verb is missing since the transaction cannot comprise “the customer of confirmation of

the processing of the transaction.” Claim 14 contains similar language reciting “*further comprising **notifying** the customer of confirmation of the processing of the transaction.*” To the extent this claim is interpreted to include “notifying,” as claim 14, the Dill-Vadhri combination teaches [3.0]. APPL-1003, ¶225.

First, as discussed in [1.4A], Dill’s money transfer facilitator 140 facilitates communications between mobile wallets 125, 130 within a mobile wallet application 121. APPL-1005, [0101], Fig. 9; APPL-1003, ¶226.

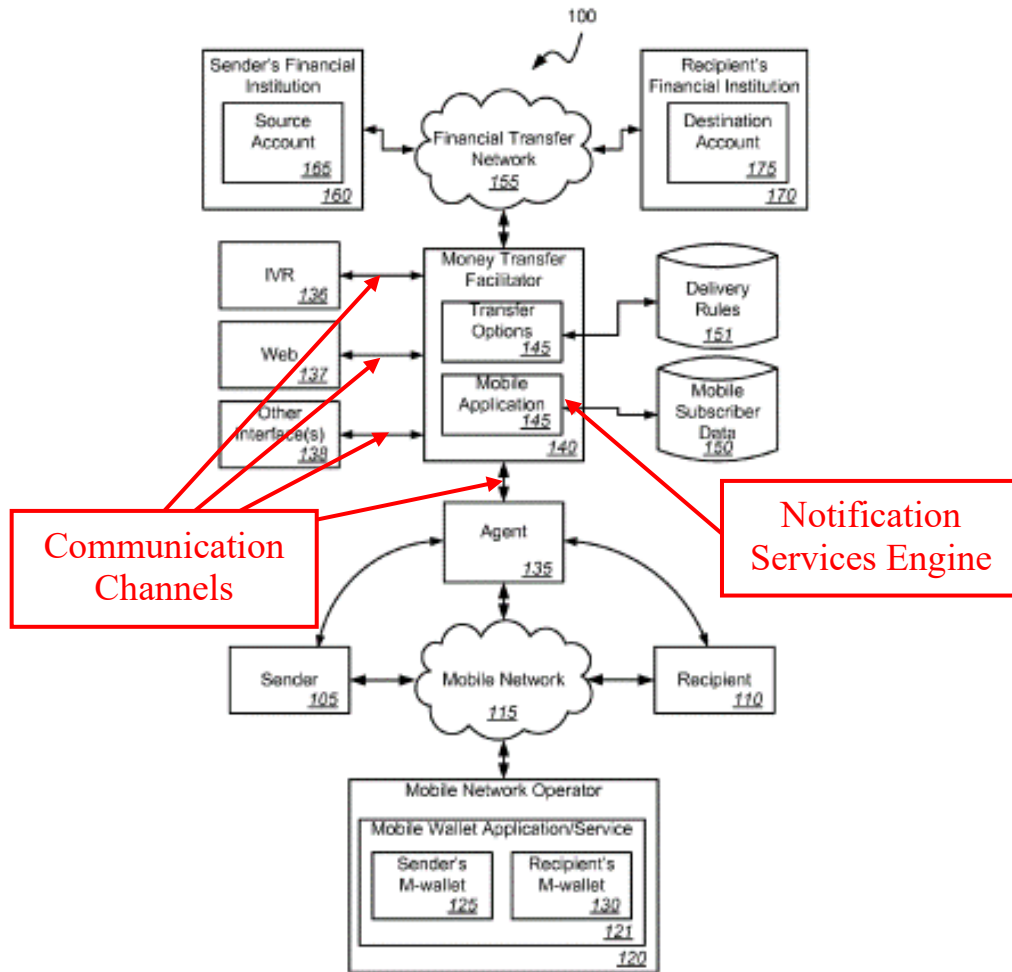


FIG. 9

APPL-1005, Fig. 9 (annotated).

Dill states that this includes a message “indicating success or failure of the transfer.” APPL-1005, [0082]. These messages include a notification indicating completion of the transaction sent to the mobile wallet application 121. APPL-1005, [0098]; APPL-1003, ¶¶227-228. Since the mobile wallet application is accessed by the customer of the mobile device 125, a POSITA would understand that Dill teaches “*the computing system notifies the customer of confirmation of the processing of the transaction using the mobile wallet.*” APPL-1003, ¶229.

Second, as discussed in [1.4A], Dill teaches that all communications, including the notification described above are sent over communication lines in Dill's financial transfers system. APPL-1005, [0052]; APPL-1003, ¶230. A POSITA would understand from the broad teachings of Dill that communications may be sent over various channels to teach that the notification of completion is sent "*over at least one of the plurality of communication channels connected to the cloud-based transaction platform.*" APPL-1003, ¶231.

Third, as discussed in [1.10A], it would have been obvious for a POSITA to incorporate the cloud computing environment of Vadhri to Dill's financial system to achieve the well-known benefits of cloud computing as this would provide the predictable result of a more flexible system. APPL-1005, [0004]; APPL-1003, ¶232. Thus, Dill teaches [3.0]. APPL-1003, ¶233.

4. Claim 4

[4.0] The computing system of claim 1, wherein the third party mobile wallet is provided by a third party mobile wallet provider.

First, Dill teaches facilitating transactions with third-party mobile wallets or wallets within its system. APPL-1005, [0036]. Dill also provides for transactions between "unrelated entities such as the sending mobile wallet 125 and receiving mobile wallet 130." APPL-1005, [0057]. Therefore, Dill teaches that its financial transfer system is designed to work with mobile wallets outside its system. These include mobile wallets provided for by a third party mobile network operator.

APPL-1005, [0036]; APPL-1003, ¶¶234-235. Dill teaches that the entities and service providers are “appropriate to that recipient.” APPL-1005, [0090]; APPL-1003, ¶236. Thus, Dill teaches [4.0]. APPL-1003, ¶237.

5. Claim 5

[5.0] The computing system of claim 4, wherein each third party mobile wallet provider has their own point of sale (POS) processing system.

As discussed in [4.0], Dill’s financial transfer system supports transactions with third party mobile wallets and their providers. APPL-1005, [0036]. Dill’s financial transaction system is designed to work with many different types of devices, including a “Point-Of-Sale (POS) device.” APPL-1005, [0004]; APPL-1003, ¶¶238-239. A POSITA would have understood that Dill teaches transactions with POS devices and service providers “appropriate to that recipient” includes third party mobile providers with their own POS processing systems. APPL-1005, [0090]; APPL-1003, ¶240. Additionally, Dill gives the example of its sender and/or recipient (which may be mobile wallets 125, 130) being registered with an action site like eBay. APPL-1005, [0090]. A POSITA would have understood that the third party services and “action site[s]” referred to by Dill would include POS processing systems to receive payments for goods and services (such as other third parties providing payment services). APPL-1005, [0033]; APPL-1003, ¶241. Thus, Dill teaches [5.0]. APPL-1003, ¶242.

6. Claim 6

[6.0] The computing system of claim 5, wherein the third party mobile wallet providers' POS processing systems communicate with each other using the cloud-based transaction platform to process the transaction.

As discussed in [5.0], a POSITA would understand that Dill's broad language including transactions processed with a POS processing system and includes third party mobile providers with their own POS processing systems. APPL-1005, [0004]; APPL-1003, ¶¶243-244. Dill teaches that the mobile device and accompanying providers are connected through its mobile network. APPL-1005, [0052], [0090], Fig. 9; APPL-1003, ¶¶244-245.

Thus, Dill's mobile network 115 connects the sender mobile wallet and recipient mobile wallet, and Dill's broad language includes transactions with POS devices and service providers "appropriate to that recipient." APPL-1005, [0090]). APPL-1003, ¶246. Thus, Dill teaches [6.0]. APPL-1003, ¶246.

7. Claim 7

[7.0] The computing system of claim 1, wherein the transaction comprises the mobile wallet deposit for depositing funds into the third party mobile wallet which is owned by the entity different than the customer, including:

As discussed in [1.10B], Dill's money transfer facilitator 140 conducts transactions between mobile wallets 125, 130 which may be external mobile wallets enrolled under another entity. APPL-1005, [0057]; APPL-1003, ¶247. Dill's broad teachings also include sending payment between mobile wallets 125,

130 that are part of either related or unrelated entities, as well as including the full spectrum of “mobile-to-mobile”, “cash-to-mobile”, and “mobile-to-cash” transactions (APPL-1005, [0057]-[0058]). APPL-1003, ¶248. Thus, Dill teaches [7.0]. APPL-1003, ¶248.

[7.1] receiving communication from the agent terminal over one of the plurality of communication channels connected to the cloud-based transaction platform, the agent communication indicating that the customer desires to deposit a specified amount of funds into the third party mobile wallet; and

First, as discussed in [1.10A], Dill teaches an agent 135 that is in communication with its money transfer facilitator 140. APPL-1005, [0051]. A POSITA would have recognized the agent 135 as an “*agent terminal*” because it may include systems associated with the agent. APPL-1005, [0051]; APPL-1003, ¶¶249-250.

Dill also teaches receiving communication with the money transfer facilitator 140 from the agent 135 including information or routing details for a transaction. APPL-1005, [0070]. The communications from the agent 135, as well as all transaction communications, are routed over communication channels in its financial transfer system. APPL-1005, [0090]; APPL-1003, ¶¶251-252.

For the particular communications received by the money transfer facilitator 140 from the agent 135, Fig. 9 shows an exemplary communication channel (APPL-1003, ¶253):

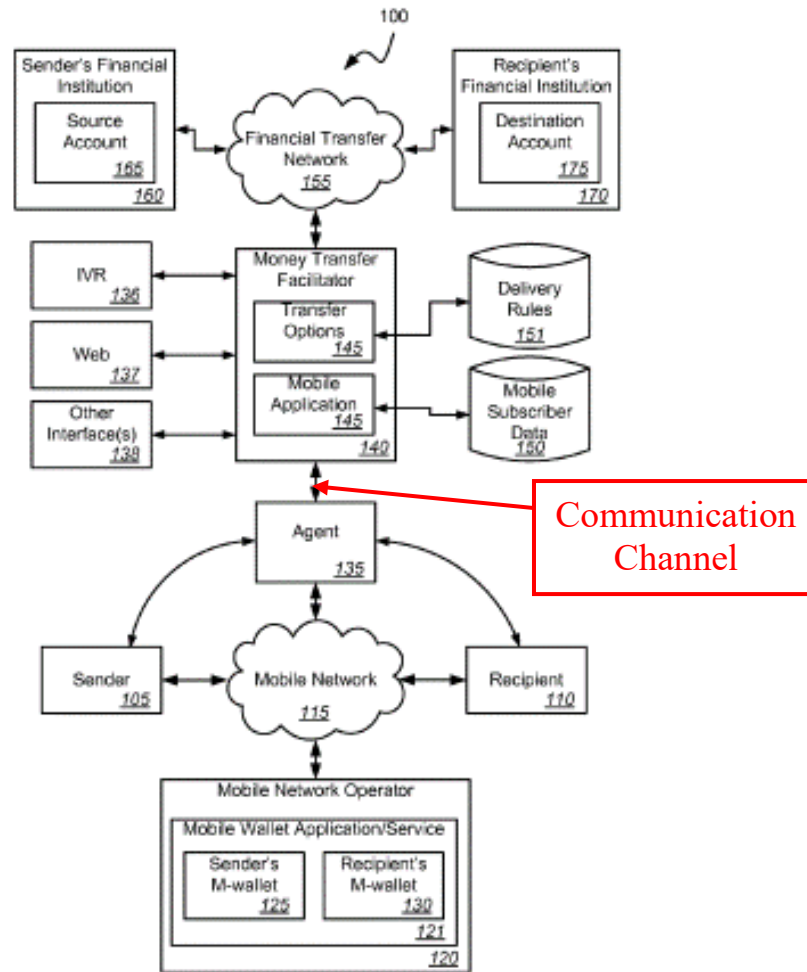


FIG. 9

APPL-1005, Fig. 9 (annotated).

As discussed in [1.10A], it would have been obvious for a POSITA to incorporate the cloud computing environment of Vadhri to Dill's financial system. APPL-1005, [0004]; APPL-1003, ¶¶254-255.

Second, Dill teaches that the communication indicates a "*the customer desires to deposit a specified amount of funds into the third party mobile wallet.*" As discussed in [1.10B], Dill teaches that money transfer facilitator 140 is configured to receive transaction requests from an agent. APPL-1005, [0065].

These requests from customers to indicate desires for various types of transactions, including a “mobile-to-mobile” option. APPL-1005, [0065]; APPL-1003, ¶256.

This transaction option may be initiated by an agent 135 to carry out a transaction for a specified amount of money that is delivered to a mobile wallet (which as discussed in [1.10B] may be a third party mobile wallet). APPL-1003, ¶257. Thus, Dill teaches [7.1]. APPL-1003, ¶257.

[7.2] crediting the third party mobile wallet with the specified amount of funds.

As discussed in [7.1], Dill’s financial transfer system includes a “mobile-to-mobile” option which is “a transaction paid from an account associated with a mobile wallet of that user wherein the payment is delivered to an account associated with a mobile wallet of the recipient.” APPL-1005, [0065]. Referring to these transactions, Dill details that “completing the money transfer transaction can comprise crediting each of the destination accounts indicated by the payment request.” APPL-1005, [0043]. As discussed in [1.10B], Dill’s mobile wallets 125, 130 may be third party mobile wallets. APPL-1005, [0065]. Thus, Dill teaches [7.2]. APPL-1003, ¶¶258-259.

8. Claim 8

[8.0] The computing system of claim 1, wherein the transaction comprises the mobile wallet withdrawal for withdrawing funds from the third party mobile wallet owned which is owned by the entity different than the customer, including:

As discussed in [1.10B], Dill’s money transfer facilitator 140 conducts

transactions between mobile wallets 125, 130 which may be by external mobile wallets enrolled under another entity. APPL-1005, [0057]; APPL-1003, ¶260.

Based on Dill's broad teachings regarding sending payment between mobile wallets 125, 130 that are part of either related or unrelated entities, as well as Dill's teachings of the full spectrum of transactions (APPL-1005, [0057]-[0058]), a POSITA would have understood Dill to teach withdrawing funds from a third party mobile wallet. APPL-1003, ¶261. Thus, Dill teaches [8.0]. APPL-1003, ¶261; *see also* [1.10C]; APPL-1003, ¶¶185-186.

[8.1] receiving communication from the customer over one of the plurality of communication channels connected to the cloud-based transaction platform, the customer communication indicating that the customer desires to withdraw a specified amount of funds from the third party mobile wallet;

As discussed in [7.1], the Dill-Vadhri combination teaches a similar limitation including a “*agent communication indicating that the customer desires to deposit a specified amount of funds*” compared to this limitation to “*withdraw a specified amount of funds.*” APPL-1003, ¶¶262-263. Dill also teaches [8.1] by providing for various types of mobile wallet transactions, such as “mobile-to-cash,” “cash-to-mobile,” and “mobile-to-mobile” which may be facilitated between mobile wallets 125, 130. APPL-1005, [0065]-[0066]; APPL-1003, ¶264. Thus, the Dill-Vadhri combination teaches [8.1]. APPL-1003, ¶265.

[8.2] providing the perishable withdrawal code to the customer over at least one of the plurality of communication channels connected to the cloud-based transaction platform;

As discussed in [1.12B], the Dill-Vadhri combination teaches “*providing the perishable withdrawal code to the customer.*” APPL-1005, [0069]; APPL-1006, [0015]; APPL-1003, ¶¶266-267. A POSITA would have understood that Vadhri’s secure, perishable purchase code would be provided “*over at least one of the plurality of communication channels connected to the cloud-based transaction platform*” as taught by Dill and Vadhri. APPL-1003, ¶267. As discussed in [1.3C], Dill teaches that communications for transactions are conducted over interfaces 136-138. APPL-1005, [0101].

These communications include Dill’s transaction identifier (and would have been obvious to include Vadhri’s temporary account code 103). APPL-1005, [0069]; APPL-1006, [0015]. These communication channels are connected to Dill’s financial system, which as discussed in [1.10A], would have been obvious to incorporate the cloud computing environment of Vadhri. APPL-1005, [0004]; APPL-1003, ¶268. Thus, the inclusion of Vadhri’s temporary account code 103 in Dill’s transaction communications teaches [8.2]. APPL-1003, ¶269.

[8.3] receiving communication from the agent terminal over at least one of the plurality of communication channels connected to the cloud-based transaction platform, the agent terminal communication indicating that the perishable withdrawal code has been presented to an agent; and

As discussed in [7.1], the Dill's financial transfer system using a cloud-based environment as taught by Vadhri is configured to "*receiv[e] communication from the agent terminal over at least one of the plurality of communication channels connected to the cloud-based transaction platform.*" APPL-1003, ¶270.

As discussed in [1.12B], Dill teaches "*the agent terminal communication indicating that the perishable withdrawal code has been presented to an agent.*"

APPL-1005, [0069]; APPL-1006, [0015]. Thus, the Dill-Vadhri combination teaches [8.3]. APPL-1003, ¶270.

[8.4] debiting the third party mobile wallet by the specified amount of funds.

As discussed in Section VII.A (Claim Construction), a POSITA would have understood this limitation to mean "*transferring the specified amount of funds from the stored value on a mobile device.*" APPL-1003, ¶271. Dill's financial system facilitates transactions between sender and recipient accounts, which include stored value accounts. These transactions are just like those discussed in the '488 patent. These transactions may be assigned a unique transaction identifier. APPL-1005, [0105]. Dill teaches transactions between a sender's mobile wallet and a recipient's mobile wallet. APPL-1005, [0038]; APPL-1003, ¶¶272-273.

Dill provides examples of these transfers in Fig. 9 (APPL-1003, ¶274):

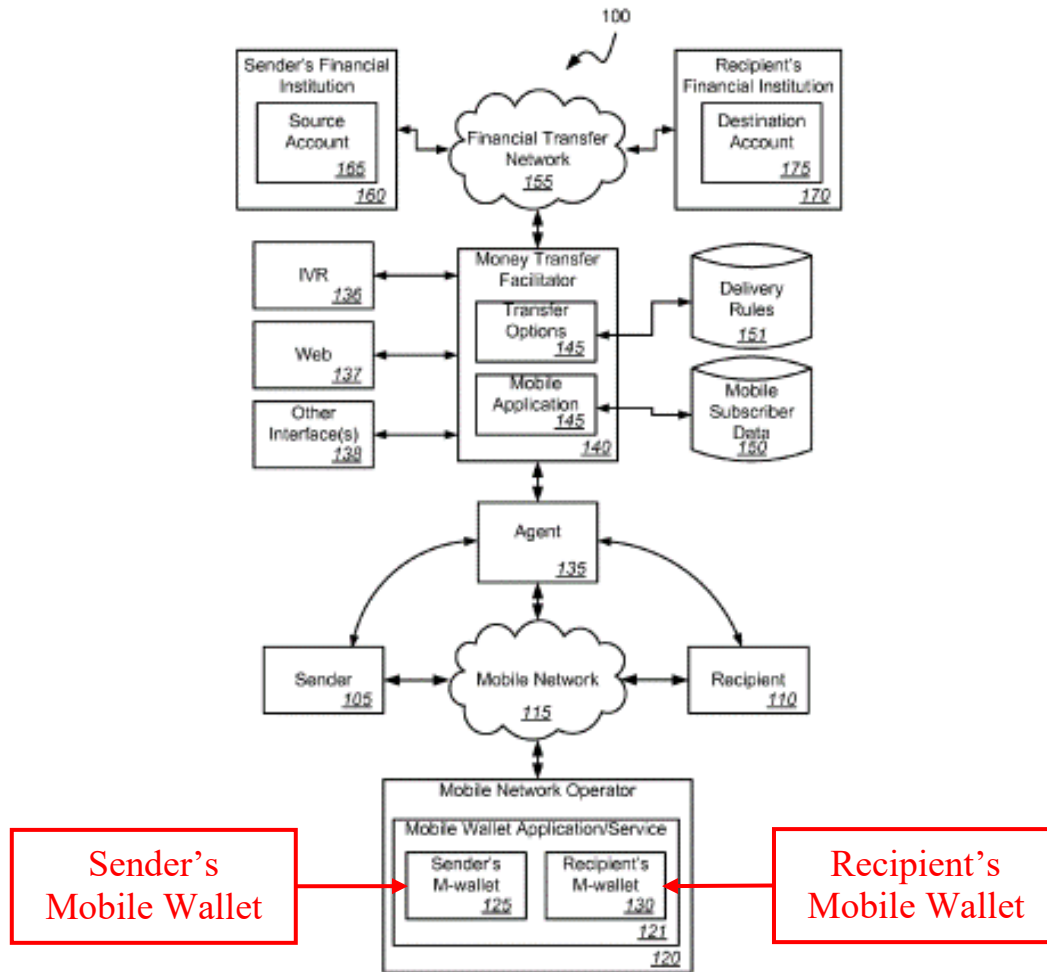


FIG. 9

APPL-1005, Fig. 9 (annotated).

Dill also teaches that specified payments are requested and carried out in transactions between the mobile wallets of the sender and recipient. APPL-1005, [0053]-[0057]; APPL-1003, ¶275. As a result, Dill teaches that a sender mobile wallet sends a specified payment to a recipient and “*debit[s]*” the mobile wallet by that amount. APPL-1005, [0053]-[0057]; APPL-1003, ¶276. Thus, Dill teaches [8.4]. APPL-1003, ¶276.

9. Claim 9

[9.0] The computing system of claim 1, wherein the transaction comprises the mobile wallet transfer for transferring money from a mobile wallet account of the customer provided by a first mobile wallet provider to a third party mobile wallet of a recipient provided by a second mobile wallet provider, the method comprising:

First, Dill teaches “*wherein the transaction comprises the mobile wallet transfer for transferring money from a mobile wallet account of the customer*” as discussed in [1.10C] because its mobile wallets 125, 130 may be external mobile wallets. APPL-1005, [0036]; APPL-1003, ¶¶277-278.

Second, Dill teaches that the “*third party mobile wallet of a recipient*” may be “*provided by a second mobile wallet provider.*” As discussed in [4.0], Dill’s financial transfer system is configured to conduct transactions between mobile wallets provided by a third-party mobile network operator. APPL-1005, [0036]; APPL-1003, ¶279.

Dill explains that the entities and service providers are “appropriate to that recipient” and teaches conducting transactions between different sets of mobile wallets 125, 130 (as discussed in [2.0]) any of which may be provided for by external mobile network operators. APPL-1005, [0052], [0090]; APPL-1003, ¶280. Thus, Dill teaches [9.0]. APPL-1003, ¶281.

[9.1] receiving customer communication over one of the plurality of communication channels connected to the cloud-based transaction platform, the customer communication indicating that the customer desires to transfer a specified amount of funds to the recipient using a specified payment method from the mobile wallet account of the customer;

This limitation is similar to [7.1] and [8.1] and differs only that “*the customer communication indicating that the customer desires to transfer a specified amount of funds to the recipient*.” Dill teaches this limitation by providing for various types of mobile wallet transactions, such as “mobile-to-cash,” “cash-to-mobile,” and “mobile-to-mobile” which may be facilitated between mobile wallets 125, 130. APPL-1005, [0058], [0043], [0065]; APPL-1003, ¶¶282-283. The Dill-Vadhri combination teaches [9.1]. APPL-1003, ¶284.

[9.2] debiting the mobile wallet account by the specified amount of funds; and

As described in [8.4], the Dill-Vadhri-Akashika combination teaches this limitation. APPL-1003, ¶285.

[9.3] transferring the specified amount of funds from the cloud-based transaction platform to the second third party mobile wallet platform for delivery to the specified recipient, the specified amount of funds being transferred over at least one of the plurality of channels connected to the third party mobile wallet platform.

First, as discussed in [7.0], Dill’s financial transfer system handles “mobile-to-mobile” transfers from a first mobile wallet 125 to a second mobile wallet 130. APPL-1005, [0057]-[0058]. This type of transfer also includes “*transferring the specified amount of funds.*” For example, Dill teaches that once a transfer request is

received by the money transfer facilitator 140, the recipient's mobile wallet 130 is identified "into which the funds should be transferred." APPL-1005, [0081]; APPL-1003, ¶¶286-287.

A POSITA would have understood that this mobile wallet 130 may be the "second third party mobile wallet platform" because the mobile wallet and associated platform may be external to Dill's mobile transfer system 140, as discussed in [1.11]. APPL-1005, [0055]; APPL-1003, ¶288.

Dill teaches many ways to conduct transfers, including "select[ing] one or more delivery options" to deliver the funds to a recipient (as discussed above, through a mobile wallet 130) and actually conducting the transfer over an interface. APPL-1005, [0046]-[0047]; APPL-1003, ¶289. A POSITA would have understood any of Dill's interfaces and associated connections for conducting the money transfer to be "at least one of the plurality of channels connected to the third party mobile wallet platform" for transferring "the specified amount of funds." APPL-1003, ¶290. Thus, the Dill-Vadhri combination teaches [9.3]. APPL-1003, ¶291.

10.Claim 10

[10.0] The computing system of claim 1, wherein the claimed method also includes performing a new transaction comprising a mobile wallet purchase at an agent terminal using a third party mobile wallet managed by a third party mobile wallet platform, including:

First, Dill teaches that its money transfer facilitator 140 is configured to "perform[] a new transaction comprising a mobile wallet purchase." As discussed

in [1.4A], Dill teaches that money transfer facilitator 140 is configured to receive transaction requests for transactions with mobile wallets. APPL-1005, [0069].

These requests include various types of transactions, and would be understood to include “*a new transaction.*” APPL-1005, [0065], [0090]. APPL-1003, ¶¶292-295.

Second, as discussed in [1.10A], Dill’s transactions may be conducted via an agent 135 (“agent terminal”) that is in communication with its money transfer facilitator 140. APPL-1005, [0051]. Thus, Dill teaches that the mobile wallet purchase may be performed “*at an agent terminal.*” APPL-1003, ¶296.

Third, as discussed in [1.11], Dill teaches many types of transactions that may be performed for external mobile wallets 125, 130 and associated platforms which a POSITA would have understood to be “*a third party mobile wallet managed by a third party mobile wallet platform.*” APPL-1005, [0055]. A POSITA would have understood that these transactions include purchases for specific items as discussed above. APPL-1005, [0090]; APPL-1003, ¶297. Thus, Dill teaches [10.0]. APPL-1003, ¶298.

[10.1] receiving communication from the customer over one of the plurality of channels connected to the cloud-based transaction platform, the customer communication indicating that the customer desires to purchase an item for a specified amount of funds using a specified payment method from a third party mobile wallet;

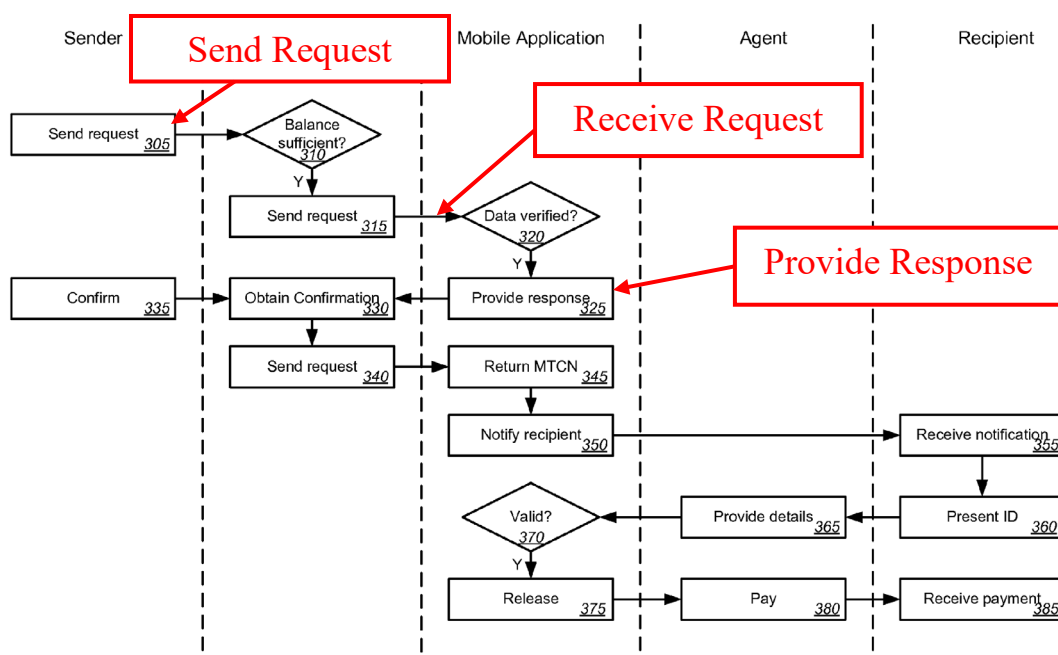
This limitation is similar to [7.1], [8.1], and [9.1] and differs only that “*the customer communication indicating that the customer desires to purchase an item*

for a specified amount of funds using a specified payment method.” Dill teaches [10.1] because its financial transfer system is configured to conduct various types of transactions including for “recipient's use in making purchases at [a] retailer” and lists examples of websites such as eBay for these transactions. APPL-1005, [0090]. A POSITA would have understood these requests to be for specific items with set prices. APPL-1003, ¶¶299-300.

Dill teaches transactions “*using a specified payment method from [a] third party mobile wallet account*” as discussed in [9.1]. APPL-1005, [0058]. This mobile wallet may include external mobile wallets 130 as discussed in [7.0] and therefore Dill teaches transactions “*using a specified payment method from a third party mobile wallet.*” APPL-1005, [0057]; APPL-1003, ¶301. Thus, the Dill-Vadhri combination teaches [10.1]. APPL-1003, ¶302.

[10.2] returning a secure, perishable purchase code to the customer over at least one of the plurality of channels connected to the cloud-based transaction platform;

First, after receiving a transaction request, Dill’s money transfer facilitator 140 returns a response 325 to the sender, as shown in Fig. 3 below. APPL-1005, [0067]; APPL-1003, ¶¶303-304.



APPL-1005, Fig. 3 (annotated).

Along with additional “information related to and/or describing fees, legal notices, etc.” that may be included in the request, Dill states that a “transaction identifier” may be assigned to the mobile wallet application. APPL-1005, [0067], [0069]; APPL-1003, ¶305.

Second, Vadhri teaches “*return[ing] a secure, perishable purchase code to the customer*” Vadhri teaches receiving a request including a temporary account code 103 that is securely sequenced and formed. APPL-1006, [0022]-[0023]. This secure temporary code 103 (also labeled 203 in Fig. 2) is used to authorize the purchase of goods and/or services and has an expiration that is earlier relative to a persistent account code 102. APPL-1006, [0027], [0046]; APPL-1003, ¶¶306-309.

Third, as discussed in [1.12B], a POSITA would have found it obvious to

include Vadhri's temporary account code 103 with Dill's mobile application for additional security by limiting the amount of time that the code is available. APPL-1006, [0015]; APPL-1003, ¶310.

Fourth, a POSITA would have understood that temporary account code 103 of Vadhri would be “*returned to the customer over at least one of the plurality of channels connected to the computing system*” as taught by Dill. APPL-1003, ¶311. As discussed in [1.3A], Dill teaches that transactions are conducted over interfaces 136-138 (which include all communications required for the transactions, including notifications returned to the mobile devices 125, 130). APPL-1005, [0101]. Thus, the Dill-Vadhri combination teaches [10.2]. APPL-1003, ¶312.

[10.3] receiving communication from the agent terminal over at least one of the plurality of channels connected to the cloud-based transaction platform, the agent terminal communication indicating that the purchase code has been presented to an agent;

As described in [8.3], the combination of Dill, Vadhri, and Akashika teaches this limitation. APPL-1003, ¶313.

[10.4] debiting the third party mobile wallet by the specified amount of funds; and

As described in [8.4], the combination of Dill, Vadhri, and Akashika teaches this limitation. APPL-1003, ¶314.

[10.5] crediting an agent account by the specified amount of funds.

Dill teaches that a sender initiates a money transfer through an agent 135. APPL-1005, [0066]; APPL-1003, ¶¶315-316. Money for the transfer may be

routed directly through the agent 135 and/or “instruct[ing] the agent 135 to pay 380 and 385 the transaction to the recipient 110.” APPL-1005, [0070]; APPL-1003, ¶317. These transfers include those for purchases as discussed above. By making these specified funds (with associated specified amounts of money) available through the agent 135, Dill teaches crediting “*an agent account*.” APPL-1003, ¶318. Thus, Dill teaches [10.5]. APPL-1003, ¶318.

11.Claim 11

Limitations of claim 11, except [11.0] and [11.8B], which are addressed below, are substantively identical to limitations already addressed above, as correlated in the table below:

Claim 11 Limitation	Corresponding Claim Limitation
[11.1A]	[1.10A]
[11.1B]	[1.10B]
[11.1C]	[1.10C]
[11.2]	[1.11]
[11.3]	[1.13]
[11.4A]	[1.12A]
[11.4B]	[1.12B]
[11.5]	[1.14]
[11.6]	[1.1]

[11.7]	[1.2]
[11.8A]	[1.3A]
[11.8C]	[1.3B]
[11.8D]	[1.3C]
[11.8E]	[1.3D]
[11.9A]	[1.4A]
[11.9B]	[1.4B]
[11.9C]	[1.4C]
[11.10A]	[1.5A]
[11.10B]	[1.5B]
[11.11]	[1.6]
[11.12]	[1.7]
[11.13]	[1.8]

The combination of Dill, Vadhri, and Akashika teaches these limitations for the same reasons discussed above. APPL-1003, ¶¶326-336, 340-350.

[11.0] At a computer system including at least one processor and a memory, a computer-implemented a method for performing a transaction for a customer using a third party mobile wallet owned by another entity than the customer, the method comprising the following:

To the extent the preamble is limiting, Dill discloses it. APPL-1003, ¶319. First, as discussed in [1.0], Dill teaches that a computer system 200 provides the

functions of its transfer facilitator system 140. APPL-1005, [0059]. As discussed in [1.1] and [1.2], Dill’s computer system includes “*one or more processors*” and “*system memory*.” APPL-1005, [0031], [0059]-[0064]; APPL-1003, ¶320.

Second, this limitation appears to contain an error: “*a computer-implemented a method for performing a transaction*.” If the claim is interpreted to mean “*a computer-implemented [] method for performing a transaction*,” Dill teaches [11.0]. Dill’s financial transfer system is configured to provide for transactions for customers using mobile wallets 125, 130. APPL-1005, [0057]; APPL-1003, ¶321. A POSITA would have understood the “structured settlements” carried out by Dill’s money transfer facilitator 140 through computer system 200 to be a “*computer-implemented [] method for performing a transaction*.” APPL-1003, ¶322.

Third, Dill’s computer system 200 implementing code as discussed above is configured to “*facilitate a transaction for a customer using the mobile wallet*.” For example, Dill teaches that its computer system 200 is configured to carry out financial transactions between mobile wallets 125, 130. APPL-1005, [0063]-[0065]; APPL-1003, ¶¶323-324.

Fourth, Dill teaches that its computer system is configured to perform transactions for a customer using the mobile wallet “*owned by another entity than the customer*.” For example, Dill teaches mobile wallets 125 and 130 that are maintained by a mobile wallet service 121. APPL-1005, [0053]. A POSITA would

have understood an external mobile wallet service 121 is one example of an “*another entity than the customer*” that owns the mobile wallet of Dill since it “provide[s] a structured settlement between unrelated entities such as the sending mobile wallet 125 and receiving mobile wallet 130.” APPL-1005, [0057]; APPL-1003, ¶324. Thus, Dill teaches [11.0]. APPL-1003, ¶325.

[11.8B] [an integration tier configured to manage mobile wallet sessions with a mobile device] on which a mobile wallet application is installed and

Dill states that its “mobile device can execute a mobile wallet application.” APPL-1005, [0045]; APPL-1003, ¶337. Dill explains that transfers are initiated from a mobile wallet application of a mobile device, and that “[r]eceiving the request to initiate the money transfer transaction can comprise receiving the request from a mobile wallet application of a mobile device.” APPL-1005, [0035]; APPL-1003, ¶338. Accordingly, a POSITA would understand that Dill’s mobile device executes a mobile wallet application. Thus, Dill teaches [11.8B]. APPL-1003, ¶339.

12.Claim 12

Claim 12 is substantively identical to claim 2 addressed above. The combination of Dill, Vadhri, and Akashika teaches this claim for the same reasons discussed for claim 2. APPL-1003, ¶351.

13.Claim 13

[13.0] The computer-implemented method of claim 11, wherein the third party mobile wallet platform comprises a third party processor.

As discussed in [1.11], Dill’s financial transfer system conducts transactions with mobile wallets 125, 130 that may be enrolled an external mobile wallet service (i.e., “third party mobile wallet platform”). APPL-1005, [0055]. Since these external “mobile wallet services” include providing a destination for transferred funds, a POSITA would understand them to include their own computing system including at least one processor, much like Dill’s computing system 200. APPL-1005, [0055], [0060]; APPL-1003, ¶352. Thus, Dill teaches [13.0]. APPL-1003, ¶353.

14.Claims 14-21

Claims 14-18 are substantively identical to claims 3-7, respectively, already addressed above. Claim 19 is substantively identical to claim 8 with the addition of claim [7.2] already addressed above. Claim 20 is substantively identical to claim 9 already addressed above. And claim 21 is substantively identical to claim 10 with the addition of claim limitations [8.3], [8.4], and [7.2] already addressed above. The combination of Dill, Vadhri, and Akashika teaches this claim for the same reasons discussed above. APPL-1003, ¶¶354-376.

15.Claim 22

The limitations of claim 22, except [22.0], which is addressed below, are substantively identical to limitations of claims already addressed above, as correlated in the table below:

Claim 22 Limitation	Corresponding Claim Limitation
[22.1A]	[1.10A]
[22.1B]	[1.10B]
[22.1C]	[1.10C]
[22.2]	[1.11]
[22.3]	[1.13]
[22.4A]	[1.12A]
[22.4B]	[1.12B]
[22.5]	[1.14]
[22.6]	[1.1]
[22.7]	[1.2]
[22.8A]	[1.3A]
[22.8B]	[11.8B]
[22.8C]	[1.3B]
[22.8D]	[1.3C]

[22.8E]	[1.3D]
[22.9A]	[1.4A]
[22.9B]	[1.4B]
[22.9C]	[1.4C]
[22.10A]	[1.5A]
[22.10B]	[1.5B]
[22.11]	[1.6]
[22.12]	[1.7]
[22.13]	[1.8]

The combination of Dill, Vadhri, and Akashika teaches these limitations for the same reasons discussed above. APPL-1003, ¶¶384-406.

[22.0] One or more computer-readable hardware storage devices having stored thereon computer-executable instructions that are executable by the one or more processors of a computing system to cause the computing system to perform a transaction for a customer using a third party mobile wallet owned by another entity than the customer, comprising the following:

To the extent the preamble is limiting, Dill discloses it. First, Dill teaches financial transfer systems for carrying out transactions with mobile wallets including using machine-readable media. APPL-1005, [0005]; APPL-1003, ¶¶377-378. As discussed in [1.0]-[1.2], Dill's financial transfer system is implemented with a computer system 200, which includes CPUs 210 and storage devices 240 as

well as system memory 280 which are “*computer-readable hardware storage devices.*” APPL-1005, Fig. 2, [0059]-[0060]; APPL-1003, ¶379.

Second, as discussed in [1.3B], Dill teaches that software is executed by its computer system 200. APPL-1005, [0063]-[0064]; APPL-1003, ¶380. A POSITA would have understood this code implemented by Dill’s computer system 200 to be “*computer-executable instructions.*” APPL-1003, ¶381.

Third, Dill teaches that its software is configured to conduct transactions with mobile wallets 125, 130, which may be maintained and serviced by an external mobile wallet service, as discussed in [1.9]. APPL-1005, [0005], [0053], [0059]. These mobile wallets would be understood to be “*owned by another entity than the customer.*” APPL-1003, ¶382. Thus, Dill teaches [22.0]. APPL-1003, ¶383.

IX. DISCRETIONARY DENIAL IS INAPPROPRIATE

The Board should not deny institution under 35 U.S.C. § 314(a).

Patent Owner recently asserted the ’488 patent in the PayPal litigation. *See* Section I.B. Petitioner is not involved in that litigation, and the defendant had no knowledge of this IPR prior to its filing. The Board should institute review because this Petition “presents compelling evidence of unpatentability” (Director Vidal’s Guidance Memorandum, APPL-1016, 2) by demonstrating that the Challenged Claims are unpatentable. This is particularly relevant as the Examiner did not issue

any prior art rejections during prosecution. APPL-1002, APPL-1002, p.158, 1567-1641.

To the extent the Board considers the *Fintiv* factors, they favor institution.

Fintiv factor 1 is neutral because there is no evidence that the defendant in the PayPal litigation has requested a stay.

Fintiv factors 2 and 5 weigh in favor of institution. A trial date is scheduled for November 30, 2023 (APPL-1018, 8) in the PayPal litigation, but the median time-for-trial for W.D. Texas is 28.3 months, placing the likely trial date in July 2024. The Board is expected to issue a final written decision in this proceeding by July 2024. Concerns about inefficiencies are minimal.

Fintiv factors 3 and 4 weigh in favor of institution. The defendant in the PayPal litigation has served preliminary invalidity contentions (APPL-1018, 6) and a *Markman* hearing was held on December 20, 2022 (APPL-1019, 1). Patent Owner proposed that the only disputed term in the '488 patent (“presented to”) (APPL-1020, 10) be construed according to its plain and ordinary meaning, which is how Petitioner applied it here. Much work remains to be done in the PayPal litigation with respect to invalidity, and there is no evidence of any overlap between the grounds in this Petition and the defendant’s invalidity contentions.

Fintiv factor 6 strongly favors institution because the grounds in this Petition present compelling evidence of unpatentability.

The Board should not deny institution under §325(d). None of the art relied upon in this Petition was cited or considered during prosecution. Therefore, the first part of the *Advanced Bionics* framework is not met. *Advanced Bionics*, IPR2019-01469, Paper 6 at 8 (Feb. 13, 2020) (precedential).

X. CONCLUSION

The Board should order an IPR and cancel the Challenged Claims.

Respectfully submitted,

December 22, 2022
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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 Petition (Sections II-X) has 13,964 words, according to the word count tool in Microsoft Word™.

/Andrew S. Ehmke/
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Apple Inc.	§	Petition for <i>Inter Partes</i> Review
Petitioner	§	
	§	U.S. Patent No. 9,208,488
	§	
	§	

CERTIFICATE OF SERVICE

The undersigned certifies, under 37 C.F.R. §§ 42.105 and 42.6, that service was made on the Patent Owner as detailed below.

Date of service December 22, 2022

Manner of service Federal Express

Documents served Petition for *Inter Partes* Review, including Exhibit List; Exhibits 1001 through 1020

Persons served Workman Nydegger
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A courtesy copy of the Petition and Exhibits 1001 through 1020 has been served on Patent Owner's litigation counsel:

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