

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD., AND
SAMSUNG ELECTRONICS AMERICA, INC.,

Petitioner,

v.

PAYGEO, LLC,

Patent Owner.

Case IPR2025-01552
Patent No. 10,796,296

**DECLARATION OF STUART J. LIPOFF
IN SUPPORT OF PETITION FOR INTER PARTES REVIEW OF
U.S. PATENT NO. 10,796,296**

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I. INTRODUCTION

1. I, Stuart J. Lipoff, submit this declaration to state my opinions on the matters described below.

2. I have been retained by Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, “Samsung”) as an independent expert in this proceeding before the United States Patent and Trademark Office. I am being compensated at the rate of \$375 per hour for time that I spend on this case. No part of my compensation depends on the outcome and I have no other interest in this proceeding.

3. I understand that this proceeding involves U.S. Patent No. 10,796,296 (“the ’296 patent,” Ex-1001), and I have been asked to provide my opinions as to the patentability of the claims of the ’296 patent.

4. I have been asked to consider the validity of certain claims of the ’296 patent based on certain prior art references. I have also been asked to consider the state of the art and prior art available as of July 18, 2011, which is the earliest claimed priority date on the face of the ’296 patent. Based on the combinations of prior art references discussed in this declaration, it is my opinion that claims 1-14 of the ’296 patent are unpatentable.

II. QUALIFICATIONS AND BACKGROUND

5. Below is a summary of my education, work experience, and other qualifications. My qualifications are stated more fully in my curriculum vitae (CV), which I understand is provided in Ex-1004.

6. I am currently the president of IP Action Partners Inc., which is a consulting practice serving the telecommunications, information technology, media, electronics, and e-business industries.

7. I earned a Bachelor of Science degree in Electrical Engineering in 1968 and a second Bachelor of Science degree in Engineering Physics in 1969, both from Lehigh University. I also earned a Master of Science degree in Electrical Engineering from Northeastern University in 1974 and a Master of Business Administration degree from Suffolk University in 1983.

8. I hold a Federal Communications Commission (“FCC”) General Radiotelephone License. I also hold a Certificate in Data Processing (“CDP”) from the Association for Computing Machinery (“ACM”)-supported Institute for the Certification of Computing Professionals (“ICCP”).

9. I am a registered professional engineer in the Commonwealth of Massachusetts and also in the State of Nevada.

10. I am a fellow of the Institute of Electrical and Electronics Engineers (IEEE) Consumer Electronics, Communications, Computer, Circuits, and Vehicular

Technology Groups. I have been a member of the IEEE Consumer Electronics Society National Board of Governors (formerly known as Administrative Committee) from 1981, and was the Boston Chapter Chairman of the IEEE Vehicular Technology Society from 1974 to 1976. I previously served as 1996-1997 President of the IEEE Consumer Electronics Society, and have served as Chairman of the Society's Technical Activities and Standards Committee. I have served as Vice President of Publications for the Society and VP of Standards and Industrial Activities. I am currently The Historian for The IEEE Consumer Technology Society (former Consumer Electronics Society). I have also served as the chair and as a committee member for the IEEE Ibuka Award in the field of consumer technology.

11. I have also prepared and presented many papers at IEEE and other professional meetings. For example, in Fall 2000, I served as general program chair for the IEEE Vehicular Technology Conference on advanced wireless communications technology. I have also organized sessions at The International Conference on Consumer Electronics and was the 1984 program chairman. I also conducted an eight-week IEEE sponsored short course on Fiber Optics System Design. I was awarded IEEE's Centennial Medal in 1984 and I was awarded the IEEE's Millennium Medal in 2000. A listing of my publications is included as part of my curriculum vitae, which I understand is provided in Ex-1004.

12. As Vice President and Standards Group Chairman of the Association of Computer Users (“ACU”), I served as the ACU representative to the ANSI X3 Standards Group. I also served as Chairman of the task group on user rule compliance for the FCC’s Citizens Advisory Committee on Citizen’s Band (“CB”) radio (“PURAC”).

13. I have been elected to membership in the Society of Cable Television Engineers (“SCTE”), Cable TV Pioneers, the ACM, and The Society of Motion Picture and Television Engineers (“SMPTE”). I also served as a member of the USA advisory board to the National Science Museum of Israel, presented a short course on international product development strategies as a faculty member of Technion Institute of Management in Israel, and served as a member of the board of directors of The Massachusetts Future Problem Solving Program.

14. I am a named inventor on seven United States patents and am the author of several publications related to data communications, including publications by Electronics Design, Microwaves, Electronic Design News (EDN), The Proceedings of the Frequency Control Symposium, Optical Spectra, and IEEE.

15. For 25 years, I worked for Arthur D. Little, Inc. (“ADL”), where I became Vice President and Director of Communications, Information Technology, and Electronics (“CIE”). At ADL, I was responsible for the firm’s global CIE practice in laboratory-based contract engineering, product development, and

technology-based consulting. While employed at ADL, my projects included multiple applications of technology to support next generation financial and ecommerce applications. These projects include electronic wallet applications incorporated into cellphones, as well as standalone devices. I was involved in the application and study of smart card technology in financial transactions and cybersecurity.

16. Prior to my time at ADL, I served as a Section Manager for Bell & Howell Communications Company for four years. Prior to working at Bell & Howell, I served as a Project Engineer for Motorola's Communications Division for three years. At both Bell & Howell and Motorola, I had project design responsibility for wireless communication and paging products.

17. During my career, I have been heavily engaged in the study, analysis, evaluation, design, and implementation of products and services making use of emerging technology in the overlap between telecommunications, information technology, media, and consumer electronics.

18. From 2004 through 2008 I served as The Chief Technology Officer (CTO) for a mobile wallet startup called "Chameleon Networks Inc." During this time, I contributed to the technology development, constructed prototypes, and applied for several patents as a named inventor.

19. I am very familiar with electronic payment systems due to various related project work. I performed several projects directed to security properties of card media for an association of credit card issuers. These projects involved the consideration and evaluation of technologies including RFID, magnetic watermark, Smart Cards, optical storage cards, and holographic storage cards. Under contract to several trade associations representing the grocery industry, I developed recommendations to permit compatible electronic data interchange between suppliers and retail stores at the store level, including the use of Smart Card and digital signature technology. For Mastercard I investigated the impact of implementing new card media technologies in their credit card authorization network, including the consideration of Smart Cards, optical storage cards, card calculators, and other developing technologies.

20. A summary of my complete qualifications can be found in my CV.

21. In light of the foregoing, I believe that I am qualified to provide an opinion as to what a person of ordinary skill in the art would have understood, known, or concluded regarding the subject matter of the '296 patent at the time of its alleged invention.

III. MATERIALS CONSIDERED

22. In forming my opinions, I have reviewed the following documents:

Exhibit	Description
Ex-1001	U.S. Patent No. 10,796,296 B2 to Ballout (“the ’296 patent”)
Ex-1002	File History for U.S. Patent No. 10,796,296 B2
Ex-1005	U.S. Patent Application Publication No. 2010/0078472 A1 to Lin et al. (“ <i>Lin</i> ”)
Ex-1006	U.S. Patent Application Publication No. 2008/0010192 A1 to Rackley III et al. (“ <i>Rackley</i> ”)
Ex-1007	U.S. Patent Application Publication No. 2007/0255652 A1 to Tumminaro et al. (“ <i>Tumminaro</i> ”)
Ex-1008	Apple Inc., iPhone User Guide For iPhone OS 3.1 Software (2009)
Ex-1009	U.S. Patent Application Publication No. 2012/0267432 A1 to Kuttuva et al. (“ <i>Kuttuva</i> ”)
Ex-1010	Stamatis Karnouskos, <i>Mobile Payment: A Journey Through Existing Procedures and Standardization Initiatives</i> , IEEE Communications Surveys & Tutorials, Vol. 6, No. 4, pp. 44-66 (2004) (“ <i>Karnouskos</i> ”)
Ex-1011	Cynthia Merritt, <i>Mobile Money Transfer Services: The Next Phase in the Evolution in Person-to-Person Payments</i> , Retail Payments Risk Forum White Paper, Federal Reserve Bank of Atlanta (Aug. 2010) (“ <i>Merritt</i> ”)
Ex-1012	U.S. Patent No. 8,001,045 B1 to McClinton (“ <i>McClinton</i> ”)

IV. LEGAL STANDARDS

23. I am not a lawyer. My understanding of the legal standards to apply in reaching the conclusions in this declaration is based on discussions with counsel for Petitioner, my experience applying similar standards in other patent-related matters, and my reading of the documents submitted in this proceeding. In preparing this declaration, I have tried to faithfully apply these legal standards to the challenged claims.

24. I have been informed that there are two ways in which prior art may render a patent claim unpatentable. First, I have been informed that the prior art can “anticipate” a claim. Second, I have been informed that the prior art can render a claim “obvious” to a person of ordinary skill in the art. I understand that a claim is patentable if it was not anticipated and would not have been obvious by the prior art at the effective filing date of the patent.

25. I have been informed that a dependent claim is a patent claim that refers back to another patent claim. I have been informed that a dependent claim includes all of the limitations of the claim to which it refers.

26. I have been asked to provide my opinions as to whether the cited prior art teaches or renders obvious claims 1-14 of the '296 Patent from the perspective of a person of ordinary skill in the art at the '296 Patent's earliest claimed priority date of July 18, 2011, as described in more detail below. I have been informed that in *inter partes* review proceedings, such as this one, the party challenging the patent bears the burden of proving unpatentability by a preponderance of the evidence. I understand that a preponderance of the evidence means “more likely than not.”

27. For purposes of this declaration, I have been asked to provide my opinions on issues regarding unpatentability. I have been informed of the following legal standards, which I have applied in forming my opinions.

A. Level of Ordinary Skill

28. I have been informed a person of ordinary skill in the art is determined by considering several factors, including the (i) type of problems encountered in the art; (ii) prior art solutions to those problems; (iii) rapidity with which innovations are made; (iv) sophistication of the technology; and (v) educational level of active workers in the field. I have been instructed to assume a person of ordinary skill in the art is not a specific real individual, but rather a hypothetical individual having the qualities reflected by the factors discussed above.

B. Prior Art

29. I have been advised and understand the information used to evaluate whether an invention was new and not obvious when made is generally referred to as “prior art.” I understand that prior art includes patents and printed publications that existed before the earliest claimed priority date or the earliest filing date of the patent (which I have been informed is also called the “effective filing date”). I have been informed and understand that a patent or published patent application is prior art if it was filed before the earliest filing date of the claimed invention and that a printed publication is prior art if it was publicly available before the earliest filing date.

C. Anticipation

30. I have been informed that under 35 U.S.C. § 102, a patent claim is unpatentable for anticipation if it is not novel, including if the claimed subject matter was patented or described in a printed publication before the effective filing date of the claimed invention. I have been informed that this is referred to as unpatentability by anticipation. I have been informed that a patent claim is anticipated under § 102 if a single prior art reference discloses all limitations of the claimed invention.

D. Obviousness

31. I have been informed that under 35 U.S.C. § 103, a patent claim is unpatentable if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to a person having ordinary skill in the art to which said subject matter pertains at the time the invention was made. I have been informed that this is referred to as unpatentability by obviousness.

32. I have been informed that a proper obviousness analysis includes the following: (a) determining the scope and content of the prior art; (b) ascertaining the differences between the prior art and the claims at issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) considering evidence of secondary indicia of non-obviousness (if available). I am not aware of any evidence of secondary

considerations that would support a determination of non-obviousness of the claimed subject matter in the '296 patent.

33. I have been informed that the relevant time for considering whether a claim would have been obvious to a person of ordinary skill in the art is the time of invention. For my obviousness analysis, counsel for Petitioner instructed me to assume that the date of invention for the Challenged Claims is July 18, 2011. My opinions would not change if I assumed a later date of invention.

34. I have been informed that a reference may be modified or combined with other references or with a person of ordinary skill in the art's own knowledge if the person would have found the modification or combination obvious. I have also been informed that a person of ordinary skill in the art is presumed to know all the relevant prior art, and the obviousness analysis may take into account the inferences and creative steps that a person of ordinary skill in the art would employ.

35. I have been informed that whether a prior art reference renders a patent claim obvious is determined from the perspective of a person of ordinary skill in the art. I have also been informed that, while there is no requirement that the prior art contain an express suggestion to combine known elements to achieve the claimed invention, and while a suggestion to combine known elements to achieve the claimed invention may come from the prior art as a whole or individually and may consider the inferences and creative steps a person of ordinary skill in the art would employ,

as filtered through the knowledge of one skilled in the art, obviousness grounds cannot be sustained by mere conclusory statements and must include some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.

36. In determining whether a prior art reference could have been combined with another prior art reference or other information known to a person having ordinary skill in the art, I have been informed that the following principles may be considered:

- a. A combination of familiar elements according to known methods is likely to be obvious if it yields predictable results;
- b. The substitution of one known element for another is likely to be obvious if it yields predictable results;
- c. The use of a known technique to improve similar items or methods in the same way is likely to be obvious if it yields predictable results;
- d. The application of a known technique to a prior art reference that is ready for improvement to yield predictable results;
- e. Any need or problem known in the field and addressed by the reference can provide a reason for combining the elements in the manner claimed;

f. A person of ordinary skill often will be able to fit the teachings of multiple references together like a puzzle; and

g. The proper analysis of obviousness requires a determination of whether a person of ordinary skill in the art would have a “reasonable expectation of success”—but not “absolute predictability” of success—in achieving the claimed invention by combining prior art references.

37. I have been informed that, when a work is available in one field, design alternatives and other market forces can prompt variations of it, either in the same field or in another. I have been informed that if a person of ordinary skill in the art could have implemented a predictable variation and would have seen the benefit of doing so, that variation is likely to have been obvious. I have been informed that, in many fields, there may be little discussion of obvious combinations, and in these fields market demand—not scientific literature—may drive design trends. I have been informed that, when there was a design need or market pressure and there are a finite number of predictable solutions, a person of ordinary skill in the art would have had a good reason to pursue those known options.

38. I have been informed that the law permits the application of “common sense” in examining whether a claimed invention would have been obvious to a person skilled in the art. For example, I have been informed that combining familiar elements according to known methods and in a predictable way may suggest

obviousness when such a combination would yield nothing more than predictable results. I understand, however, that a claim is not obvious merely because every claim element is disclosed in the prior art and that a party asserting obviousness must still provide a specific motivation to combine or modify the references as recited in the claims and explain why one skilled in the art would have reasonably expected to succeed in doing so.

39. I have been informed that there is no rigid rule that a reference or combination of references must contain a “teaching, suggestion, or motivation” to combine references. But I also understand that the “teaching, suggestion, or motivation” test can be a useful guide in establishing a rationale for combining elements of the prior art. I have been informed that this test poses the question as to whether there is an express or implied teaching, suggestion, or motivation to combine prior art elements in a way that realizes the claimed invention, and that it seeks to counter impermissible hindsight analysis.

40. I have been informed that, in an obviousness analysis, prior art must be analogous prior art to the patent being considered. I have been informed that a prior art reference is considered to be analogous, or in the same field of art, if the reference is either (1) in the same field of endeavor as the challenged patent, regardless of the problems the challenged patent and the prior art address, or (2) reasonably pertinent to the particular problem being solved by the challenged patent.

V. TECHNICAL BACKGROUND

41. The ability to make electronic payments using mobile devices was known in the art well before the '296 patent's earliest alleged priority date of July 18, 2011. Ex-1001, 2:4-40; *Lin*, [0009]; *Rackley*, [0027]; *Tumminaro*, [0021]; Ex-1009, [0023]; Ex-1010, 45. By 2003, mobile payment transaction revenue had already reached \$3.2 billion worldwide. Ex-1010, 48. These mobile payment capabilities include person to person (P2P) payments, in which a sender can provide funds to a recipient for a specified amount. Ex-1011, 16. Indeed, *Karnouskos* identifies nearly one hundred examples of different mobile payment platforms as of 2004. Ex-1010, 58-66.

42. The '296 patent itself acknowledges that such payment systems enabled users to input payment information, such as the identity of a payee, a payment amount, and a payment source via the user's mobile device. Ex-1001, 2:14-34; *Lin*, [0122]; *Rackley*, [0159]; *Tumminaro*, [0304]. This transaction information was then communicated to a financial institution to fulfill the payment request. Ex-1001, 2:14-34; *Lin*, [0122]; *Rackley*, [0159]; Ex-1009, [0082]; Ex-1010, 45; Ex-1011, 16. Such services thereby enabled payments using bank accounts, credit cards, or other financial accounts via a mobile device. Ex-1001, 2:14-34; *Lin*, [0115]; *Rackley*, [0189]; *Tumminaro*, [0136]; Ex-1010, 45. As demonstrated below, allowing registered users to conduct cash-like transactions using a third-party

payment source, as represented in the '296 patent, was not an advance over the prior art.

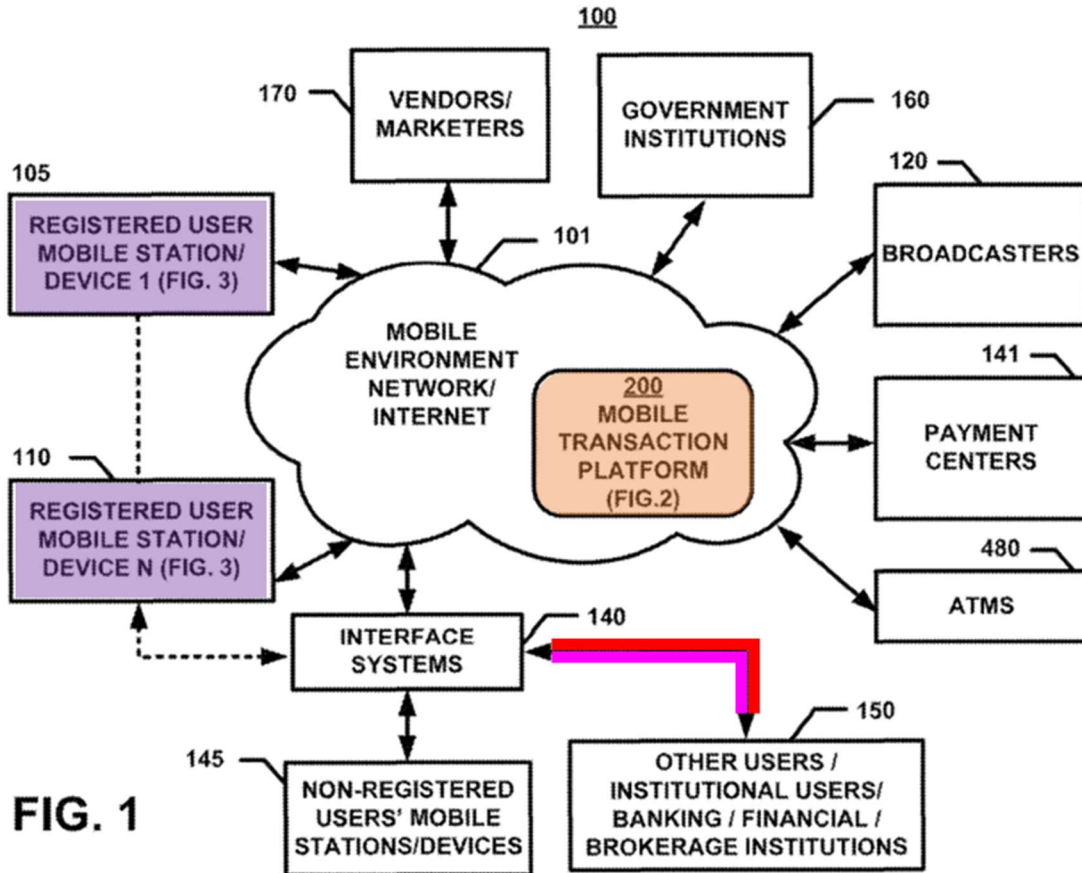
VI. THE '296 PATENT

A. Overview of the '296 patent

43. The application leading to the '296 patent was filed on May 22, 2020, and claims priority to earlier-filed applications dating back to July 18, 2011. Ex-1001, Cover, 2. For purposes of this declaration, I have assumed the '296 patent is entitled to claim July 18, 2011, as the date of invention.

44. The '296 patent discloses a system enabling financial transactions, including the exchange of cash, through a mobile telecommunications environment. Ex-1001, Abstract. As the patent explains, “the present invention, including the applicable software application, could be integrated with available devices or systems, such as, for example only, Apple Computer, Inc.’s iPhones, iPods, and iPads.” Ex-1001, 23:63-66.

45. Specifically, the system enables **registered users** to interface with **credit card companies**, **financial institutions**, and **other registered users**:



Ex-1001, Fig. 1, 9:23-40.¹ Via the platform, a registered user may login (Ex-1001, Fig. 3F, 11:5-13), add payment sources (Ex-1001, Fig. 6B, 7E-7G, 19:1-17), select payment functions (Ex-1001, Fig. 3J, 12:7-12), identify a payee (Ex-1001, Fig. 4B, 12:21-30), choose a payment source (Ex-1001, Fig. 4D-4G, 12:52-62), choose a payment amount (Ex-1001, 12:52-62), select the interface associated with the chosen payment source (Ex-1001, Fig. 1, 9:23-40), request payment, and notify another registered user of the payment (Ex-1001, 15:23-32).

¹ All color and colored annotations in figures have been added.

46. The purported advantage of the '296 patent arises from the ability of registered users to conduct "cashless transactions," thus "dispens[ing] with the use of cash." Ex-1001, 2:35-40, 5:3-7. The '296 patent acknowledges that secure mobile financial transactions via interfaces that allow the selection of a payment source, a payment amount, a payee identification, and payment method was known. Ex-1001, 2:4-34.

B. Summary of the Prosecution History of the '296 patent

47. I have reviewed the prosecution history of the application that led to the '296 patent. *See* Ex-1002. The claims were rejected during prosecution on the grounds of nonstatutory double patenting. Ex-1002, 74-77. The claims were then allowed following a terminal disclaimer filed by the applicant. *See* Ex-1002, 61-65, 8-9.

C. Claim Construction of Terms in the '296 patent

48. I have been informed that, for purposes of *inter partes* review, the standard for construction of terms in a patent's claims is the same as that applied in federal district court litigation. I understand that under this standard, the meaning of claim terms is considered from the viewpoint of one of ordinary skill in the art at the time of the alleged invention.

49. I understand that a district court has yet to construe the claim terms of this patent. At this time, I see no need to construe any terms of the challenged claims

for the purposes of this proceeding. Accordingly, in preparing my analysis I have applied the ordinary and customary meaning that each claim term would have had to POSITA in light of the '296 patent's specification and prosecution history.

50. If any claim terms are differently construed, I reserve the right to reassess my opinions under those constructions.

VII. PERSON OF ORDINARY SKILL IN THE ART

51. As discussed above, I have been informed that patentability must be analyzed from the perspective of a "person of ordinary skill in the art" in the same field as the patent-in-suit at the time of the invention.

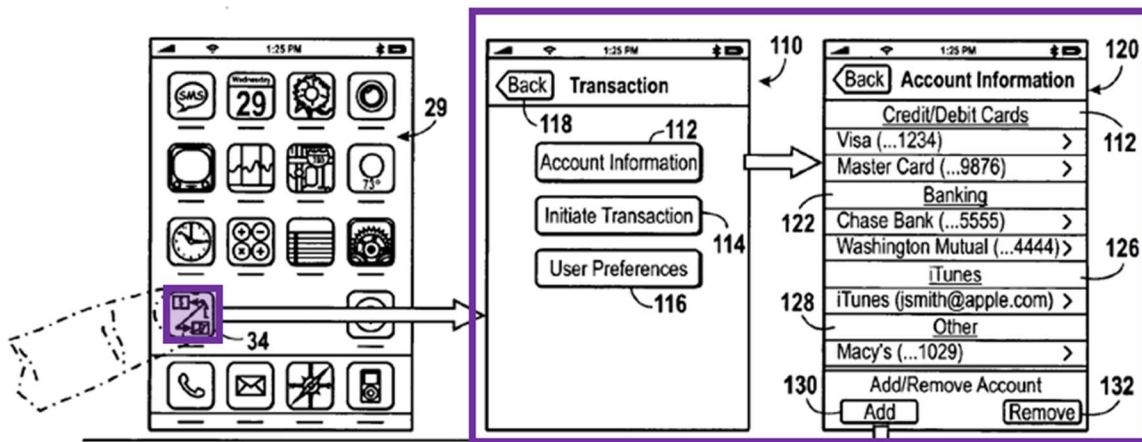
52. I refer to a person of ordinary skill in the art here as a "POSITA." A POSITA in this case would have had at least a bachelor's degree in electrical engineering, computer science, or a similar field and at least two years of experience in the field of mobile applications and/or related payment systems. Additional relevant work experience can compensate for less education, and vice versa. I at least meet this definition of a POSITA, now and as of the priority date of the '296 patent.

53. I am also familiar with the knowledge of a POSITA as of the priority date of the '296 patent. I am able to opine on how a POSITA would have understood the disclosure and claims of the '296 patent, the disclosures of the prior art, the various motivations to combine the prior art, and what combinations would have been obvious to a POSITA.

VIII. THE PRIOR ART

A. Overview of *Lin* (Ex-1005)

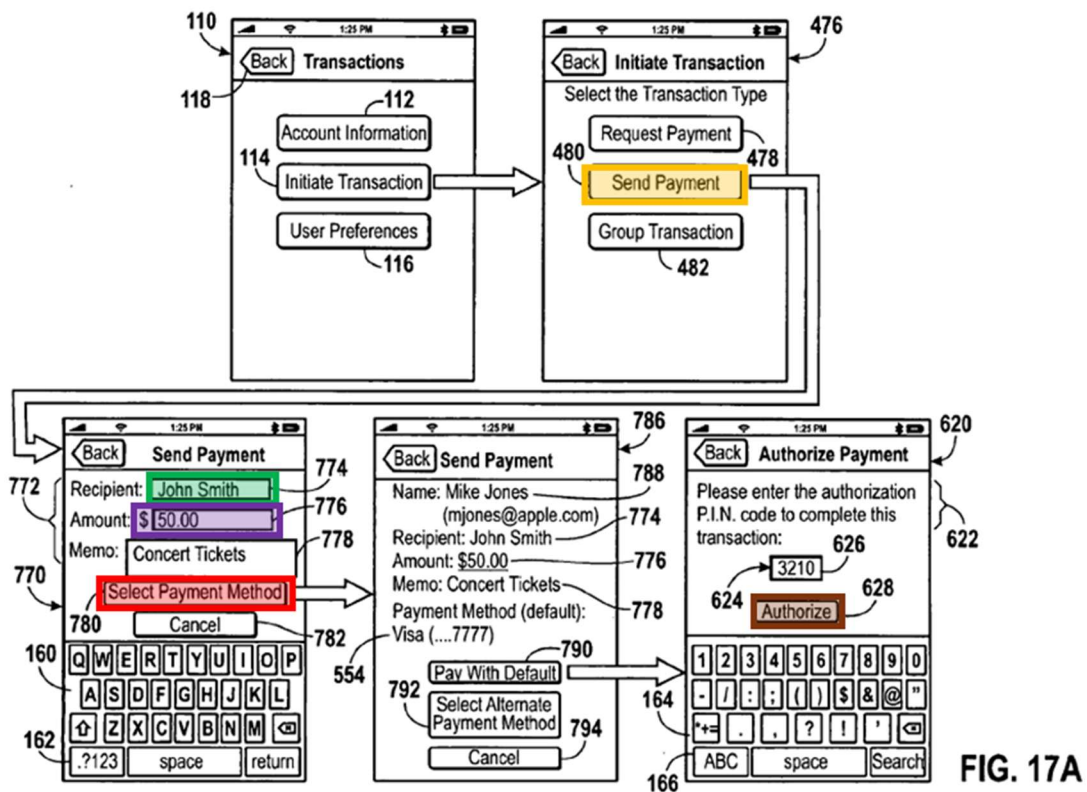
54. I have been told that U.S. Patent Application Publication No. 2010/0078472 to Lin (“*Lin*”; Ex-1005) is prior art. *Lin* discloses a system for “carrying out peer-to-peer financial transactions using one or more electronic devices.” *Lin*, Abstract. In an exemplary embodiment, *Lin* discloses that its system operates within the Apple™ ecosystem and “the electronic device 10 may be a model of an iPhone®, available from Apple Inc.” *Lin*, [0085]. In *Lin*’s system, these “electronic device[s] ... include one or more **transaction applications** for providing the transaction related techniques and capabilities.” *Lin*, [0085].



Lin, Fig. 5A.

55. *Lin*’s transaction application provides various user interfaces enabling a user to initiate and receive transactions with users of other devices. *Lin*, [0121]. For example, *Lin* provides a screen 120 (shown above) enabling users to add

accounts as payment sources for transactions. *Lin*, [0215]. And shown below, *Lin*'s transaction application enables a payor to initiate a transaction using a **send payment function**:

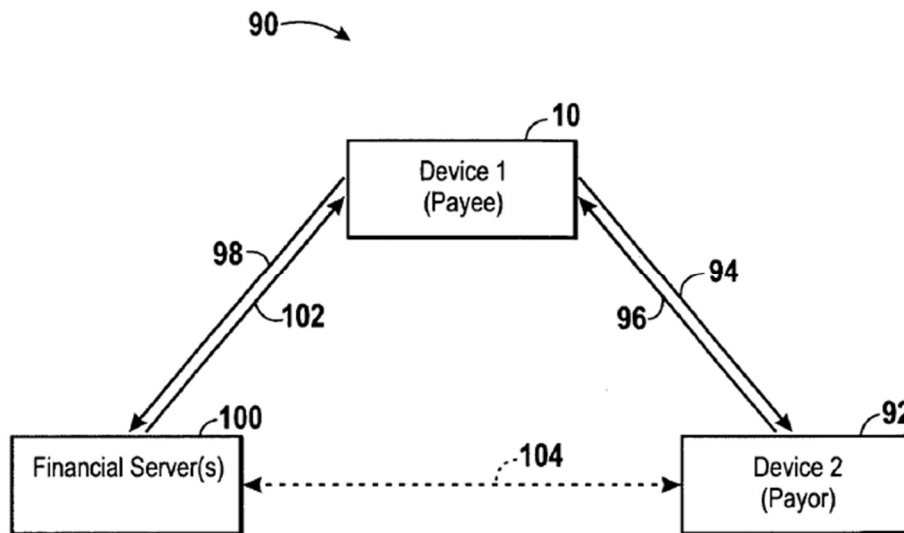


Lin, Fig. 17A. The transaction application also allows the payor to **select a payee**, **choose a payment source**, **specify a payment amount**, and **initiate the transaction**. *Lin*, [0245], Fig. 17A. And upon completion, a notification message is displayed to the payee. *Lin*, [0250].

56. *Lin* also provides cashless transactions between the payor and payee. *Lin*, [0115] (describing “non-cash accounts ... stored alongside financial accounts”), [0259]-[0262]. For example, *Lin*, discloses a transaction process for exchanging

“a non-cash asset, in this case, iTunes® credits.” *Lin*, [0260]. These non-cash accounts are used as a “medium of exchange with at least one party, such as the institution holding or maintaining the non-cash account.” *Lin*, [0115].

57. When conducting the various transactions, the payee device and payor device communicate transaction information via a short-range interface, such as near field communication (NFC). *Lin*, [0011]. For example, the payor device may provide transaction information to the payee device via NFC, and the payee device may communicate with one or more financial institutions to carry out the transaction. *Lin*, [0085], [0256].

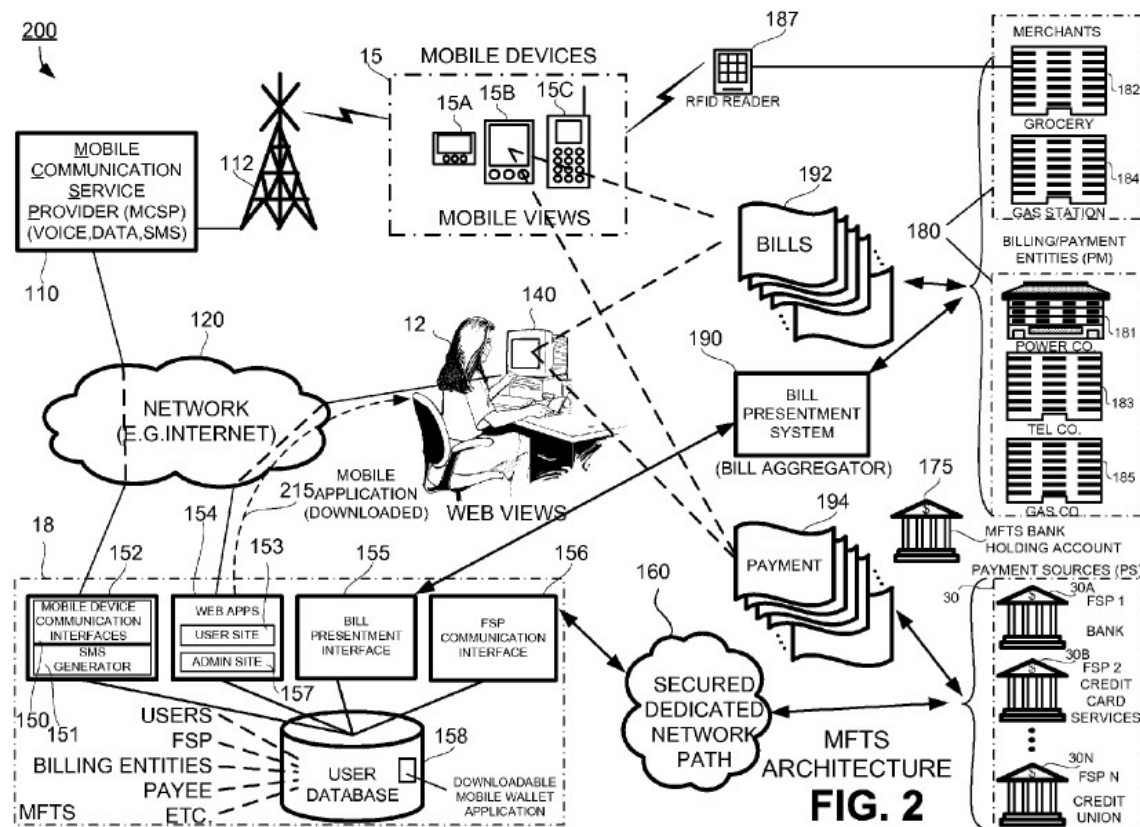


Lin, Fig. 4.

B. Overview of *Rackley* (Ex-1006)

58. I have been told that U.S. Patent Application Publication No. 2008/0010192 to Rackley (“*Rackley*”; Ex-1006) is prior art. *Rackley* discloses a

system similar to the '296 patent and *Lin* for conducting a “mobile financial payment utilizing a mobile device.” *Rackley*, Abstract. *Rackley*’s system includes a “Mobile Wallet application” facilitating transactions between payor and payee devices. *Rackley*, [0035]. In *Rackley*, the mobile devices 15 communicate with a central mobile financial transaction system (MFTS) 18. *Rackley*, [0146].



Rackley, Fig. 2. To use *Rackley*'s MFTS application, "a user 12 with a suitable mobile device 15 must register for service with an entity that operates [the] MFTS 18." *Rackley*, [0255]. *Rackley* enables users to transfer funds using various forms of accounts, such as credit card or banking accounts. *Rackley*, [0186].

59. *Rackley* also discloses conducting a “balance transfer,” described as “a financial transaction involving the transfer of funds between different accounts of the same user.” *Rackley*, [0447]. This allows a device user “to use his or her mobile device to obtain and monitor information relating [to] the user’s financial accounts, and move funds from one account to another.” *Rackley*, [0447].

C. Overview of *Tumminaro* (Ex-1007)

60. I have been told that U.S. Patent Application Publication No. 2007/0255652 to Tumminaro (“*Tumminaro*”; Ex-1007) is prior art. *Tumminaro* discloses “[a] mobile payment platform [that] provides a fast, easy way to make payments [on] users of mobile devices.” *Tumminaro*, Abstract. In exemplary embodiments, *Tumminaro* teaches “systems and techniques for effectuating financial transactions via mobile devices.” *Tumminaro*, [0003]. *Tumminaro* appreciated the “great need for a system to permit mobile phones to send and receive payment, just like cash, and provide other financial and mobile banking transactions.” *Tumminaro*, [0010].

IX. OPINIONS ON UNPATENTABILITY

61. The following prior art, in my opinion, render claims 1-14 of the ’296 patent obvious:

Ground	Claims	Basis	Prior Art
1	1-14	§ 103	<i>Lin</i> and <i>Rackley</i> .
2	1-14	§ 103	<i>Lin</i> , <i>Rackley</i> , and <i>Tumminaro</i> .

A. Ground 1: Claims 1-14 Are Rendered Obvious by *Lin* and *Rackley*

1. Combination of *Lin* and *Rackley*

62. In my opinion, a POSITA would have been motivated to modify *Lin*'s payment system so as to enable “balance transfers,” as taught by *Rackley*.

63. As I explained above, *Rackley* teaches a “balance transfer” that enables exchanging funds “between different accounts of the same user.” *Rackley*, [0447]. A POSITA would have been motivated to incorporate *Rackley*'s balance transfer capabilities into *Lin* to provide additional functionalities to the users of *Lin*'s transaction application. For example, a POSITA would have recognized that balance transfer functionality provides users with additional tools for managing their funds, including the ability “to obtain and monitor information relating [to] the user's financial accounts” and “move funds from one account to another.” *Rackley*, [0447].

64. *Rackley* recognizes that consumers “must be able to ‘Pay Anyone’, at any time, in any of a number of different ways.” *Rackley*, [0024]. Consumers “must be provided with the information they need to conduct a transaction—and only such information as is necessary—and this information must be current.” *Rackley*, [0024].

Rackley describes these requirements as “desirable,” and in some cases, “absolutely essential.” *Rackley*, [0025]; *see also Rackley*, [0043] (describing “information about current account balances provided in real time”). *Rackley*’s balance transfer feature provides this flexibility, enabling users to move funds to different accounts of the same user. *Rackley*, [0447]. And these balances are updated in real time to provide up-to-date information to the user. *Rackley*, [0456]; *see also Rackley*, [0043].

65. In my opinion, a POSITA would have recognized that users of *Lin*’s system would enjoy these same benefits. For example, as *Lin* recognizes, if a payor attempts to complete a payment but a selected account has insufficient funds, the transaction will fail. *Lin*, [0130]. *Rackley*’s balance transfer feature enables a user to “obtain and monitor information relating the user’s financial accounts, and move funds from one account to another,” and thus avoid failed transactions. *Rackley*, [0047]; *see also* [0373] (describing “receipt of a payment by the recipient and relatively fast (virtually instant) availability of the funds”). A POSITA would have understood that *Rackley*’s balance transfer capabilities help fulfill these consumer requirements. Indeed, *Rackley* describes similar instances in which a transaction will fail due to insufficient funds in a selected payment source account. *Rackley*, [0365]. This emphasizes the need for flexibility in transferring funds between accounts and providing information about current account balances in real time. *Rackley*, [0043].

66. In my opinion, a POSITA would have also understood that such balance transfers would be particularly beneficial in the context of *Lin* because the transfers would enable a user to fund (or withdraw funds) from “a user’s online music/media subscription or purchase account, such as an iTunes® account.” *Lin*, [0115]. As *Lin* explains, “[a]n iTunes® account may include a number of ‘credits’ by which a user may redeem or exchange at the iTunes® online media store for media files, such as music files, movie files, audiobooks, podcasts, or the like.” *Lin*, [0115]. Although these “credits” are described as “a non-cash medium” (*Lin*, [0254]), a POSITA would have understood that such credits would have been acquired using a bank account or credit card. For example, *Lin* shows \$50 being credited to an iTunes® account. *Lin*, Fig. 19C. A balance transfer enables a user to transfer funds from a bank account or credit card into an iTunes® account to acquire credits for purchase of media files. In my opinion, incorporating *Rackley*’s balance transfer feature would enhance *Lin*’s transaction application to enable users to add funds to their own iTunes® accounts.

67. A POSITA would have had a reasonable expectation of success in providing this form of balance transfer option within *Lin*. *Lin* already discloses performing transactions between different users, and in my opinion, it would have therefore been a straightforward (if not simpler) endeavor to likewise enable a user to conduct a balance transfer involving only a single user. As one example, the

transaction requires only a single user device—not two user devices—simplifying the number of devices that need to communicate and coordinate the transaction. And this would require minimal changes to *Lin*'s transaction application. To conduct the payment transfer, the user would select themselves as the payee, thus directing funds to their own payee account. And such adaptations were well within the purview of a POSITA.

68. In addition, *Rackley* provides a detailed explanation of this form of transfer. *Rackley*, Fig. 33, [0453]-[0456]. In my opinion, this explanation is particularly notable given that *Lin* and *Rackley* have compatible architectures. For example, *Lin* explains that its devices are configured for communicating over LAN and WAN interfaces, which “may provide longer-range communication channels.” *Lin*, [0106]; see also *Lin*, [0108]. *Rackley*'s system communicates with financial service providers using similar interfaces: “local-area networks (LANs), wide-area networks (WANs), etc.” *Rackley*, [0168].

69. As a result, implementing this balance transfer functionality in *Lin*'s system to allow a user to transfer assets between their own financial sources (e.g., credit card, bank accounts, third-party accounts) would have involved the use of conventional techniques, carried out according to their known functions. The combination would therefore yield predictable results.

2. Independent Claim 1

a. [1.pre]: “A system, comprising”

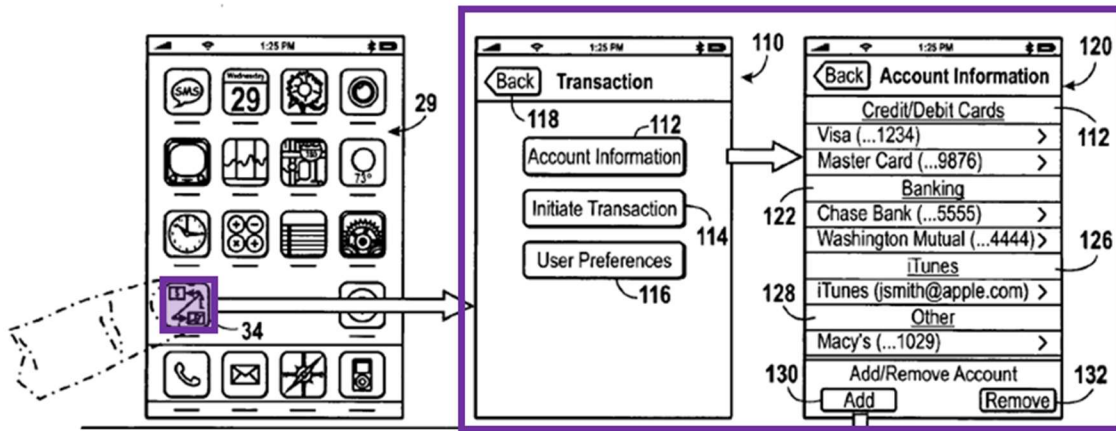
70. In my opinion, to the extent the preamble is limiting, *Lin* discloses it.

71. *Lin* discloses “various systems, methods, and electronic devices configured to initiate and process [peer-to-peer] transactions.” *Lin*, [0002]. *Lin* thus discloses a *system*.

b. [1.a.i]: “memory storing program code associated with a service provided by a third-party entity to a plurality of members who register with the service provided by the third-party entity,”

72. In my opinion, *Lin* discloses and/or the *Lin-Rackley* combination renders obvious [1.a.i].

73. *Lin* discloses *memory storing program code associated with a service*. *Lin*’s system includes an electronic device 10, which may be “an iPhone®, available from Apple Inc.” *Lin*, [0085]. Device 10 includes a “**transaction application (e.g., represented by icon 34)**” (i.e., *program code*) that performs the various functionalities for conducting transactions. *Lin*, [0121]. This **transaction application** is shown below in the context of device 10’s user interface:



Lin, Fig. 5A (partially reproduced). The **transaction application** “include[s] encoded instructions [(i.e., *program code*)] stored on one or more machine readable media, such as the storage device 54” of device 10. Lin, [0375]. Lin’s transaction application is thus stored in the memory of device 10.

74. Lin’s transaction application is also *associated with a service provided by a third-party entity: Apple. See Lin, [0085]* (describing “transaction applications for providing the transaction related techniques and capabilities”), [0115], [0252]-[0254], [0375]. Lin discloses the transaction application being accessed through “iTunes® accounts held by the payee and payor.” Lin, [0255]-[0256]. Using this **transaction application**, users may exchange non-cash assets by “a user’s online music/media subscription or purchase account, such as an iTunes® account available through the iTunes® online digital media store, developed and operated by Apple Inc.” Lin, [0115].

75. The service in *Lin* is provided ... to a plurality of members who register with the service provided by the third-party entity. A POSITA would have recognized that users of iTunes® accounts and the iPhone® would need to register with Apple for these services. *Lin*, [0115], [0252] (disclosing “an iTunes® account, available through the iTunes® online digital media store/service operated and managed by Apple Inc”), [0254]. For example, the iPhone user guide explains that “[t]o use iPhone, you need: ... [a]n iTunes Store account.” Ex-1008, 9-10. This registration would have included, for example, setting up a particular username and password. Ex-1008, 9 (“To use iPhone, you need: ... iTunes 8.2 or later ... [and] [a]n iTunes Store account....”). *Lin*’s transaction application is thus provided by Apple to a plurality of members who register with Apple’s ecosystem.

76. Furthermore, register[ing] with [a] [transaction application] by the third-party entity was well known in the art. See, e.g., Ex-1009, [0137] (“Users can create accounts by registering themselves and creating their usernames and passwords by visiting the Payintele website or from a Payintele mobile phone application installed on a mobile device.”); Ex-1011, 15 (describing a mobile “transfer from one registered user to another using SMS texting”). For example, to use *Rackley*’s MFTS application, “a user 12 with a suitable mobile device 15 must register for service with an entity that operates an MFTS 18 constructed in accordance with exemplary aspects of the invention.” *Rackley*, [0255]. Such

registration methods were well known as of the '296 patent's priority date. To the extent not disclosed by *Lin*, a POSITA would have been motivated to incorporate *Rackley*'s registration capabilities to ensure that sensitive financial information may only be exchanged between registered users to improve system security.

77. In my opinion, a POSITA would have also had a reasonable expectation of success in incorporating these features. For example, *Rackley*'s MFTS server provides these registration features. *Rackley*, [0184]. And *Rackley* describes a user site 153 hosted by this server for enabling users "to enroll to receive services by providing appropriate information such as name, address, mobile number, etc., to obtain a username and a password for security purposes." *Rackley*, [0184]. *Lin* already includes a similar "iTunes® server 818 configured to maintain the respective iTunes® accounts belonging to the payor and the payee." *Lin*, [0257]. A POSITA would have recognized that *Lin*'s server could host a similar page enabling this form of user registration, similar to what is disclosed in *Rackley*. See Ex-1008, 10 (explaining that users can "create an iTunes Store account, or specify an existing account, to enable purchases with iPhone").

- c. [1.a.ii]: “the program code including a first communication interface configured to communicate with a first device associated with a credit card company on behalf of the plurality of members, the program code including a second communication interface configured to communicate with a second device associated with a financial institution on behalf of the plurality of members, the program code including a third communication interface configured to communicate with a third device associated with the third-party entity; and”

78. In my opinion, *Lin* discloses [1.a.ii].

79. *Lin* discloses *communication interface[s]* configured to communicate with ... *device[s]* associated with financial providers. For example, *Lin* explains that “[o]nce the crediting account is selected on the payee device 10, ... ‘transaction information’ ... may be transmitted by the payee device 10 to one or more financial servers 100 for ... authorization and processing of the requested payment.” *Lin*, [0126]. This “communication with the financial servers 100 may be accomplished through one or more ... **communication interfaces**.” *Lin*, [0126]. These interfaces are shown below:

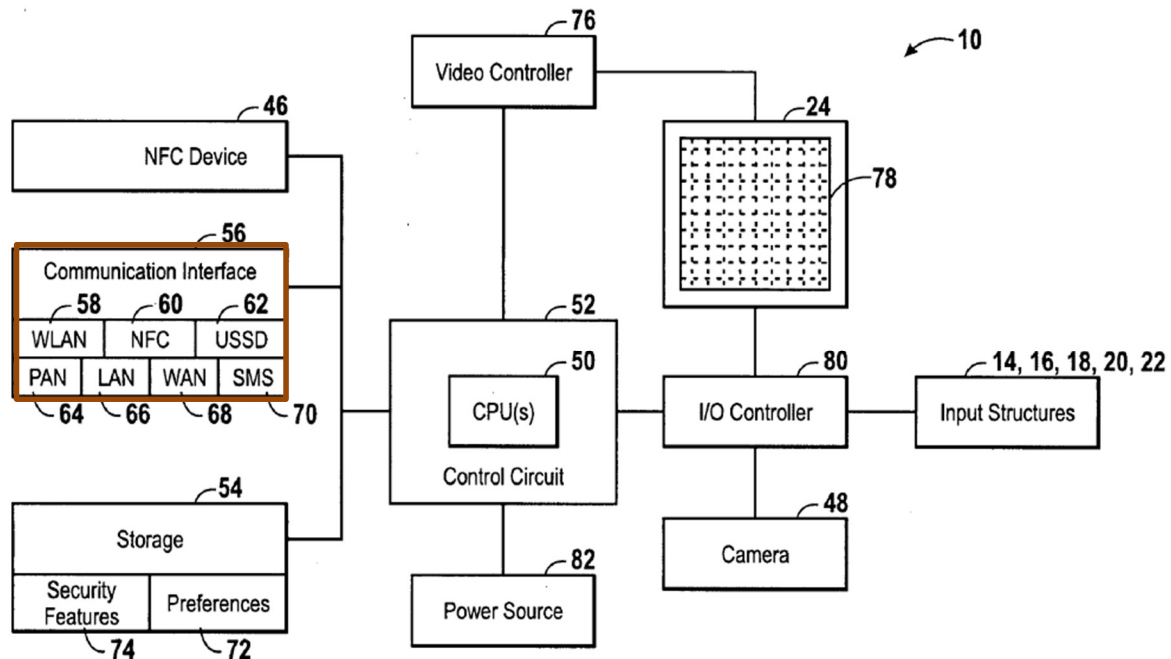


FIG. 3

Lin, Fig. 3. According to *Lin*, “one or more of the ... data encryption techniques and security protocols (e.g., SSL or TLS protocols) ... may be further utilized in order to facilitate the secure transmission of the transaction data 98 to the financial servers 100.” *Lin*, [0126].

80. In my opinion, a POSITA would have recognized that the code of *Lin*’s transaction application likewise includes communication interfaces to direct communications to different devices in the system. A POSITA would have further recognized that the portion of this program code causing instructions or other information to be transmitted to a particular destination is a communication interface within the meaning of the ’296 patent. As the ’296 patent explains, “the term ‘interface’ includes a ... software ... and/or a computer program product that is

typically embedded within, or installed on a computer, a server, or otherwise a dedicated auxiliary device.” Ex-1001, 9:50-58. This is what *Lin* discloses: communication interfaces within the code of the transaction application (i.e., software).

81. *Lin*’s communication interfaces include *a first communication interface configured to communicate with a first device associated with a credit card company*. In particular, *Lin*’s “transaction data 98 may be ... transmitted to a credit card verification server ... associated with a credit card company which maintains the payor’s selected credit card account, such as American Express® or MasterCard®.” *Lin*, [0128]. Each device 10 thus includes program code associated with the transaction application to interface with a credit card account and send instructions for direct payment via a credit card. *Lin*, [0121]. This interface (as well as the other communication interfaces described below) is configured to communicate *on behalf of the plurality of members* because the transaction information communicated to the financial server for authorization includes “the payment account information 96, and the selected crediting account”—information for both the payee and payor. *Lin*, [0126], [0192]; *see also Lin*, [0187] (“[F]inancial server 380 ... determine[s] whether the specified payment account and crediting account are compatible.”).

82. *Lin's* communication interfaces include *a second communication interface configured to communicate with a second device associated with a financial institution*. *Lin* explains that “instead of a credit card verification server, a transaction may be processed by multiple bank servers.” *Lin*, [0129]. A POSITA would have recognized that these bank servers would be *associated with a financial institution*. Each device 10 thus includes program code associated with the transaction application to interface with a financial institution (e.g., bank) and send instructions for direct payment via that financial institution.

83. *Lin's* communication interfaces include *a third communication interface configured to communicate with a third device associated with the third-party entity*. *Lin's* “financial servers 100 need not necessarily be limited to financial servers configured to manage monetary assets” and “may include a server managed by the iTunes® online server.” *Lin*, [0132]. As I explained, *Lin's* transaction application is provided by Apple Inc. *Lin*, [0252]. Each device 10 thus also includes program code associated with the transaction application to interface with iTunes® and send instructions for direct payment via iTunes®.

84. In my opinion, including different communication interfaces for different financial service providers, as disclosed by *Lin*, was well known in the art. For example, *Rackley* discloses “multiple **financial service provider communication interfaces 156** to partner Financial Service Providers (FSPs) 30 ...

to whom payment instructions are sent on behalf of a user.” *Rackley*, [0186]. And *Tumminaro* explains that “[e]ach partner system may have a different electronic interfacing scheme, and the mobile payment system will communicate using the appropriate application program interface (API) for each partner[, thus] ... allow[ing] easy integration of financial partners (e.g., banking partners, card partners) to mobile and other consumer partners (e.g., mobile phone carriers).” *Tumminaro*, [0255]. *Kuttuva* similarly discloses a system “connected to external entities such as partner banks, payment gateways, and other entities that may be required to provide various transactional services.” Ex-1009, [0137].

d. [1.b.i]: “one or more hardware processors configured to execute the program code to cause the system to perform a process of:”

85. In my opinion, *Lin* discloses [1.b.i].

86. *Lin* discloses a “**central processing unit (CPU) 50**” which may include “a single processor or, in other embodiments, it may include a plurality of processors” (i.e., *one or more hardware processors*). *Lin*, [0100].

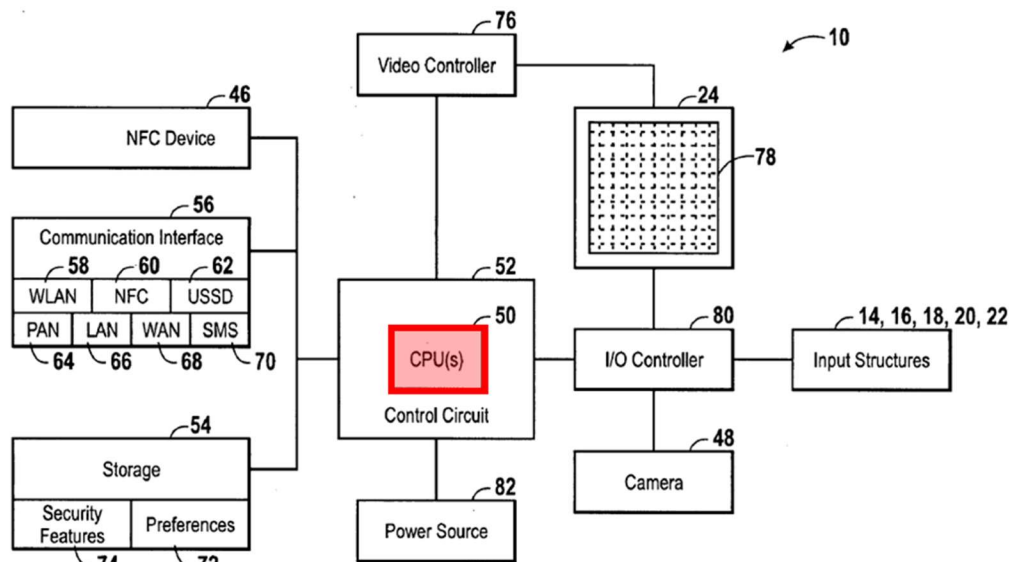


FIG. 3

Lin, Fig. 3. This CPU cooperates with a control circuit to “provide the processing capability required to execute an operating system, application programs, the GUI 28, and any other functions provided on the device 10.” *Lin*, [0100]. A POSITA would have understood that the CPU is thus *configured to execute the program code to cause the system to perform [the claimed] process*.

- e. [1.b.ii]: “providing a login interface requesting security credentials from a first member of the plurality of members before the first member can access the service, the first member having previously registered with the service”

87. In my opinion, *Lin* discloses and/or the *Lin-Rackley* combination renders obvious [1.b.ii].

88. *Lin* discloses various “security features 74 [that may be] available for each respective communication interface.” *Lin*, [0114]. These security features,

shown below, “include a secure access-restricted storage area ... to limit access to the data that may be required by the certain aspects of the security features 74, such as encryption keys, passcodes and passwords, digital certificates, or the like.” *Lin*, [0115].

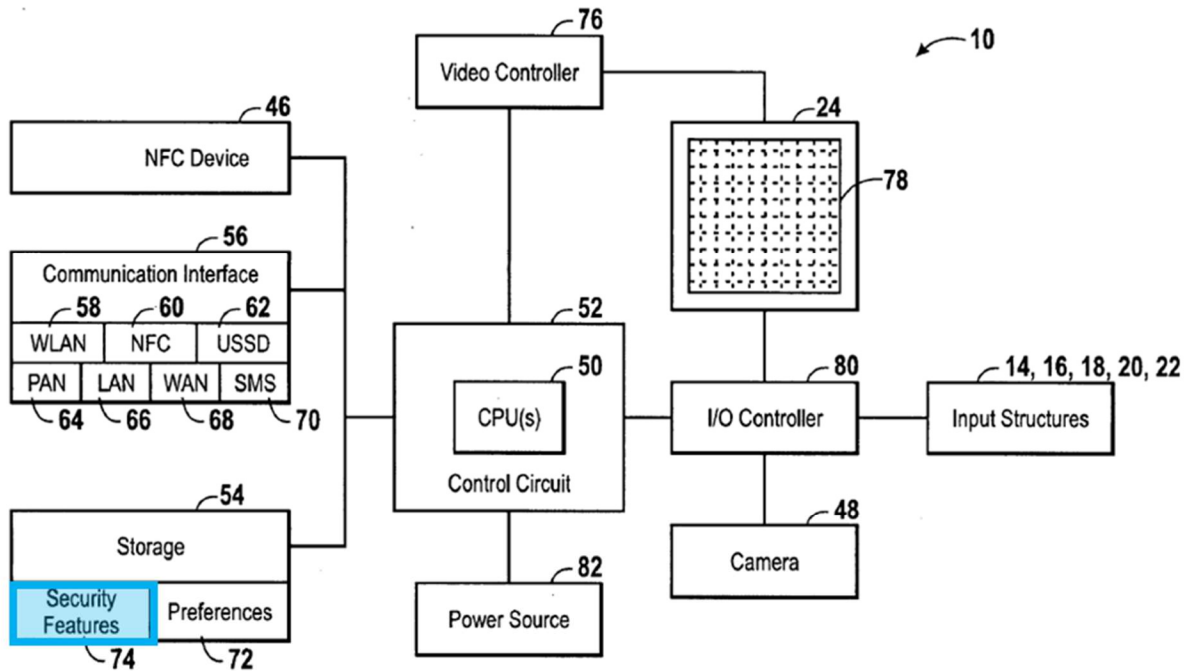


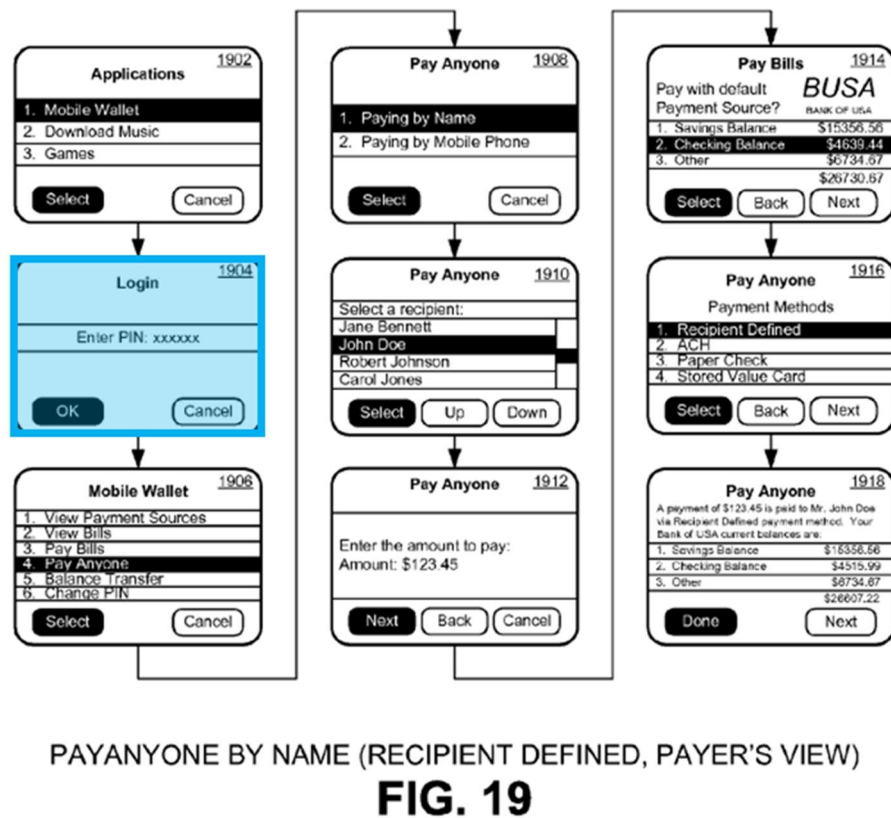
FIG. 3

Lin, Fig. 3. For example, *Lin*’s “security features 74 ... allow a user to lock or temporarily disable all (e.g., lock on power-up) or only certain functions on the device 10” such that, when locked, “peer-to-peer transaction features ... may be disabled or inaccessible by users until a user-specified PIN or password is provided.” *Lin*, [0116]. In my opinion, a POSITA would have understood that *Lin*’s security features would include a login interface to enable a user (i.e., member) to enter a

PIN or password and access the transaction application's peer-to-peer transaction features.

89. Indeed, the use of a login interface to present security credentials was well known in the art at the time of the '296 patent. For example, *McClinton* describes a process in which, to use an online banking service, the user “sign[s] in to the web site [which] may entail providing a correct userid and password, and/or using any other steps for ensuring that the person requesting access is an authorized person.” Ex-1012, 4:36-43; *see also Tumminaro*, Abstract (“[T]ransactions are conducted on a person-to-person basis where each party is identified by a telephone number and a password.”).

90. To the extent further disclosure is required, a POSITA would have also been motivated to modify *Lin* to include a login interface for requesting security credentials from a registered member before accessing the transaction application. *Rackley* teaches a *login interface for requesting security credentials*. For example, *Rackley* discloses a “Pay Anyone” process (shown below), during which “a conventional **user login screen** for entry of username and password (not shown) is provided.” *Rackley*, [0313].

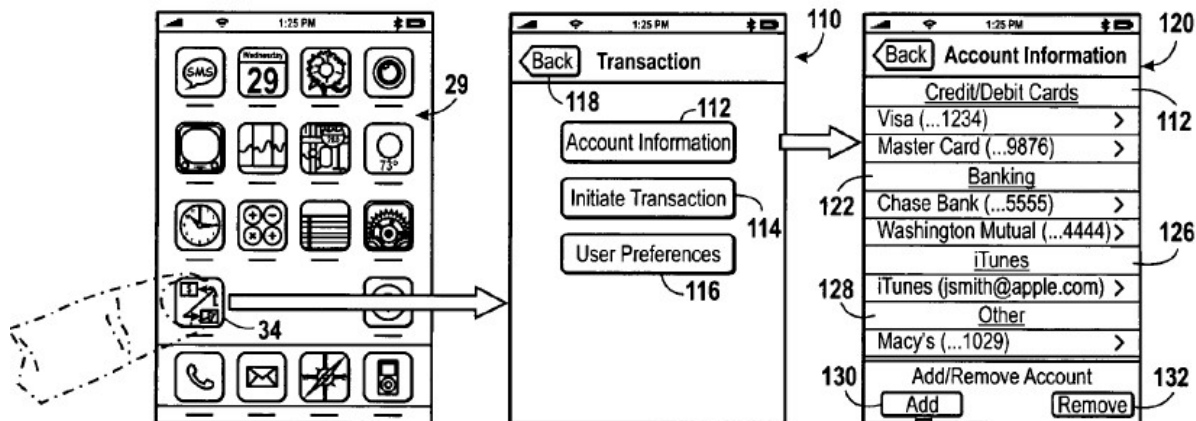


Rackley, Fig. 19.

91. Rackley's login interface is for *requesting security credentials from a first member of the plurality of members*. For example, in Rackley's "Pay Anyone" process, **login screen 1904** (shown above) is presented to a payer via the "payer's mobile device." Rackley, [0376]. When combined with *Lin*, the payer would be one of the registered members of the service. And Rackley expressly states that these security credentials are requested *before the first member can access the service* because they are required to access the mobile wallet. Rackley, [0339] (explaining that when the "user opens a 'Mobile Wallet' application on the mobile device 15[,] he/she is preferably required to log in by providing a password or PIN for

verification”), [0376] (explaining that screen 1904 is “described elsewhere herein and will not be repeated”).

92. As discussed above, *Lin*’s system describes various security measures, such as “passcodes and passwords.” *Lin*, [0115]. Further, *Lin*’s system—operated by Apple, Inc.—is demonstrated on an iPhone® device and, thus, a user of the transaction application would already be logged in to the Apple ecosystem. Ex-1008, 9-10 (explaining that use of an iPhone requires “[a]n iTunes Store account”). Accordingly, *Lin*’s transaction application provides access to payment capabilities and potentially sensitive financial information due to users being authenticated through the device as a whole:



Lin, Fig. 5A (partially reproduced). To the extent not expressly disclosed, a POSITA would have been motivated to incorporate *Rackley*’s login interface and related features to provide a more secure payment application for payors and payees.

93. In my opinion, a POSITA would have had a reasonable expectation of success in providing a login interface requesting security credentials from a first member of the plurality of members before the first member can access the service. A POSITA would have recognized that providing a login interface requesting security credentials from a first member of the plurality of members before the first member can access the service, including the associated graphical user interface, was well known and routine in the prior art. Indeed, *Lin* already discloses requiring “passcodes and passwords” for access control, as discussed above. A POSITA would have understood how to implement these passcodes and passwords in a graphical user interface, which would facilitate authentication of the user. In my opinion, implementing this login interface in *Lin*’s system as the contemplated security features would have been the routine application of application of conventional techniques, according to their customary functions. And the end result would be predictable.

f. [1.b.iii]: “receiving particular security credentials from the first member”

94. In my opinion, *Lin* discloses and/or the *Lin-Rackley* combination renders obvious [1.b.iii].

95. As explained for [1.b.ii], a POSITA would have understood that *Lin*’s security features would include a login interface for accessing the transaction

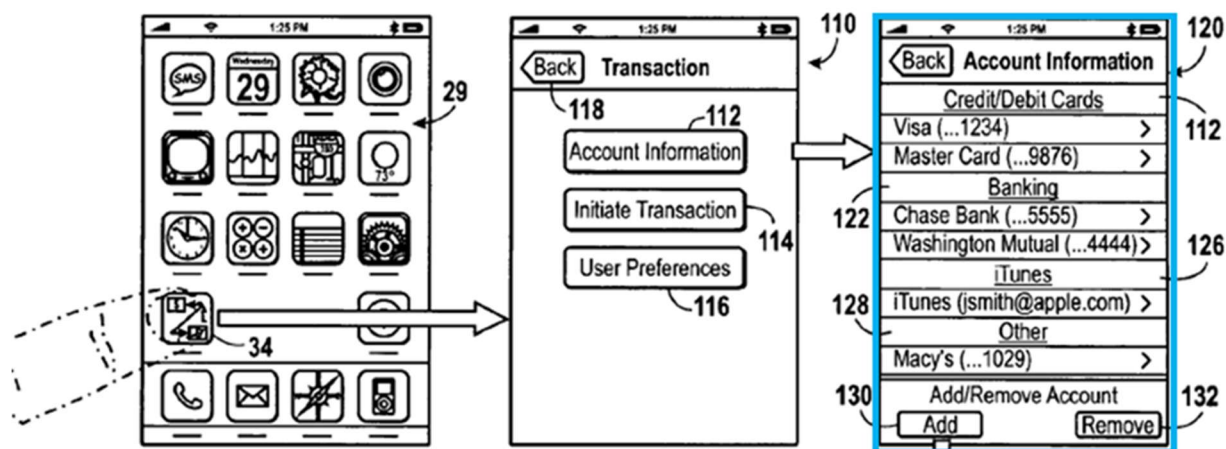
application's peer-to-peer transaction features. *Supra* §IX.A.2.e. For example, *Lin*'s transaction features "may be disabled or inaccessible by users until a user-specified PIN or password is provided." *Lin*, [0116]. In my opinion, a POSITA would have also understood that when a user enters this "user-specified PIN or password," the device *receiv[es] particular security credentials from the first member*.

96. As I also explained for [1.b.ii], a POSITA would have been motivated to incorporate *Rackley*'s login interface and related features into *Lin*. *Supra* §IX.A.2.e. *Rackley* explains that, using its login interface "[t]he password or PIN is entered by the user." *Rackley*, [0339]. A POSITA thus would have understood that the device thus *receiv[es] particular security credentials from the first member*. For example, *Rackley* describes "provid[ing] a user identifier in some form to the MFTS, upon login of the user, so as to allow the system to authenticate the user." *Rackley*, [0247]. Thus, the system would receive the credentials to use them for authentication. When implementing *Lin*'s payment system with *Rackley*'s login interface, a POSITA would have been motivated to include the receipt of these credentials for the reasons described for [1.b.ii].

- g. [1.b.iv]: “when the particular security credentials have been validated, presenting one or more interfaces configured to assist the first member to register a set of one or more payment sources for a future transaction, the one or more interfaces configured to assist the first member to register a credit card account issued by the credit card company in the set of one or more payment sources, the one or more interfaces configured to assist the first member to register a financial account associated with the financial institution in the set of one or more payment sources, the third-party entity being different than the financial institution and different than the credit card company”

97. In my opinion, *Lin* discloses [1.b.iv].

98. *Lin* discloses presenting one or more interfaces configured to assist the first member to register a set of one or more payment sources for a future transaction. For example, *Lin* discloses a “**screen 120**” for “display[ing] a listing of all accounts presently stored on the device 10” along with “graphical elements representing the functions of adding additional accounts to or removing existing accounts.” *Lin*, [0138]. **Screen 120** is shown below:

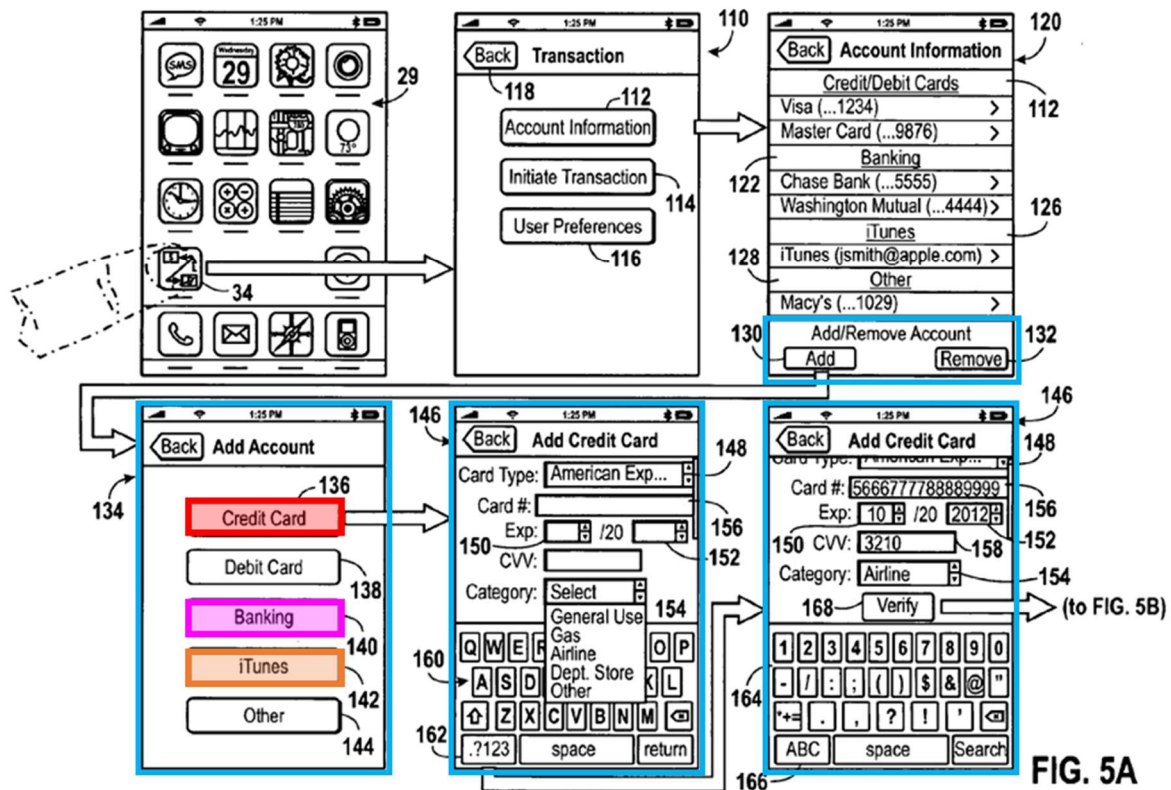


Lin, Fig. 5A (partially reproduced). *Lin* confirms that these accounts are used as payment sources for a future transaction. *E.g.*, *Lin*, [0215] (enabling payor to select from the “payment accounts stored on the payor device”).

99. In *Lin*, **screen 120** would only be presented *when the particular security credentials have been validated* via the login interface. For example, *Lin* explains that “when locked, [its] peer-to-peer transaction features ... may be disabled or inaccessible by users until a user-specified PIN or password is provided” to “prevent the device 10 from being used to make payments by unauthorized persons.” *Lin*, [0116]. A POSITA would have understood that this would include preventing **screen 120**—displaying sensitive account information—from being presented to such unauthorized persons. Indeed, preventing access to financial applications until user credentials have been received and validated was well known in the art. For example, *Rackley* explains that upon entering credentials via the login interface, “the MFTS 18 validates the login and allows the Mobile Wallet application to execute.” *Rackley*, [0339]; *see also* Ex-1012 (“Signing in to the web site may entail providing a correct userid and password, and/or using any other steps for ensuring that the person requesting access is an authorized person.”).

100. *Lin* further details how payment accounts may be registered. According to *Lin*, with reference to **screen 120**, “upon selecting the graphical button 130 [(i.e., ‘Add’)], the user may be advanced to the **screen 134**, [which] ... may include a

plurality of graphical buttons ... represent[ing] categories of various types of accounts which may be stored onto the device 10.” *Lin*, [0139]. Selection of one of these buttons “advance[s] the user to the **screen 146**” (*Lin*, [0139]), which includes various fields enabling a user to input information associated with the account being registered (*Lin*, [0142]-[0144], Fig. 5A). These screens are shown below:



Lin, Fig. 5A.

101. *Lin* discloses that these interfaces are configured to assist the first member to register a credit card account issued by the credit card company in the set of one or more payment sources. For example, “the user may initiate the process of entering and storing a new credit card account by selecting the **graphical button**

136” on **screen 134**. *Lin*, [0139], Fig. 5A. As shown in Figure 5A (above), once **button 136** has been selected, **screen 146** may include a field 148 “provid[ing] a listing of credit card brands corresponding to various credit card providers” to be selected by the user. *Lin*, [0140]. Indeed, the ’296 patent acknowledges that the ability to register an account was known in the art. Ex-1001, 2:4-13. For example, *Kuttuva*’s figures illustrate exemplary interfaces through which a user may “add a bank account or a credit card account.” Ex-1009, Figs. 45-49; *see also Tumminaro*, [0189] (“Account holders may also choose to link their account to a debit or credit cards offered by financial institution[s] and which can be used at the millions of merchant locations worldwide.”); Ex-1010, 65 (“[T]he user must sign a contract with Sonera and register the payment method(s), e.g. credit card, direct credit.”).

102. *Lin* also discloses other account types that may be registered, including *a financial account associated with the financial institution in the set of one or more payment sources*. *Lin* explains that **screen 134** (below) displays graphical button **140** and that “to enter and store a new bank account, the user may select the **graphical button 140** to proceed to the screen 198,” which “may be similar to the screen 146 [in Fig. 5A].” *Lin*, [0150]; *see also Lin*, Fig. 6A. **Screen 198** “may allow the user to select the identity of the banking provider associated with the new bank account.” *Lin*, [0150].

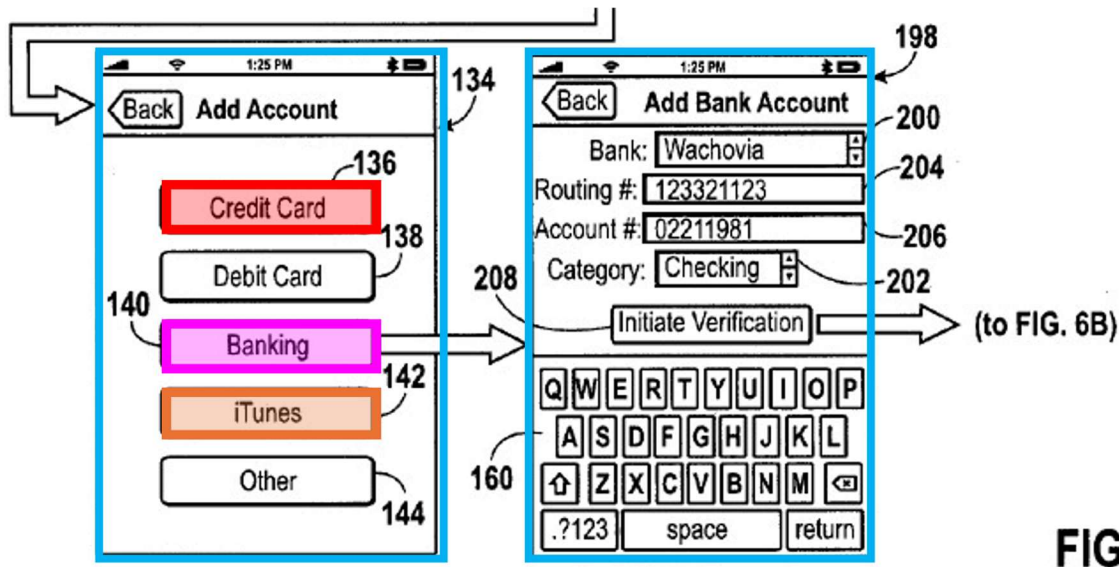


FIG. 6A

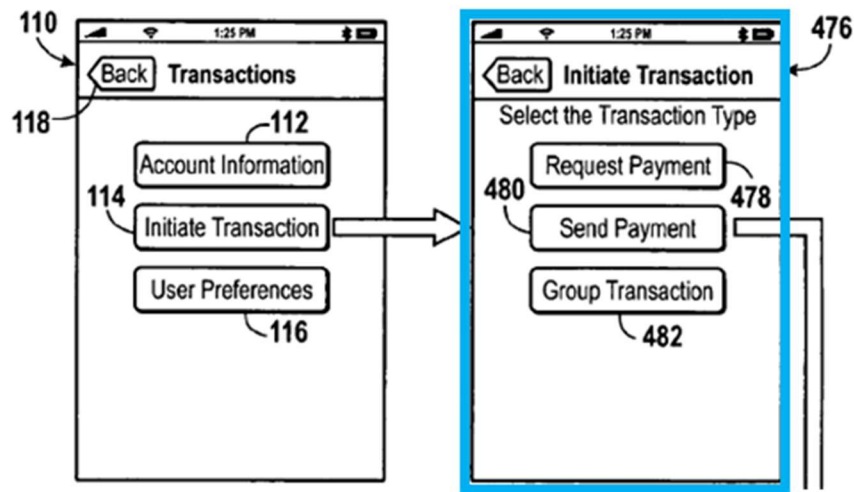
Lin, Fig. 6A (partially reproduced).

103. *Lin* further discloses *the third-party entity being different than the financial institution and different than the credit card company*. For example, *Lin* explains that “screen 134 may display the graphical buttons 136, 138, 140, 142, and 144, each of which may represent categories of various types of accounts which may be stored onto the device 10.” *Lin*, [0150]. As I explained above, *Lin* requires users to register with a service provided by a third-party entity. *Supra* §IX.A.2.b. The service corresponds to the **iTunes® payment account** described in *Lin*. As indicated by **button 142**, this third-party entity is *different than the financial institution and different than the credit card company*. See *Lin*, [0132], Fig. 6A. In my opinion, a POSITA would have understood that iTunes™, provided by Apple™, is different from a credit or banking account. See *Lin*, [0115].

- h. **[1.b.v]: “presenting one or more interfaces configured to enable the first member to select a function identifier from a set of function identifiers, each function identifier of the set of function identifiers configured to navigate to a respective function, a particular function identifier of the set of function identifiers configured to navigate to a payment function, the payment function configured to assist the first member to request sending a payment amount to a payee account, the payee account being a third-party account associated with the third-party entity and belonging to a second member of the plurality of members, the second member having previously registered with the service”**

104. In my opinion, *Lin* discloses and/or the *Lin-Rackley* combination renders obvious [1.b.v].

105. *Lin* discloses presenting one or more interfaces configured to enable the first member to select a function identifier from a set of function identifiers. For example, *Lin* discloses presenting a “**screen 476** ... display[ing] a plurality of graphical buttons,” each of which “represent[s] a particular function that may be performed when selected.” *Lin*, [0201]. **Screen 476** is shown below (right), including each of the available payment functions for selection:

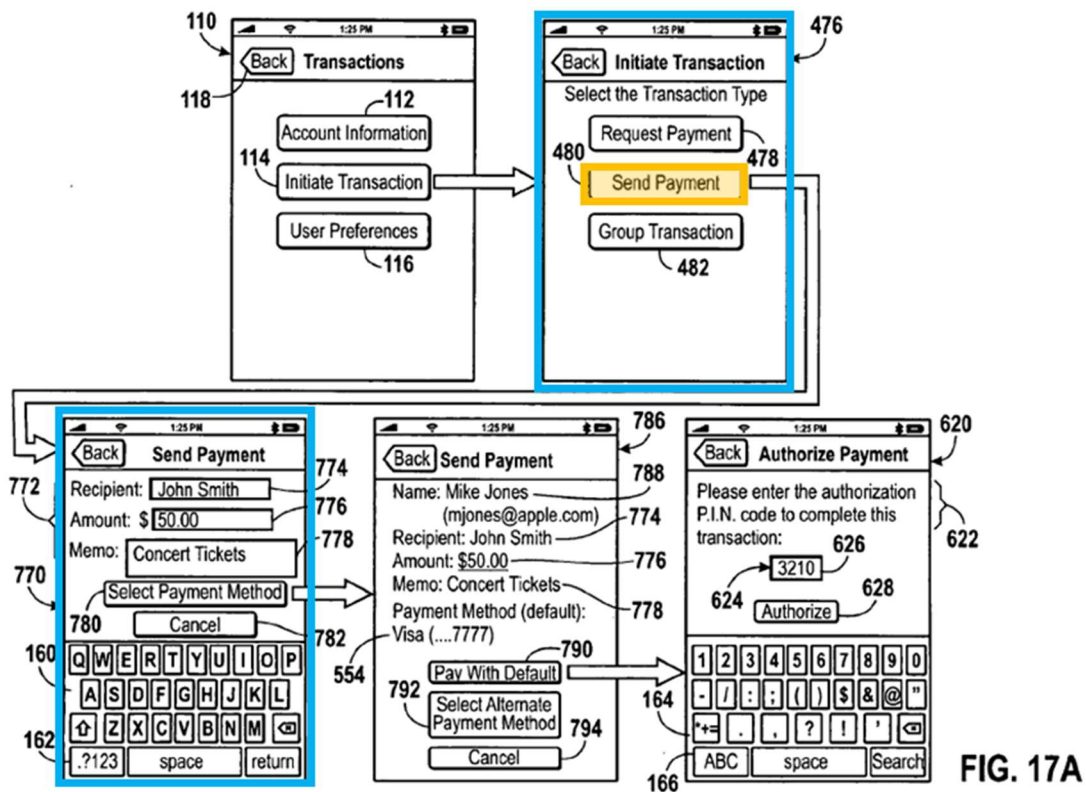


Lin, Fig. 17A (partially reproduced). In my opinion, a POSITA would have recognized that these graphical buttons represent *a set of function identifiers* because they represent the functions that may be selected and performed by a user. For example, *Lin* describes these graphical buttons as “represent[ing] a function.” *Lin*, [0136]. Each graphical button is *configured to navigate to a respective function*, including to request payment, send payment, and initiate a group transaction. *Lin*, [0201], [0279], [0345]. For example, *Lin* explains that upon selection of these graphical buttons, the user is advanced to the next screen. *Lin*, [0202], [0245], [0322].

106. *Lin*’s function identifiers include a “graphical button 480 ... represent[ing] a function by which the user may send a payment to another device.” *Lin*, [0201]. Button 480, which is the **send payment function**, corresponds to a *particular function identifier of the set of function identifiers configured to navigate*

to a payment function. For example, “the payor may initiate the sending of a payment by selecting the graphical button 480” and “may be advanced to the screen 770.”

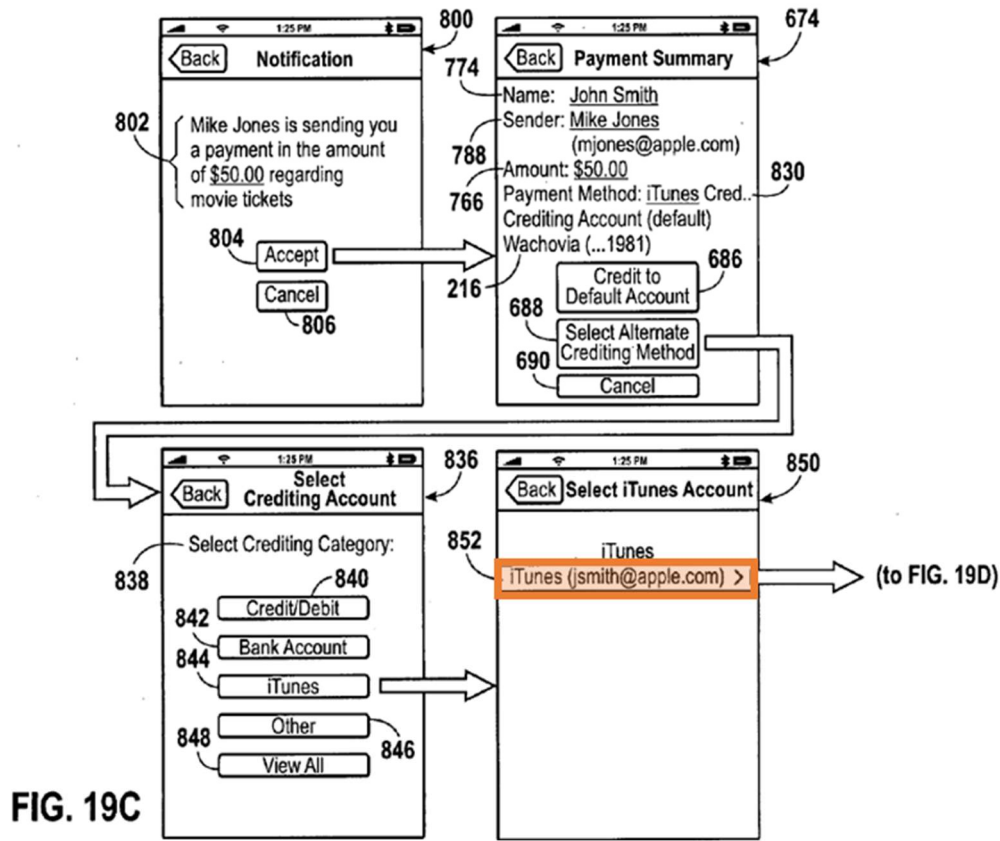
Lin, [0245]; see also *Lin*, Figs. 19A-19C. This is shown below:



Lin, Fig. 17A. In my opinion, a POSITA would have understood that this **send payment function** is a payment function configured to assist the first member to request sending a payment amount to a payee account because it “represent[s] a function by which the user may send a payment to another device.” *Lin*, [0201]. *Lin* confirms that this payment is sent to a payee account, explaining that “the payor may input the identity of the payee 774, [and] the amount of the payment being sent to the payee 776.” *Lin*, [0245]. Thus, by enabling the payor to request transfer to the

payee, *Lin*'s payment function *assist[s]* the first member to request sending a payment amount to a payee account because this request will result in transfer to the payee's account.

107. *Lin* further discloses the payee account being a third-party account associated with the third-party entity and belonging to a second member of the plurality of members, the second member having previously registered with the service. As discussed above, *Lin* enables transactions using "iTunes® accounts held by the payee and payor." *Lin*, [0255]. *Lin* further explains that, after receiving a payment sent by the payor, the payee "select[s] a compatible account (in this case an iTunes® account) for receiving" the payment via a screen 836. *Lin*, [0265]. For example, as shown in Figure 19C (below), "the payee may select the **iTunes® account 852** as the crediting account in the present transaction 808." *Lin*, [0265].



Lin, Fig. 19C. Accordingly, a POSITA would have recognized that payment is made to a *third-party account* (iTunes®) associated with the *third-party entity* (Apple). Because the payee is a holder of an iTunes® account, this account *belong[s]* to a *second member of the plurality of members* who previously registered with the service. *Supra* §IX.A.2.b (explaining that *the second member [would] hav[e] previously registered with the service*).

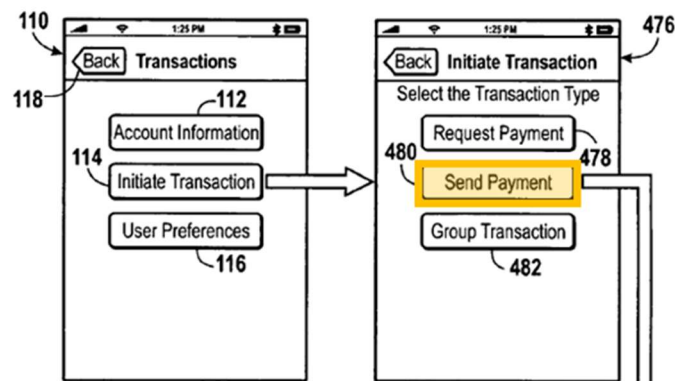
108. To the extent further disclosure is required, as I explained above, a POSITA would have been motivated to modify *Lin*'s application in view of *Rackley* to incorporate a balance transfer functionality. *Supra* §IX.A.1. This balance transfer enables the first member to "transfer ... funds between different accounts of the same

user.” *Rackley*, [0447]. As I discuss in more detail below (*infra* §IX.A.2.j), as part of this modification, it would have been obvious for *Lin*’s **screen 770** to include an option of designating the device user (i.e., the first member) as the identity of payee 774 (i.e., the second member) to carry out a balance transfer. Indeed, dependent claim 5 of the ’296 patent confirms that the second member (payee) may be the same as the first member (payor). Ex-1001, claim 5.

i. [1.b.vi]: “receiving selection by the first member of the particular function identifier configured to navigate to the payment function”

109. In my opinion, *Lin* discloses [1.b.vi].

110. As I explained for [1.b.v], *Lin*’s button 480 is a *particular function identifier ... configured to navigate to a payment function*. *Supra* §IX.A.2.h. *Lin* explains that the payor (i.e., the *first member*) “may initiate the sending of a payment by selecting the **graphical button 480**.” *Lin*, [0245]. This is shown below:

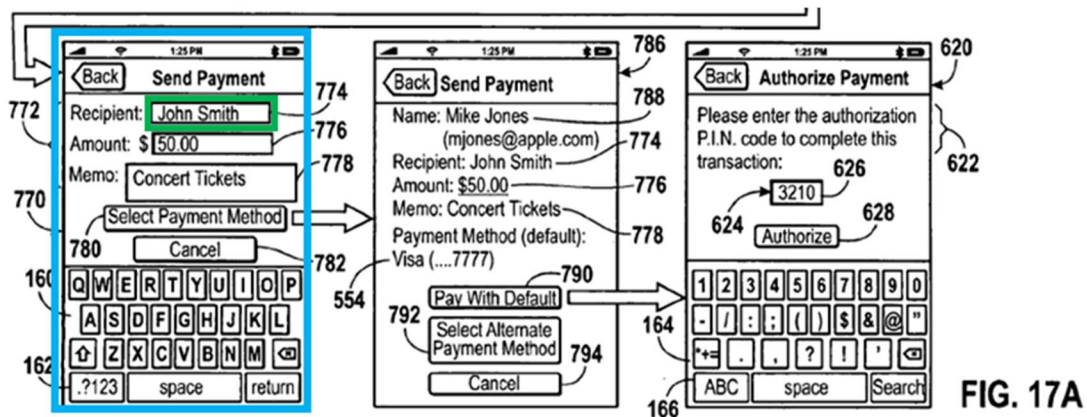


Lin, Fig. 17C (partially reproduced). Accordingly, *Lin* discloses *receiving [this] selection by the first member*.

- j. [1.b.vii]: “after receiving the selection of the particular function identifier, presenting one or more interfaces configured to enable the first member to select a payee identifier identifying the payee account”

111. In my opinion, *Lin* discloses and/or the *Lin-Rackley* combination renders obvious [1.b.vii].

112. As I explained for [1.b.vi], *Lin* discloses *receiving selection by the first member of the particular function identifier*. *Supra* §IX.A.2.i. *Lin* further discloses after receiving this selection, *presenting one or more interfaces configured to enable the first member to select a payee identifier identifying the payee account*. For example, *Lin* discloses that “the payor may initiate the sending of a payment by selecting the graphical button 480 [and] [t]hereafter ... may be advanced to the **screen 770**.” *Lin*, [0245].



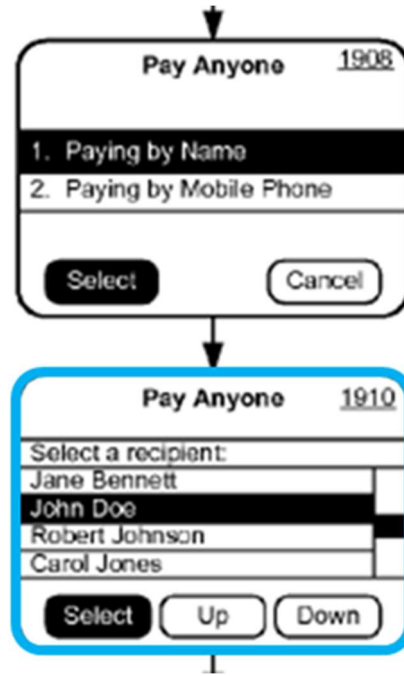
Lin, Fig. 17A (partially reproduced). *Lin*’s **screen 770** enables the payor to input (i.e., *select*) information such as “the identity of the **payee 774**.” *Lin*, [0250]. Indeed, the ’296 patent recognizes that this form of interface was well known in the art. Ex-

1001, 2:18-20 (explaining “[t]he user inputs information into the mobile device identifying a payee”); *see* Ex-1012, 4:58-5:3 (describing an “online banking web site ... present[ing] a list of all of the payees associated with Customer A in database 103” such that “the customer may simply select one of the displayed payees”).

113. As I discussed above, a POSITA would have been motivated to modify *Lin*’s application in view of *Rackley* to incorporate a balance transfer functionality. *Supra* §IX.A.1. In my opinion, a POSITA would have recognized that, under this modification, it would have been obvious for *Lin*’s **screen 770** to include an option of designating the device user (i.e., the first member) as the identity of payee 774 to carry out a balance transfer. A POSITA would have been motivated to modify *Lin*’s **screen 770** in this way so as to minimize the number of modifications to *Lin*’s application that would have been necessary to implement balance transfer functionality. Indeed, in my opinion, this sort of modification would have been intuitive to users who were otherwise accustomed to signing checks to transfer cash and selecting (i.e., writing) the user’s own name when conducting a non-digital balance transfer from a bank account.

114. In my opinion, to the extent not expressly disclosed, a POSITA would have been motivated to modify *Lin* in view of *Rackley* to provide the user (payor) the option of selecting among known contacts for payment. For example, when using *Rackley*’s “Pay Anyone” function (shown below), a payor is presented with a **screen**

1910 “comprising a list of pre-entered payees” from which a payee name may be selected. *Rackley*, [0377]. This is shown below:



Rackley, Fig. 24 (partially reproduced). These selectable names are *payee identifier[s]* because they refer to members registered with the system. *Rackley*, [0377] (indicating “[i]nformation relating to the names on the list in the screen 1910 may be stored locally in the mobile device and/or in the MFTS 18 user database”).

115. A POSITA would have recognized that the ability to select a payee from a pre-populated list, as described by *Rackley*, would improve the user experience. Rather than having to know which users are registered with the system and to remember user identifiers, the payor could simply select from a pre-stored list (modified to include the first member for a balance transfer). *Rackley*, [0377]. A

POSITA would have thus been motivated to incorporate a pre-populated list of potential payees to improve usability of the transaction application.

116. In my opinion, a POSITA would have had a reasonable expectation of success in modifying *Lin* to include a pre-populated list because *Lin*'s transaction application already includes a payee identifier input and updating this interface to include a dropdown menu of available payees would have been a straightforward modification. *Lin*, [0250]. Indeed, the use of dropdown menus in user interfaces was a common practice. *See Lin*, [0304] (describing "dropdown selection field" in another interface); *Rackley*, [0482] (describing "dropdown menu"); Ex-1009, Fig. 6 (showing a dropdown menu). And, in my opinion, a POSITA would have understood how to make the necessary modifications to an application's graphical user interface to carry out this modification.

k. [1.b.viii]: "receiving selection by the first member of the payee identifier"

117. In my opinion, *Lin* discloses [1.b.viii].

118. As I explained for [1.b.vii], *Lin* discloses and/or the *Lin-Rackley* combination renders obvious *one or more interfaces configured to enable the first member to select a payee identifier. Supra §IX.A.2.j.* In *Lin*, "the payor [] input[s] the identity of the payee 774 ... into the form fields 772." *Lin*, [0245]. And, as further discussed, this would include the device user (first member), to the extent the user

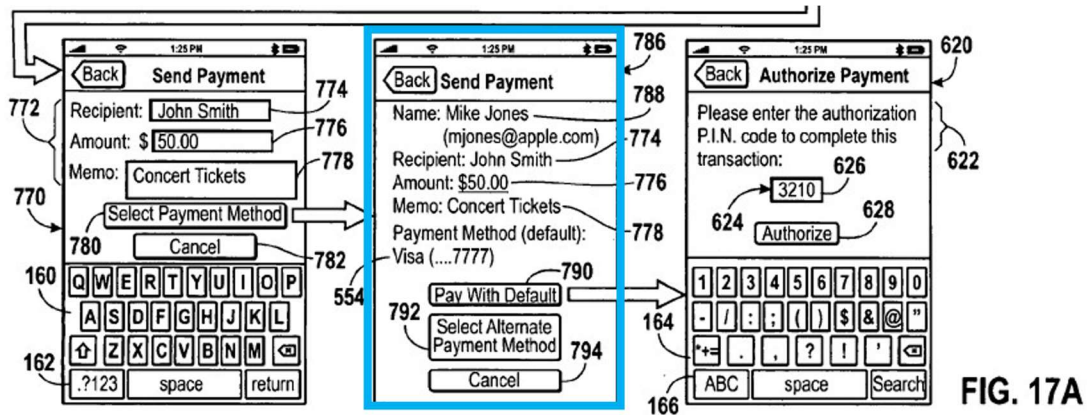
is carrying out a balance transfer under the *Lin-Rackley* combination. A POSITA would have recognized that *Lin* discloses *receiving* this selection, irrespective of whether this selection is undertaken through *Lin*'s user interface or *Rackley*'s pre-populated list of potential payees. *See also Rackley*, [0380] (describing "selection of a particular payee in screen 1910 (e.g. John Doe)").

- I. **[1.b.ix]: "presenting one or more interfaces configured to enable the first member to select a payment source identifier from a set of one or more payment source identifiers, the set of one or more payment source identifiers identifying a particular set of one or more payment sources, each payment source identifier of the set of one or more payment source identifiers identifying a respective payment source of the particular set of one or more payment sources, the program code capable of presenting in the set of one or more payment source identifiers a financial account identifier identifying the financial account associated with the financial institution, a credit card identifier identifying the credit card account issued by the credit card company, and a third-party account identifier identifying a third-party account associated with the third-party entity and belonging to the first member"**

119. In my opinion, *Lin* discloses [1.b.ix].

120. *Lin* discloses *presenting one or more interfaces configured to enable the first member to select a payment source identifier from a set of one or more payment source identifiers*. In *Lin*, after entering the identity of the payee, "the user may proceed to the **screen 786** in order to select an appropriate payment method by selecting the graphical button 780." *Lin*, [0245]. **Screen 786** includes a "graphical

button 792” directing the payor to “one or more screens for the selection of an alternate payment method” referring to another screen 566. *Lin*, [0247]. **Screen 786**, including its associated payment options, is shown below:



Lin, Fig. 17A (partially reproduced).

121. When a user presses “graphical button 792” and elects to select alternate payment methods, **screen 566** (below) “display[s] a plurality of graphical buttons ... representing account categories ... represented by the buttons 570, 572, 574, 576, or 578.” *Lin*, [0214], [0247]. Through selection of one of these buttons, the user is provided with a list of available payment accounts on **screen 598** to select from to complete a payment. *Lin*, [0215]. The transition from **screen 566** to **screen 598** is shown below:

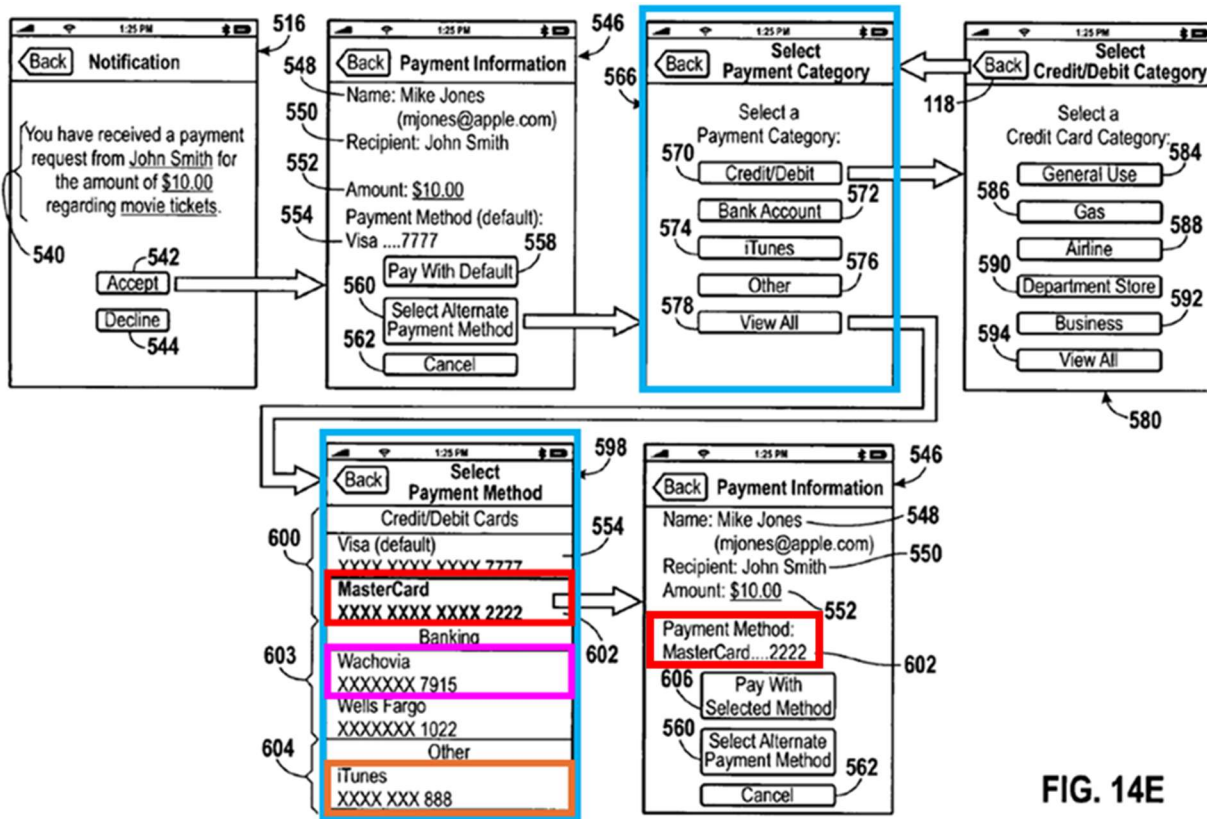


FIG. 14E

Lin, Fig. 14E. The listed payment accounts on **screen 598** are *payment source identifiers* because they represent an account that, when selected, will be used to initiate the transaction. *Lin*, [0247], [0215]. Accordingly, at least **screen 786** (in *Lin*, Fig. 17A), and **screens 566 and 598** (in *Lin*, Fig. 14E)² represent *interfaces configured to enable the first member to select a payment source identifier from a*

² Although screens 566 and 598 are initially described in the context of a payee-initiated transaction, *Lin* explains that within screen 786, “upon selection of the graphical button 792, the payor may be advanced to the screen 566 previously described above with reference to FIG. 14E.” *Lin*, [0261].

set of one or more payment source identifiers. Further, the listed payment accounts represent a *particular set of one or more payment sources, each ... identifying a respective payment source of the particular set of one or more payment sources* because **screen 598** lists stored payment sources, each of which represents a different source account. *Lin*, [0215].

122. As the '296 patent recognizes, this form of interface was well known in the art. Ex-1001, 2:18-20 (explaining “[t]he user inputs information into the mobile device identifying ... a payment source”). For example, *McClinton* discloses a web application in which “present[ing] a list of all of the accounts of Customer A that are represented in database 103” such that “[i]f the desired account is already listed, then the customer may simply select one of the displayed accounts.” Ex-1012, 5:19-25. *Kuttuva* likewise discloses a “Screen B ... configured to allow for selection of a funding source.” Ex-1009, [0080], Fig. 1.

123. *Lin* discloses that its program code is *capable of presenting in the set of one or more payment source identifiers a financial account identifier identifying the financial account associated with the financial institution*. For example, **screen 598** (shown above) lists various types of accounts, such as **credit card accounts 600**, **bank accounts 603**, and other accounts **604**, including **non-cash iTunes® accounts**. *Lin*, [0215]. For example, *Lin* explains that from within the “listing **603 of**

bank accounts ... the payor may select the bank account 612 ... associated with a banking provider (e.g., Wells Fargo®).” *Lin*, [0218].

124. *Lin* also discloses *presenting ... a credit card identifier identifying the credit card account issued by the credit card company*. For example, *Lin* explains that, using **screen 598**, “the payor may select the alternate **credit card account 602** as the payment account.” *Lin*, [0216]. As shown in Figure 14E (above), this alternate account is associated with MasterCard™. *Lin*, [0216].

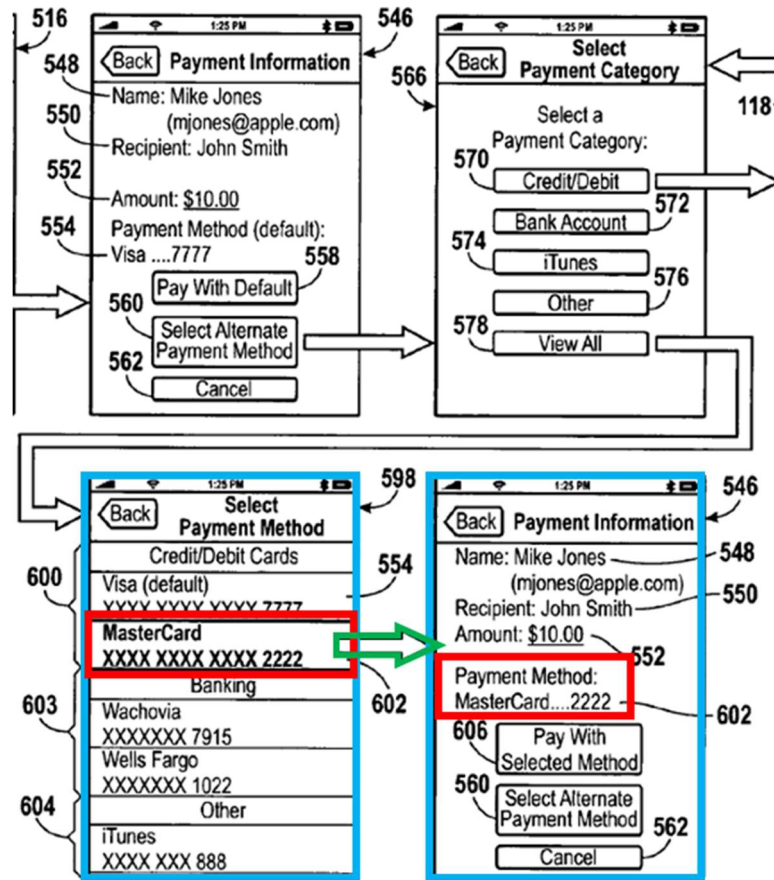
125. *Lin* likewise discloses *presenting ... a third-party account identifier identifying a third-party account associated with the third-party entity and belonging to the first member*. For example, **screen 598** presents “additional accounts **604** including a **non-cash iTunes® account**” belonging to the user. *Lin*, [0215], [0253].

- m. **[1.b.x]: “receiving identification of a particular payment source identifier of the set of one or more payment source identifiers, the particular payment source identifier identifying a particular payment source of the particular set of one or more payment sources”**

126. In my opinion, *Lin* discloses [1.b.x].

127. As I explained for [1.b.ix], *Lin* discloses *interfaces enabl[ing] the first member to select a payment source identifier from a set of one or more payment source identifiers*. *Supra* §IX.A.2.1. A POSITA would have recognized that *Lin*

similarly discloses **receiving** this selection. For example, *Lin* describes selecting a payment source in **screen 598** and “display[ing] the information that was entered by the payor” in **screen 546**, including “the method of payment selected by the payor.” *Lin*, [0250]. This is shown below:



Lin, Fig. 14E (partially reproduced). As the '296 patent recognizes, this form of interface was well known in the art. Ex-1001, 2:18-20 (explaining “[t]he user inputs information into the mobile device identifying ... a payment source.”). For example, *McClinton* discloses a web application in which “present[ing] a list of all of the accounts of Customer A that are represented in database 103” such that “[i]f the

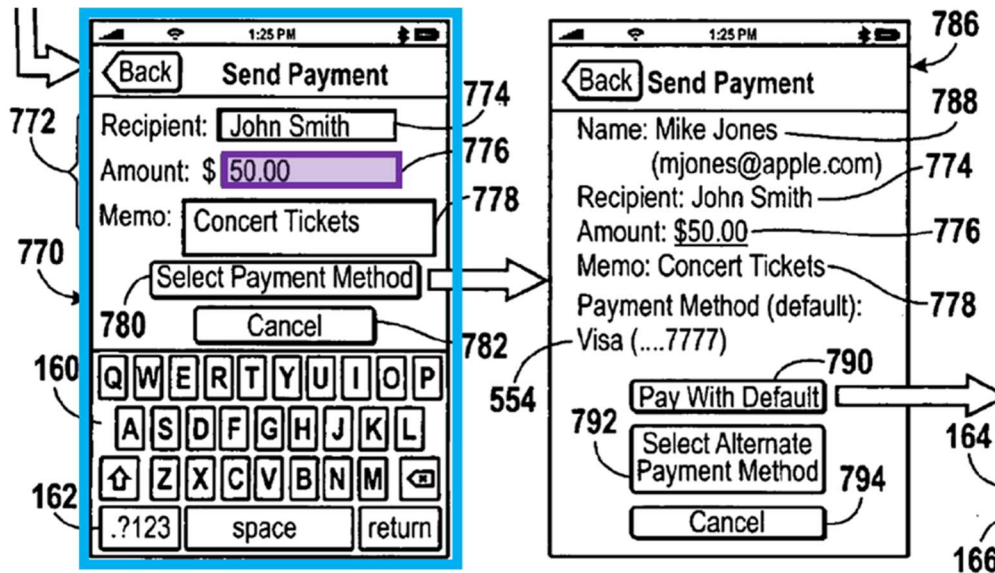
desired account is already listed, then the customer may simply select one of the displayed accounts.” Ex-1012, 5:19-25. *Kuttuva* likewise discloses a “Screen B ... configured to allow for selection of a funding source.” Ex-1009, [0080], Fig. 1.

128. As I explained for [1.b.ix], *each payment source identifier of the set of one or more payment source identifiers identif[ies] a respective payment source of the particular set of one or more payment sources. Supra §IX.A.2.1.* Accordingly, the selected particular payment source identifier would also identify[] a particular payment source of the particular set of one or more payment sources. *See, e.g., Lin*, [0218] (explaining “bank account 612 is associated with a banking provider”).

n. [1.b.xi]: “presenting an interface configured to enable the first member to identify the payment amount to be transferred to the payee account”

129. In my opinion, *Lin* discloses [1.b.xi].

130. As part of initiating a transaction and sending a payment, *Lin*’s **screen 770** enables a user to input an “**amount of the payment being sent to the payee 776**.” *Lin*, [0246]. This is shown below:



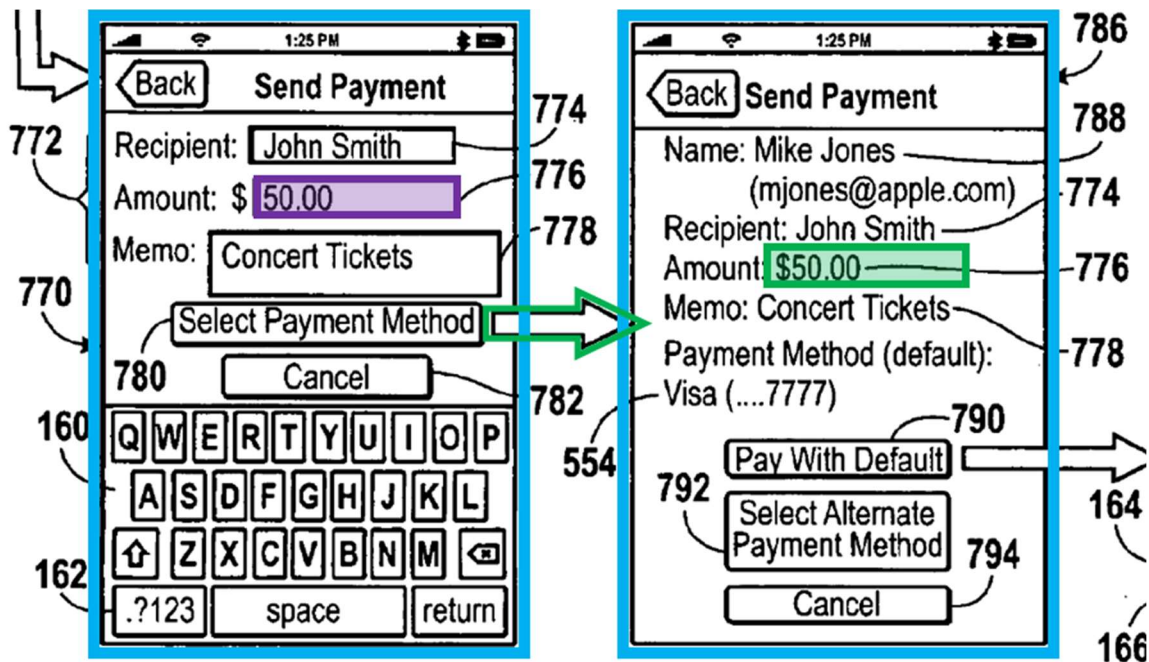
Lin, Fig. 17A (partially reproduced). Screen 770 is thus an interface configured to enable the first member to identify the payment amount to be transferred to the payee account. Indeed, this form of interface for entering a payment amount was well known in the art. *Rackley*, Fig. 19, [0380] (“[A] screen 1912 is presented that allows the user to enter an amount to pay.”); Ex-1009, Fig. 1, [0082] (“The payor may then enter a payment amount into an amount window 13 of the app.”); Ex-1012, Fig. 3, 5:45-54 (describing a “section 303 for selecting or otherwise inputting the amount to be paid”).

o. [1.b.xii]: “receiving information from the first member of the payment amount”

131. In my opinion, *Lin* discloses [1.b.xii].

132. As I explained for [1.b.xi], *Lin* discloses *enabl[ing] the first member to identify the payment amount*. *Supra* §IX.A.2.n. A POSITA would have recognized

that *Lin* similarly discloses *receiving information from the first member of the payment amount. Lin*, [0245]. Indeed, after payment information is entered on *screen 770*, *Lin* discloses confirming receipt of this payment information on subsequent *screen 786*, displaying the payment amount. *Lin*, [0245]. This is shown below.



Lin, Fig. 17A (partially reproduced).

- p. [1.b.xiii]: “selecting the first communication interface as a particular communication interface and establishing a communication link between the first communication interface and the first device associated with the credit card company on behalf of the first member, when the particular payment source is the credit card account issued by the credit card company”

133. In my opinion, *Lin* discloses [1.b.xiii].

134. As I explained for [1.a.ii], *Lin* discloses *a first communication interface configured to communicate with a first device associated with a credit card company on behalf of the plurality of members. Supra §IX.A.2.c.* And as I explained for [1.b.x], *Lin* discloses *receiving identification of a particular payment source identifier. Supra §IX.A.2.m.*

135. *Lin*'s device may "communicate with one or more external servers to acquire an authorization for a payment through a selected communication channel." *Lin*, [0085]. *Lin*'s communication interfaces provide "connectivity channels for receiving and transmitting information." *Lin*, [0104]. When the user selects a credit card as a payment account (i.e., *the particular payment source is the credit card account issued by the credit card company*), the "'transaction information' ... may be transmitted by the payee device 10 to one or more financial servers 100 for verification of the account information and the subsequent authorization and processing of the requested payment." *Lin*, [0126]; *see also Lin* [0012] ("[T]he electronic device may transmit a request including the extracted payment account information to one or more financial servers for the authorization of a payment using the extracted information"). Indeed, in *Lin*, the payee and payor devices may be the same devices. *Lin*, [0121]. Accordingly, the device will include the same program code whether the device is a payee device or payor device. *Lin*, [0121].

136. In my opinion, a POSITA would have recognized that this form of selection of a particular communication interface to perform a transaction was well known in the art. For example, *McClinton* explains that when completing a transaction, “since the selected account is Bank B Checking Account, network communications server 105 may communicate with Bank B 112 to ensure that Bank B 112 has the appropriate information to allow the payment to be made from Bank B Checking Account.” Ex-1012, 6:21-31. *McClinton* thus similarly discloses selecting a particular communication interface to communicate with the appropriate financial institution. *Kuttuva* discloses a similar form of selection. Ex-1009, [0082] (explaining the “Payintele app communicates with a payintele back end server and/or suitable banking, credit card, ACH and/or other payment processing systems to effect the necessary payment transfers”).

137. *Lin* discloses that, if the payor is using a credit card as the payment source, a “credit card verification server may process the transaction information 98 to determine whether a charge to the payor’s credit card account in the amount specified in the payment request may be authorized.” *Lin*, [0128]. And *Lin* explains that “communication with the financial servers 100 may be accomplished through one or more of the communication interfaces.” *Lin*, [0126]. A POSITA would have thus recognized that *Lin* discloses *selecting the first communication interface as a particular communication interface and establishing a communication link between*

the first communication interface and the first device associated with the credit card company. Lin, [0126].

138. As I explained above, a POSITA would have also been motivated to modify *Lin*'s transaction application in view of *Rackley* to incorporate balance transfer functionality. *Supra* §IX.A.1. In *Lin*'s modified application, when the transfer occurs between accounts of the same user (i.e., the first member is the same as the second member), this communication interface would operate in the same manner as when the transfer is between accounts of different users. As *Lin* explains, “[o]nce the crediting account is selected on the payee device 10, the requested payment amount, the payment account information 96, and the selected crediting account, collectively referred to as the ‘transaction information’ ... [is] transmitted by the payee device 10 to one or more financial servers 100.” *Lin*, [0126]. A POSITA would have recognized that, when a user initiates a balance transfer, the payee device would be the same as the payor device, and the crediting account would be an account held by the payor.

- q. [1.b.xiv]: “selecting the second communication interface as the particular communication interface and establishing a communication link between the second communication interface and the second device associated with the financial institution on behalf of the first member, when the particular payment source is the financial account associated with the financial institution”

139. In my opinion, *Lin* discloses [1.b.xiv].

140. As I explained for [1.b.xiii], *Lin* discloses *selecting [a] communication interface as the particular communication interface and establishing a communication link between the ... communication interface and [a] device associated with [a financial provider] on behalf of the first member. Supra §IX.A.2.p.* A similar rationale applies to this limitation.

141. A POSITA would have recognized that when a payor (which may also be the payee) selects a banking account as a payment source (i.e., *the particular payment source is the financial account associated with the financial institution*), *Lin* would *select[] the second communication interface as the particular communication interface and establish[] a communication link between the second communication interface and the second device associated with the financial institution on behalf of the first member.* As I explained for [1.b.ix], *Lin* discloses a payment source identifier including *the financial account associated with the financial institution* that may be selected as a source account. *Supra §IX.A.2.i; Lin,*

[0218], [0219]. As I explained, the selected communication interface would correspond to the selected banking entity. This holds true when the funds are transferred to another account held by the payor. *Supra* §IX.A.2.p.

- r. **[1.b.xv]: “selecting the third communication interface as the particular communication interface and establishing a communication link between the third communication interface and the third device associated with the third-party entity, when the particular payment source is the third-party account”**

142. In my opinion, *Lin* discloses [1.b.xv].

143. As I explained for [1.b.xiii], *Lin* discloses *selecting [a] communication interface as the particular communication interface and establishing a communication link between the ... communication interface and [a] device associated with [a financial provider] on behalf of the first member. Supra* §IX.A.2.p. A similar rationale applies to this limitation.

144. A POSITA would have recognized that when the payor (which may also be the payee) selects an iTunes® account (or similar type account) as the payment source (i.e., *the particular payment source is the third-party account*), *Lin* *select[s] the third communication interface as the particular communication interface and establish[es] a communication link between the third communication interface and the third device associated with the third-party entity*. As I explained for [1.b.ix], *Lin* discloses a payment source identifier including *a third-party account*

identifier identifying a third-party account associated with the third-party entity and belonging to the first member that may be selected as a source account. *Lin*, [0215], [0253]. The selected communication interface corresponds to the other form of financial server, such as a “server managed by the iTunes® online server.” *Lin*, [0132]. This holds true when the funds are transferred to another account held by the payor. *Supra* §IX.A.2.p.

s. [1.b.xvi]: “requesting electronic transfer of the payment amount from the particular payment source to the payee account using the selected particular communication interface”

145. In my opinion, The *Lin-Rackley* combination renders obvious [1.b.xvi].

146. *Lin*’s system “specifically rel[ies] on the initiation of a transaction by a payee, such as via sending a payment request (e.g., 384) from the device 10.” *Lin*, [0237]. But, according to *Lin*, “the payor may initiate the transaction as well.” *Lin*, [0237]. As discussed above, a POSITA would have been motivated to modify *Lin*’s application in view of *Rackley* to incorporate a balance transfer functionality. *Supra* §IX.A.1. In this circumstance, the user (i.e., the first member) is both the payor and the payee. *Rackley*, [0447]. Accordingly, under the *Lin-Rackley* combination, and the user’s device requests electronic transfer of the payment amount from one of the user’s accounts (i.e., the particular payment source) to another (i.e., the payee account).

147. As I explained for [1.b.xiii], [1.b.xiv], and [1.b.xv], *Lin* discloses selecting one of the first, second, or third communication interfaces as the particular communication interface based on the particular payment source. *Supra* §§IX.A.2.p, IX.A.2.q, IX.A.2.r. Thus, by selecting the particular payment source, the corresponding particular communication interface is also necessarily selected. Thus, *Lin* renders obvious *requesting electronic transfer of the payment amount from the particular payment source to the payee account using the selected particular communication interface*.

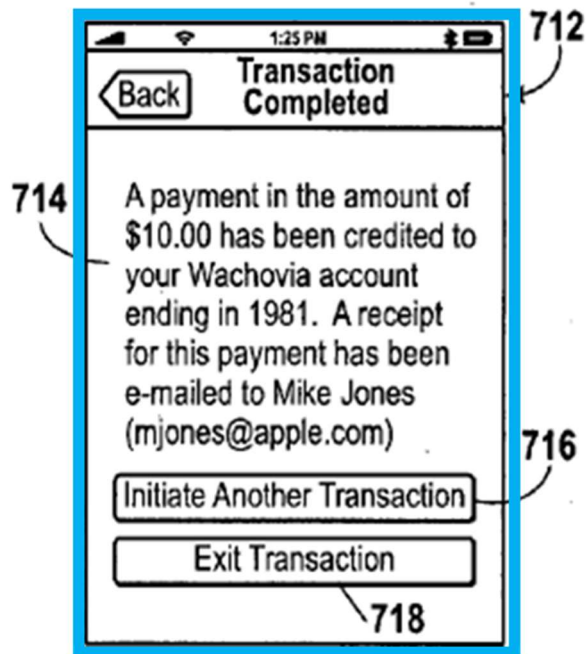
148. In my opinion, requesting electronic transfer of a payment amount using a *selected particular communication interface* for *[a] particular payment source* was well known in the art. For example, *Rackley* discloses “multiple financial service provider communication interfaces 156 to partner Financial Service Providers (FSPs) 30 ... to whom payment instructions are sent on behalf of a user.” *Rackley*, [0186]. In conducting a transaction, *Rackley*’s MFTS “constructs an MFTS payment instruction to a payment instruction recipient, which in some cases is a selected financial service provider or financial institution associated with the selected payment source.” *Rackley*, [0164]. *Kuttuva* describes similar transactions in which an “entered payment amount will be deducted from the selected payment source” and the payment app “communicates with a ... suitable banking, credit card, ACH and/or other payment processing systems to effect the necessary payment

transfers....” Ex-1009, [0082]. And *Tumminaro* explains that “[w]hen transacting business for that user, the system will then know where (which bank) to direct transactions and which API to use so that the user’s value exchange transactions (which are typically money exchanges) are transacted properly.” *Tumminaro*, [0259]; *see also* Ex-1012 (“[S]ince the selected account is Bank B Checking Account, network communications server 105 may communicate with Bank B 112 to ensure that Bank B 112 has the appropriate information to allow the payment to be made from Bank B Checking Account.”).

t. [1.b.xvii]: “generating a notification indicating the electronic transfer to the payee account”

149. In my opinion, *Lin* discloses [1.b.xvii].

150. *Lin* discloses *generating a notification indicating the electronic transfer to the payee account*. For example, *Lin* discloses that “upon the successful completion of a transaction, the **screen 712** may be displayed on the payee device 10 ... includ[ing] the notification message 714.” *Lin*, [0236]. The notification message is shown below:



Lin, Fig. 14J (partially reproduced). This notification message is *a notification indicating the electronic transfer to the payee account* because it “inform[s] the payee that the requested payment amount 680 has been credited to the selected crediting account 216.” *Lin*, [0236].

151. According to *Lin*, once the transfer is complete, “a payment receipt in an electronic form may [also] be e-mailed to the payor using the e-mail address provided in the payor identification information 678 on the screen 674.” *Lin*, [0236]. In the context of a balance transfer, a POSITA would have understood that because the payor’s device and payee’s device are the same, both the notifications to payor and to the payee are generated from the same device (i.e., the claimed “system”). This would enable the payor/payee to confirm the balance transfer was complete.

This confirmation would assure the user that the transaction was successful, allowing them to proceed with future transactions without risking the transaction being declined. *See Lin*, [0130] (explaining a transaction may be unsuccessful if the source account lacks sufficient funds). *Rackley* describes this same form of confirmation message. *Rackley*, [0456] (describing a step in which “the mobile device 15 receives the balance transfer confirmation message 3332.”); *see also Rackley*, [0373] (describing “receipt of a payment by the recipient and relatively fast (virtually instant) availability of the funds”).

- u. [1.b.xviii]: “transmitting the notification over a communication network to a computing device associated with the second member in real time, so that the second member has immediate access to up-to-date electronic transfers to the payee account”**

152. In my opinion, *Lin* discloses [1.b.xviii].

153. *Lin* discloses *transmitting the notification over a communication network to a computing device associated with the second member*. For example, as I explained, “upon the successful completion of a transaction, the screen 712[, which] ... include[s] the notification message 714” is “displayed on the payee device 10.” *Lin*, [0236]. *Lin* also discloses sending communications using an unstructured supplementary service data (“USSD”) interface to “facilitate the transmission of real time text messages over GSM signaling channels.” *Lin*, [0109]. A POSITA would have understood that providing notification message 714 in “real

time,” using *Lin*’s disclosed communication interfaces would have enabled *immediate access to up-to-date electronic transfers to the payee account*.

154. As discussed above, *Lin* discloses that “a payment receipt in an electronic form may [also] be e-mailed to the payor using the e-mail address provided in the payor identification information 678 on the screen 674.” *Lin*, [0236]. A POSITA would have understood that an e-mail would have been received by the payor at any computing device with access to e-mail, including both the user’s mobile phone and/or a desktop computer. A POSITA would have further understood that an e-mail would typically require a communication network to carry out the transmission.

155. Indeed, an e-mail providing receipt of a balance transfer would be consistent with the goal of providing “current” information to a user about financial transactions. *Rackley*, [0024]. As discussed above, a user may require a balance transfer to be able to complete a transaction with another party (e.g., to ensure sufficient funds in a single account), and it would thus be “absolutely essential” for the account balance information to be current. *Rackley*, [0024]-[0025]. A POSITA would have understood that an e-mail receipt accomplishes this consumer requirement. And *transmitting [a] notification over a communication network to a computing device associated with the second member in real time* was well known in the art. *See Rackley*, [0043] (“information about current account balances

provided in real time), [0334] (stating that “the mobile device 15 is communicating with the MFTS 18 and receiving real-time balance information from the corresponding financial institutions”), [0373] (describing “receipt of a payment by the recipient and relatively fast (virtually instant) availability of the funds”).

3. Claim 2: “The system of claim 1, wherein the system is a mobile device, and the program code is an application on the mobile device.”

156. In my opinion, *Lin* discloses this additional limitation.

157. As I explained for [1.a.i], *Lin* discloses and/or renders obvious a *program code* in the form of a transaction application. *Supra* §IX.A.2.b. *Lin*’s transaction application is stored on a storage device 54 of device 10, which *Lin* explains may be “a handheld device incorporating the functionality of one or more portable devices, such as ... a cellular phone.” *Lin*, [0085]. A POSITA would have recognized that when the memory is stored on this “portable device” the *system is a mobile device* within the meaning of the ’296 patent. *See* Ex-1001, 4:49-52 (describing “mobile devices, such as smart phones”). *Lin* thus discloses *the program code [being] an application on the mobile device*.

158. *Lin* further explains that this device 10 includes a “central processing unit (CPU) 50” that may include “a single processor or ... a plurality of processors.” *Lin*, [0100]. This CPU would be *configured to execute the program code to cause the system to perform* the various steps of claim 1. For example, *Lin* explains that

the CPU (in cooperation with circuitry) “provide[s] the processing capability required to execute ... application programs, the GUI 28, and any other functions provided on the device 10.” *Lin*, [0100].

4. Claim 3: “The system of claim 1, wherein the system is a server, and the program code is server code on the server.”

159. In my opinion, the *Lin-Rackley* combination renders obvious claim 3.

160. As I explained for [1.a.i], *Lin* discloses a *program code* in the form of a transaction application, which may be stored on a mobile device. *Supra* §IX.A.2.b. *Rackley* discloses a similar system in which “a transaction is typically initiated at a mobile device,” but further discloses that these transactions can “be initiated by the user 12 using [a] web application.” *Rackley*, [0252]. Accordingly, users can “access the MFTS via the Internet 120 using a web browser on a computer 140 (FIG. 2), as opposed to a mobile device.” *Rackley*, [0310].

161. A POSITA would have been motivated to modify *Lin* to incorporate *Rackley*’s web application functionality to improve user accessibility. For example, *Rackley* explains that “mobile devices typically have smaller display screens” and thus “provide less information to the user than a web view.” *Rackley*, [0180]. To address this, *Rackley* provides that transaction details may be obtained not only “through a function of the mobile device,” but “through web views using a computer” as well. *Rackley*, [0180]. A POSITA would thus have recognized that

this additional web application feature improves user accessibility by providing an alternative and more user-friendly viewing experience. Indeed, *Lin* likewise relies on a “graphical user interface viewable on the display” of a mobile device (*Lin*, [0014]) and thus could be improved in a similar way.

162. A POSITA would have had a reasonable expectation of success in implementing *Rackley*’s teaching of a web application in *Lin*. Indeed, *Rackley* provides a detailed explanation of the software provided in its MFTS server. *Rackley*, [0210], Fig. 3B. Moreover, implementing a mobile application in other forms, such as a web application was a straightforward endeavor. *Lin* invites this form of modification, envisioning that its device 10 can be “a non-portable device, such as a desktop computer,” indicating its interfaces are adaptable to a larger screen format. *Lin*, [0121]. Implementing *Rackley*’s web applications in *Lin* would have been straightforward and the results would have been predictable given that the modification involves the application of known, conventional techniques..

163. In *Rackley*, “web applications 154 reside on the server of the MFTS.” *Rackley*, [0183]. This server includes “data storage in the form of disk drives and random access memory (RAM)” and “one or more processors and/or central processing units (CPU)” for storing and running these web applications *Rackley*, [0130]. A POSITA would have recognized that when modifying *Lin* to include *Rackley*’s web application features, *Lin* would similarly include a server for storing

and running the web application. Indeed, *Lin* already discloses “an iTunes® server 818 configured to maintain the respective iTunes® accounts belonging to the payor and the payee,” similar to *Rackley*’s MFTS server. *Lin*, [0257].

164. Using *Rackley*’s web application feature, the various mobile payment platform functions explained above with respect to *Lin*’s transaction application would be carried out at a server for users conducting transactions via the web interface. For example, the web application would include program code enabling the server to communicate with various financial providers and thus would include the *first, second, and third communication interface[s]* of [1.a.ii]. See *supra* §IX.A.2.c. Similarly, the web application would *select[] the first communication interface as a particular communication interface and establish[] a communication link between the first communication interface and the first device* to complete a transaction (e.g., if a credit card is selected as a payment source). Here, the communication link is formed directly between the server and the financial institution. See *Rackley*, [0187] (describing a “special secured dedicated network path 160 ... between the MFTS 18 and various FSPs”). A POSITA would thus have recognized that, when incorporating this web application functionality in *Lin*, *the system is a server, and the program code is server code on the server*.

5. **Claim 4: “The system of claim 1, wherein the one or more interfaces configured to assist the first member to register the set of one or more payment sources is configured to assist the first member to register a loan account, an international account or a commodity account.”**

165. In my opinion, the *Lin-Rackley* combination renders obvious claim 4.

166. As I explained for [1.b.iv], *Lin* discloses *one or more interfaces configured to assist the first member to register a set of one or more payment sources*. *Supra* §IX.A.2.g. *Lin* envisions communications with various different “types of financial servers 100 to which ... transaction data 98 is transmitted.” *Lin*, [0127], [0132]. Accordingly, *Lin* is not limited to the specific financial institutions disclosed. *Lin*, Fig. 5A (including element 144 for “Other” account types), [0326] (explaining “additional devices or payment instruments may also be included”).

167. *Rackley* teaches that financial service providers that provide payment sources “include banking entities such as ... savings and loans” and thus discloses a payment source being *a loan account*. *Rackley*, [0189]. Moreover, *Rackley* “contemplates making payments ... across country, and across national borders (of course within the confines of applicable currency regulations) without physically handling of cash or checks.” *Rackley*, [0373]. A POSITA would have recognized that these forms of international transactions across different currencies would include *an international account*.

168. A POSITA would have been motivated to incorporate *Rackley*'s additional loan and international account types into *Lin* to provide additional options to a user and to increase the forms of payments available. As *Rackley* recognizes, consumers "must be able to 'Pay Anyone', at any time, in any of a number of different ways." *Rackley*, [0024]. Adding *Rackley*'s additional account types to *Lin*'s transaction application would have improved accessibility and broadened the customer base across *Lin*'s platform.

169. A POSITA would have also had a reasonable expectation of success in incorporating *Rackley*'s additional account types into *Lin*'s system. Indeed, *Lin* envisions different account types, recognizing "the type or types of financial servers 100 to which ... the transaction data 98 is transmitted may depend on the type of payment account selected." *Lin*, [0127]. Adding these different payment sources to *Lin*'s system to allow a user to access additional financial accounts would have been straightforward and the results would have been predictable given that the modification involves the application of known, conventional techniques.

6. **Claim 5: "The system of claim 1, wherein the second member is the first member, the particular payment source is one of the financial account associated with the financial institution or the credit card account issued by the credit card company, and the payee account is the third-party account associated with the third-party entity and belonging to the first member."**

170. In my opinion, the *Lin-Rackley* combination renders obvious claim 5.

171. As discussed above, a POSITA would have been motivated to modify *Lin*'s application in view of *Rackley* to incorporate a balance transfer functionality. *Supra* §IX.A.1; *Rackley*, [0447]. During a balance transfer, the second member is the first member. That is, the payor and payee are the same user. And as further discussed above, this balance transfer can be used to move funds between a bank account (i.e., financial institution) and third-party iTunes® account. *Supra* §IX.A.1. The *Lin-Rackley* combination renders this claim obvious.

7. Claim 6: “The system of claim 1, wherein the payee identifier is a telephone number.”

172. In my opinion, the *Lin-Rackley* combination renders obvious claim 6.

173. As I explained for [1.b.vii], *Lin-Rackley* renders obvious *enabl[ing] the first member to select a payee identifier. Supra* §IX.A.2.j. *Lin-Rackley* further renders obvious a *payee identifier [being] a telephone number*. For example, *Rackley* discloses “selecting/entering a payee by entering/selecting a mobile phone number associated with a payee.” *Rackley*, [0374].

174. A POSITA would have been motivated to include a telephone number as the payee identifier to provide users with additional means for identifying a payee, as disclosed in *Rackley*. In my opinion, a payor may not necessarily know the iTunes® account identifier of a payee but may have the payee's mobile phone number. This would likewise apply when a user performs a balance transfer, where

a user may be able to more quickly recall their own telephone number. The transaction application may be hosted on a cellular phone (*Lin*, [0085]) and thus the payor may have access to mobile phone numbers of various contacts.

175. A POSITA would have had a reasonable expectation of success in implementing a mobile phone number as an identifier. For example, *Lin* acknowledges that “information indicating the identity of the payee ... may include text data corresponding to the name of the payee, an e-mail address belonging to and/or identifying the payee, or any other type of suitable identification information.” *Lin*, [0122]. A POSITA would have understood that a telephone number is “any other type of suitable identification” of the payee. Implementing this functionality in *Lin*’s system would have been straightforward and the results would have been predictable given that the modification involves the application of known, conventional techniques.

8. Claim 7: “The system of claim 1, wherein the payee identifier is a contact from an address book.”

176. In my opinion, the *Lin-Rackley* combination renders obvious claim 7.

177. As I explained for [1.b.vii], *Lin* discloses and/or *Lin-Rackley* renders obvious *enabl[ing] the first member to select a payee identifier. Supra §IX.A.2.j. Lin-Rackley further renders obvious a payee identifier [being] a contact from an address book.*

178. *Rackley* discloses a “‘Paying by Name’ option” through which “a screen is displayed on the mobile device comprising a list of pre-entered payees, e.g. screen 1910, with names Jane Bennett, John Doe, Robert Johnson, Carol Jones, etc.” *Rackley*, [0377]. *Rackley*’s web application also “allows users to ... add/edit/view/delete payees.” *Rackley*, [0210]. A POSITA would have understood that this “list of pre-entered payees” is an address book and that the “payees or billing entities” identified, added, edited, and deleted in the web application are contacts in this address book. Furthermore, a *payee identifier [being] a contact from an address book* was well known and routine in the prior art. See *Tumminaro*, [0217] (explaining that to avoid the “need to separately enter in the telephone number ... a hosted address book is used where the user would set up their address book with the service and then that address book would be available to them through any device that they use”).

179. A POSITA would have been motivated to include *Rackley*’s list of pre-entered payees (i.e., address book) into *Lin*’s system. A POSITA would have understood that *Rackley*’s list of pre-entered payees simplifies and expedites the method by which users can identify payees. Use of previously stored contacts also increases security by ensuring that a payor only transfers money to known contacts, minimizing the risk of fraud. A POSITA would have thus recognized that this functionality provides the user with a better user experience and increased security.

180. In my opinion, a POSITA would have had a reasonable expectation of success in using a contact from an address book to identify a payee. A POSITA would have recognized that using a contact from an address book to identify a payee was well known and routine in the prior art. *See Tumminaro*, [0217]. Implementing this functionality in *Lin*'s system to identify a payee would have been straightforward and nothing more than the application of known, conventional techniques, used according to their known functions. In my opinion, the result would have thus been predictable to a POSITA.

9. Independent Claim 8

a. [8.pre]: "A method, comprising:"

181. In my opinion, *Lin* discloses "various systems, methods, and electronic devices configured to initiate and process [peer-to-peer] transactions." *Lin*, [0002]. *Lin* discloses "[a] method for conducting a group transaction" and thus discloses a *method*. *See Lin*, Claim 1.

b. [8.a.i]: "storing program code associated with a service provided by a third-party entity to a plurality of members who register with the service provided by the third-party entity,"

182. In my opinion, [8.a.i] recites substantively the same limitations as [1.a.i], which *Lin* discloses and/or the *Lin-Rackley* combination renders obvious as discussed for [1.a.i].

- c. **[8.a.ii]: “the program code including a first communication interface configured to communicate with a first device associated with a credit card company on behalf of the plurality of members, the program code including a second communication interface configured to communicate with a second device associated with a financial institution on behalf of the plurality of members, the program code including a third communication interface configured to communicate with a third device associated with the third-party entity;”**

183. In my opinion, [8.a.ii] recites substantively the same limitations as [1.a.ii], which *Lin* discloses as discussed for [1.a.ii].

- d. **[8.b.i]: “providing a login interface requesting security credentials from a first member of the plurality of members before the first member can access the service provided by a third-party entity, the first member having previously registered with the service;”**

184. In my opinion, [8.b.i] recites substantively the same limitations as [1.b.ii], which *Lin* discloses and/or the *Lin-Rackley* combination renders obvious as discussed for [1.b.ii].

- e. **[8.b.ii]: “receiving particular security credentials from the first member;”**

185. In my opinion, [8.b.ii] recites substantively the same limitations as [1.b.iii], which *Lin* discloses and/or the *Lin-Rackley* combination renders obvious as discussed for [1.b.iii].

- f. **[8.b.iii]: “when the particular security credentials have been validated, presenting one or more interfaces configured to assist the first member to register a set of one or more payment sources for a future transaction, the one or more interfaces configured to assist the first member to register a credit card account issued by the credit card company in the set of one or more payment sources, the one or more interfaces configured to assist the first member to register a financial account associated with the financial institution in the set of one or more payment sources, the third-party entity being different than the financial institution and different than the credit card company;”**

186. In my opinion, [8.b.iii] recites substantively the same limitations as [1.b.iv], which *Lin* discloses as discussed for [1.b.iv].

- g. **[8.b.iv]: “presenting one or more interfaces configured to enable the first member to select a function identifier from a set of function identifiers, each function identifier of the set of function identifiers configured to navigate to a respective function, a particular function identifier of the set of function identifiers configured to navigate to a payment function, the payment function configured to assist the first member to request sending a payment amount to a payee account, the payee account being a third-party account associated with the third-party entity and belonging to a second member of the plurality of members, the second member having previously registered with the service;”**

187. In my opinion, [8.b.iv] recites substantively the same limitations as [1.b.v], which *Lin* discloses and/or the *Lin-Rackley* combination renders obvious as discussed for [1.b.v].

- h. [8.b.v]: “receiving selection by the first member of the particular function identifier configured to navigate to the payment function;”**

188. In my opinion, [8.b.v] recites substantively the same limitations as [1.b.vi], which *Lin* discloses as discussed for [1.b.vi].

- i. [8.b.vi]: “after receiving the selection of the particular function identifier, presenting one or more interfaces configured to enable the first member to select a payee identifier identifying the payee account;”**

189. In my opinion, [8.b.vi] recites substantively the same limitations as [1.b.vii], which *Lin* discloses and/or the *Lin-Rackley* combination renders obvious as discussed for [1.b.vii].

- j. [8.b.vii]: “receiving selection by the first member of the payee identifier;”**

190. In my opinion, [8.b.vii] recites substantively the same limitations as [1.b.viii], which *Lin* discloses and/or the *Lin-Rackley* combination renders obvious as discussed for [1.b.viii].

- k. **[8.b.viii]: “presenting one or more interfaces configured to enable the first member to select a payment source identifier from a set of one or more payment source identifiers, the set of one or more payment source identifiers identifying a particular set of one or more payment sources, each payment source identifier of the set of one or more payment source identifiers identifying a respective payment source of the particular set of one or more payment sources;”**

191. In my opinion, [8.b.viii] recites substantively the same limitations as [1.b.ix], which *Lin* discloses as discussed for [1.b.ix].

- l. **[8.b.ix]: “presenting in the set of one or more payment source identifiers a financial account identifier identifying the financial account associated with the financial institution, a credit card identifier identifying the credit card account issued by the credit card company, and a third-party account identifier identifying a third-party account associated with the third-party entity and belonging to the first member;”**

192. In my opinion, [8.b.ix] recites substantively the same limitations as [1.b.ix], which *Lin* discloses as discussed for [1.b.ix].

- m. **[8.b.x]: “receiving identification of a particular payment source identifier of the set of one or more payment source identifiers, the particular payment source identifier identifying a particular payment source of the particular set of one or more payment sources;”**

193. In my opinion, [8.b.x] recites substantively the same limitations as [1.b.x], which *Lin* discloses as discussed for [1.b.x].

- n. **[8.b.xi]: “presenting an interface configured to enable the first member to identify the payment amount to be transferred to the payee account;”**

194. In my opinion, [8.b.xi] recites substantively the same limitations as [1.b.xi], which *Lin* discloses as discussed for [1.b.xi].

- o. **[8.b.xii]: “receiving information from the first member of the payment amount;”**

195. In my opinion, [8.b.xii] recites substantively the same limitations as [1.b.xii], which *Lin* discloses as discussed for [1.b.xii].

- p. **[8.b.xiii]: “selecting the first communication interface as a particular communication interface and establishing a communication link between the first communication interface and the first device associated with the credit card company on behalf of the first member, when the particular payment source is the credit card account issued by the credit card company;”**

196. In my opinion, [8.b.xiii] recites substantively the same limitations as [1.b.xiii], which *Lin* discloses as discussed for [1.b.xiii].

- q. **[8.b.xiv]: “selecting the second communication interface as the particular communication interface and establishing a communication link between the second communication interface and the second device associated with the financial institution on behalf of the first member, when the particular payment source is the financial account associated with the financial institution;”**

197. In my opinion, [8.b.xiv] recites substantively the same limitations as [1.b.xiv], which *Lin* discloses as discussed for [1.b.xiv].

- r. **[8.b.xv]: “selecting the third communication interface as the particular communication interface and establishing a communication link between the third communication interface and the third device associated with the third-party entity, when the particular payment source is the third-party account;”**

198. In my opinion, [8.b.xv] recites substantively the same limitations as [1.b.xv], which *Lin* discloses as discussed for [1.b.xv].

- s. **[8.b.xvi]: “requesting electronic transfer of the payment amount from the particular payment source to the payee account using the selected particular communication interface;”**

199. In my opinion, [8.b.xvi] recites substantively the same limitations as [1.b.xvi], which the *Lin-Rackley* combination renders obvious as discussed for [1.b.xvi].

- t. **[8.b.xvii]: “generating a notification indicating the electronic transfer to the payee account; and”**

200. In my opinion, [8.b.xvii] recites substantively the same limitations as [1.b.xvii], which *Lin* discloses as discussed for [1.b.xvii].

- u. **[8.b.xviii]: “transmitting the notification over a communication network to a computing device associated with the second member in real time, so that the second member has immediate access to up-to-date electronic transfers to the payee account.”**

201. In my opinion, [8.b.xviii] recites substantively the same limitations as [1.b.xviii], which *Lin* discloses as discussed for [1.b.xviii].

10. Claim 9: “The method of claim 8, wherein the method is performed by a mobile device executing an application on the mobile device.”

202. In my opinion, claim 9 recites substantively the same additional limitations as claim 2, which *Lin* discloses as discussed for claim 2.

11. Claim 10: “The method of claim 8, wherein the method is performed by a server executing server code on the server.”

203. In my opinion, claim 10 recites substantively the same additional limitations as claim 3, which the *Lin-Rackley* combination renders obvious as discussed for claim 3.

12. Claim 11: “The method of claim 8, wherein the one or more interfaces configured to assist the first member to register the set of one or more payment sources is configured to assist the first member to register a loan account, an international account, or a commodity account.”

204. In my opinion, claim 11 recites substantively the same additional limitations as claim 4, which the *Lin-Rackley* combination renders obvious as discussed for claim 4.

- 13. Claim 12: “The method of claim 8, wherein the second member is the first member, the particular payment source is one of the financial account associated with the financial institution or the credit card account issued by the credit card company, and the payee account is the third-party account associated with the third-party entity and belonging to the first member.”**

205. In my opinion, claim 12 recites substantively the same additional limitations as claim 5, which the *Lin-Rackley* combination renders obvious as discussed for claim 5.

- 14. Claim 13: “The method of claim 8, wherein the payee identifier is a telephone number.”**

206. In my opinion, claim 13 recites substantively the same additional limitations as claim 6, which the *Lin-Rackley* combination renders obvious as discussed for claim 6.

- 15. Claim 14: “The method of claim 8, wherein the payee identifier is a contact from an address book.”**

207. In my opinion, claim 14 recites substantively the same additional limitations as claim 7, which the *Lin-Rackley* combination renders obvious as discussed for claim 7.

B. Ground 2: Claims 1-14 Are Rendered Obvious by *Lin* and *Rackley*, in Further View of *Tumminaro*

208. In my opinion, the *Lin-Rackley-Tumminaro* combination renders obvious claims 1-14. As I explained above in Ground 1, the *Lin-Rackley* combination renders obvious claims 1-14. To the extent the Board determines the

communication interface limitations of claims 1-14 are not rendered obvious by the *Lin-Rackley* combination, the *Lin-Rackley-Tumminaro* combination renders each such limitation obvious.

1. Independent Claim 1

a. Communication Interface Limitations ([1.a.ii], [1.b.xiii], [1.b.xiv], and [1.b.xv])

209. Independent claim 1 includes a series of limitations directed to communication interfaces.

210. [1.a.ii] recites “the program code including a first communication interface configured to communicate with a first device associated with a credit card company on behalf of the plurality of members, the program code including a second communication interface configured to communicate with a second device associated with a financial institution on behalf of the plurality of members, the program code including a third communication interface configured to communicate with a third device associated with the third-party entity.”

211. [1.b.xiii] recites “selecting the first communication interface as a particular communication interface and establishing a communication link between the first communication interface and the first device associated with the credit card company on behalf of the first member, when the particular payment source is the credit card account issued by the credit card company.”

212. [1.b.xiv] recites “selecting the second communication interface as the particular communication interface and establishing a communication link between the second communication interface and the second device associated with the financial institution on behalf of the first member, when the particular payment source is the financial account associated with the financial institution.”

213. And [1.b.xv] recites “selecting the third communication interface as the particular communication interface and establishing a communication link between the third communication interface and the third device associated with the third-party entity, when the particular payment source is the third-party account.”

214. In my opinion, to the extent that the *Lin-Rackley* combination does not disclose or render obvious communicating with different communication interfaces for each of the credit card company, the financial institution, and the third-party entity ([1.a.ii], [1.b.xiii], [1.b.xiv], and [1.b.xv]), the *Lin-Rackley-Tumminaro* combination renders these limitations obvious. The *Lin-Rackley* combination renders obvious the other limitations of claim 1 for the reasons discussed above. *Supra* §IX.A.2.

215. *Tumminaro* discloses “systems and techniques for effectuating financial transactions via mobile devices, such as mobile or cellular phones, and more particularly to a mobile, individualized payment transfer infrastructure and method for transferring payment.” *Tumminaro*, [0003]. *Tumminaro* discloses the use

of transaction partners (e.g., debit cards) to fund transactions. *Tumminaro*, [0254]. “[T]here may be multiple such partner entities that interface with the mobile payment system or network.” *Tumminaro*, [0254]. According to *Tumminaro*, “[e]ach partner system may have a different electronic interfacing scheme, and the mobile payment system will communicate using the appropriate application program interface (API) for each partner.” *Tumminaro*, [0255]. *Tumminaro* teaches that its interfacing scheme “allows easy integration of financial partners (e.g., banking partners, card partners) to mobile and other consumer partners (e.g., mobile phone carriers).” *Tumminaro*, [0255].

216. An API is defined as the means by which the software code for an application requests services such as access to communications interfaces. A POSITA would have been motivated to include *Tumminaro*’s APIs in *Lin*’s system to ensure that each partner system has a different electronic interfacing scheme for communicating with a transaction application on a mobile device. *Tumminaro* teaches that interfacing with different financial providers through different APIs “allows easy integration of financial partners (e.g., banking partners, card partners) to mobile and other consumer partners (e.g., mobile phone carriers).” *Tumminaro*, [0255]. Furthermore, the prior art recognized that “consumers require strong security in using their devices.” *Rackley*, [0024]. A POSITA would have understood that *Tumminaro*’s individual APIs enable easy—and more importantly secure—

integration with different financial partners. Indeed, in my opinion, individualized interfaces improve security by tailoring the connection requirements to the particular partner.

217. In my opinion, a POSITA would have had a reasonable expectation of success in using *Tumminaro*'s individual APIs in *Lin*'s system. A POSITA would have understood how to create and manipulate APIs for various purposes, including the proposed modification to *Lin*'s transaction application. A POSITA would have understood that it was common for each financial partner to have their own, unique security protocols and requirements. *Rackley*, [0187]. Implementing this functionality in *Lin*'s system would have been merely the straightforward application of known, conventional techniques used according to their known functions to yield predictable results.

2. Claims 2-7

218. In my opinion, the *Lin-Rackley-Tumminaro* combination renders obvious the additional limitations recited in claims 2-7 for the same reasons discussed for the *Lin-Rackley* combination. *Supra* §§IX.A.3-IX.A.8.

3. Independent Claim 8

219. In my opinion, the *Lin-Rackley-Tumminaro* combination renders obvious independent claim 8 for the same reasons discussed for claim 1. *Supra* §IX.B.1.

4. Claims 9-14

220. In my opinion, the *Lin-Rackley-Tumminaro* combination renders obvious the additional limitations recited in claims 9-14 for the same reasons discussed for the *Lin-Rackley* combination. *Supra* §§IX.A.10-IX.A.15.

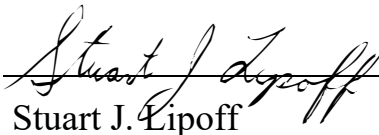
X. CONCLUSION

221. For the reasons set forth above, it is my opinion that claims 1-14 of the '296 patent are unpatentable in view of the prior art.

222. In signing this declaration, I understand that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I acknowledge that I may be subject to cross-examination in this case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

223. I declare that all statements made herein of my knowledge are true, that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: Sept. 30, 2025

By: 
Stuart J. Lipoff