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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/934,392	11/01/2022	11488174	104402-5043-US	2603

24341 7590 10/12/2022
Morgan, Lewis & Bockius LLP (PA)
1400 Page Mill Road
Palo Alto, CA 94304-1124

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 271 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional inventors):

Paresh K. Patel, Portland, OR;

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

PAYRANGE INC., Portland, OR;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/934,392	07/21/2020	Paresh K. Patel	104402-5043-US	2603
24341	7590	09/28/2022		
Morgan, Lewis & Bockius LLP (PA)			EXAMINER	
1400 Page Mill Road			NIGH, JAMES D	
Palo Alto, CA 94304-1124				
			ART UNIT	PAPER NUMBER
			3685	
			NOTIFICATION DATE	DELIVERY MODE
			09/28/2022	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

padocketingdepartment@morganlewis.com
vskliba@morganlewis.com

Notice of Allowability	Application No. 16/934,392	Applicant(s) Patel, Paresh K.	
	Examiner JAMES D NIGH	Art Unit 3685	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to information disclosure statement filed September 19, 2022.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 2-21. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892) 2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>09/19/2022</u> . 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____. 4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	5. ☐ Examiner's Amendment/Comment 6. ☐ Examiner's Statement of Reasons for Allowance 7. ☐ Other _____.
--	---

/JAMES D NIGH/
Senior Examiner, Art Unit 3685

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed September 19, 2022	
				Application Number	16/934,392
					July 21, 2020
				First Named Inventor	Paresh K. Patel
				Art Unit	3685
	Examiner Name	James D. Nigh			
Sheet	1	of	1	Attorney Docket Number	104402-5043-US

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number Number - Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		2014/0006451 A1	01-02-2014	Mullis et al.	
		2019/0244465 A1	08-08-2019	Saunders et al.	
		5,854,994 A	12-29-1998	Canada et al.	
		11,182,794 B1	11-23-2021	Aument	
		11,373,147 B1	06-28-2022	Moore	
FOREIGN PATENT DOCUMENTS					
Examiner Initials	Cite No.	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
NON-PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			
		PayRange, Inc., Non-Final Office Action, 17/147,305, 31AUG2022, 6 pgs.			

Examiner Signature	/JAMES D NIGH/	Date Considered	09/26/2022
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DB2/ 43987797



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
16/934,392

RECEIPT DATE / TIME
09/22/2022 03:49:21 PM ET

ATTORNEY DOCKET #
104402-5043-US

Title of Invention

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 2603

FILED BY Benjamin Pezzner

PATENT CENTER # 60994482

FILING DATE 07/21/2020

CUSTOMER # 24341

FIRST NAMED
INVENTOR Paresh K. Patel

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY -

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
web85b.pdf	3	Issue Fee Payment (PTO-85B)	62 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
web85b.pdf	5AE1C2FE4CEEE156BE170C70D9202B735A38ABE4742E23979 C2587A06F3AECF12806C29373D0C7199D9553768671E72BDE A901C2245FF25DD46A1426B78E18F0

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as

EX1002, Page 005

described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



ELECTRONIC PAYMENT RECEIPT

APPLICATION #
16/934,392

RECEIPT DATE / TIME
09/22/2022 03:49:21 PM ET

ATTORNEY DOCKET #
104402-5043-US

Title of Invention

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 2603

FILED BY Benjamin Pezzner

PATENT CENTER # 60994482

AUTHORIZED BY -

CUSTOMER # 24341

FILING DATE 07/21/2020

CORRESPONDENCE
ADDRESS -

FIRST NAMED
INVENTOR Paresh K. Patel

Payment Information

PAYMENT METHOD
CARD / 8177

PAYMENT TRANSACTION ID
E20229LF53042981

PAYMENT AUTHORIZED BY
Benjamin Pezzner

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
2501	UTILITY ISSUE FEE	600.00	1	600.00
TOTAL AMOUNT:				\$600.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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ISSUE FEE TRANSMITTAL FORM

APPLICATION #
16934392

FILING DATE
07/21/2020

FIRST NAMED INVENTOR
Paresh Patel

ATTORNEY DOCKET #
104402-5043-US

Title of Invention

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

Application Information

APPLICATION TYPE Nonprovisional Application under 35
USC 111(a)

DATE DUE 12/21/2022

CONFIRMATION # 2503

ISSUE FEE DUE \$ 600

EXAMINER JAMES NIGH

PUBLICATION DUE \$ 0

GROUP ART UNIT 3685

TOTAL FEES DUE \$600

CLASS - SUBCLASS 705/071000

PREV. PAID FEE \$ 0

ENTITY STATUS Small

1. CHANGE OF CORRESPONDENCE ADDRESS AND/OR INDICATION OF FEE ADDRESS (37 CFR 1.33 & 1.363)

Correspondence Address

Maintenance Fee Address

CURRENT ADDRESS

CURRENT ADDRESS



Change of correspondence address requested, system
generated AIA/122-PC form attached



Fee address indication requested, system
generated SB/47-PC form attached

2. ENTITY STATUS

Change in Entity Status

NEW STATUS

3. THE FOLLOWING FEES ARE SUBMITTED



Issue Fee



Publication Fee



Advance Order - # of copies:

4. FEE AUTHORIZATION



I authorize USPTO to apply my previously paid issue fee to the current fees due



The Director is hereby authorized to apply my previously paid issue fee to the current fee due and to charge deficient fees to Deposit Account Number:



If in addition to the payment of the issue fee amount submitted with this form, there are any discrepancies in any amount(s) due, the Director is authorized to charge any deficiency, or credit any overpayment, to Deposit Account Number: 500310

5. FIRM AND/OR ATTORNEY NAMES TO BE PRINTED

NOTE: If no name is listed, no name will be printed

For printing on the patent front page, list to be displayed as entered

MORGAN, LEWIS & BOCKIUS LLP

6. ASSIGNEE NAME(S) AND RESIDENCE DATA TO BE PRINTED

NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

PAYRANGE INC.

PORTLAND, OR UNITED STATES

Corporation

Signature

I certify, in accordance with 37 CFR 1.4(d)(4) that I am an attorney or agent registered to practice before the Patent and Trademark Office who has filed and has been granted power of attorney in this application. I also

certify that this Fee(s) Transmittal form is being transmitted to the USPTO via Patent Center on the date indicated below.

Signature	Name	Registration #	Date
/Benjamin Pezzner/	Benjamin Pezzner	70711	09/22/2022



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United States Patent and Trademark Office
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www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

24341 7590 09/21/2022
Morgan, Lewis & Bockius LLP (PA)
1400 Page Mill Road
Palo Alto, CA 94304-1124

EXAMINER	
NIGH, JAMES D	
ART UNIT	PAPER NUMBER

3685

DATE MAILED: 09/21/2022

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/934,392	07/21/2020	Paresh K. Patel	104402-5043-US	2603

TITLE OF INVENTION: METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	12/21/2022

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

24341 7590 09/21/2022
Morgan, Lewis & Bockius LLP (PA)
 1400 Page Mill Road
 Palo Alto, CA 94304-1124

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

	(Typed or printed name)
	(Signature)
	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/934,392	07/21/2020	Paresh K. Patel	104402-5043-US	2603

TITLE OF INVENTION: METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	12/21/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
NIGH, JAMES D	3685	705-071000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

1 _____

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/934,392	07/21/2020	Paresh K. Patel	104402-5043-US	2603
24341	7590	09/21/2022	EXAMINER	
Morgan, Lewis & Bockius LLP (PA)			NIGH, JAMES D	
1400 Page Mill Road			ART UNIT	
Palo Alto, CA 94304-1124			PAPER NUMBER	
			3685	
DATE MAILED: 09/21/2022				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/934,392	Applicant(s) Patel, Paresh K.	
	Examiner JAMES D NIGH	Art Unit 3685	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on July 21, 2020 and amendment of February 1, 2021.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 2-21. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892) 2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>08/17/2022 and 09/07/2022.</u> 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____. 4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	5. ☐ Examiner's Amendment/Comment 6. ☒ Examiner's Statement of Reasons for Allowance 7. ☐ Other _____.
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DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Priority

CONTINUATION

2. This application is a continuation application of U.S. application no. 15/406,492 filed on January 13, 2017, now U.S. Patent 10,719,833 ("Parent Application"). which is a continuation of U.S. Patent Application No. 14/335,762, filed July 18, 2014, now U.S. Patent No. 9,547,859, which is a continuation of U.S. Patent Application No. 14/214,644, filed March 14, 2014, now U.S. Patent No. 8,856,045, . See MPEP §201.07. In accordance with MPEP §609.02 A. 2 and MPEP §2001.06(b) (last paragraph), the Examiner has reviewed and considered the prior art cited in the Parent Application. Also in accordance with MPEP §2001.06(b) (last paragraph), all documents cited or considered 'of record' in the Parent Application are now considered cited or 'of record' in this application. Additionally, Applicant(s) are reminded that a listing of the information cited or 'of record' in the Parent Application need not be resubmitted in this application unless Applicants desire the information to be printed on a patent issuing from this application. See MPEP §609.02 A. 2. Finally, Applicants are reminded that the prosecution history of the Parent Application is relevant in this application. See *e.g., Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350, 69 USPQ2d 1815, 1823 (Fed. Cir. 2004) (holding that statements made in prosecution of one patent are relevant to the scope of all sibling patents).

3. Applicant's claim for the benefit of U.S. provisional patent application 61/917,936 filed December 18, 2013 under 35 U.S.C. 119(e) is acknowledged.

4. Applicant's claim for the benefit of U.S. design patent application 29/477,025, filed December 18, 2013, now U.S. Patent D755,183, is acknowledged.

Information Disclosure Statement

5. The information disclosure statements (IDS) were submitted on August 17, 2022 and September 7, 2022. The submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Prior Patent 10,719,833 subject of Post Grant Review

6. Patent 10,719,833, issued July 21, 2020 is the subject of post-grant review PGR-2021-00077. Examiner has reviewed the entire document for the matters being reviewed under sections 101, 112(a), 112(b), 102 and 103. The patent is also the subject of *PayRange Inc. v. KioSoft Technologies, LLC et al.*, Case No. 1:20-cv-24342 in the U.S. District Court for the Southern District of Florida (from pages 2-3 under section B "Related Matters". Examiner also notes that the only ground under which institution was not denied was under section 101 eligibility grounds as the Patent Trial and Appeal Board determined that challenges under sections 112 and 102/103 were not likely to be successful. Per section B the '833 patent is related to U.S. Patent No. 9,659,296 and U.S. Patent No. 9,134,995, which are the subject of *PayRange Inc. v. Kiosoft Technologies, LLC et al.*, Case No. 1:20-cv-20970-RS in the U.S. District Court for the Southern District of Florida ("the '20970 district court litigation"). Pet. 8; Paper 4, 2. U.S. Patent No. 9,659,296 was challenged in CBM2020-00026 and IPR2021-00086,

in which the Patent Trial and Appeal Board exercised discretion respectively under 35 U.S.C. § 324(a) and § 314(a) to deny institution. Pet. 8; Paper 4, 2. In reviewing the arguments regarding section 101 from pages 19-21 it would appear that the presence of the short-range communication mode and the long-range communication mode in the claims of the '859 patent were sufficient to overcome the section 101 rejection both in the Examiner's issuance of the '859 patent and were the basis for the Patent Trial and Appeal Board concluding that any arguments relative to the long-range communication mode and short-range communication mode have already been considered by the Office. The claims of U.S. Patent 10,719,833 and those of the instant application do not contain this exact language and per pages 24-35 of PGR-2021-00077 the Board has determined that there are sufficient reasons to conclude that it is more likely than not that claim 1 of U.S. Patent 10,719,833 is ineligible. Therefore Examiner is going to provide an analysis as to why Examiner held the original claim 1 eligible in examining U.S. Patent 10,719,833 and why Examiner also believes that independent claims 2, 13 and 20 are eligible under 35 U.S.C. § 101.

7. Claim 2 recites as follows:

2. A method of payment processing, the method comprising:

at a mobile device with one or more processors, memory, and a communications unit, and *prior to user selection of any items or services provided by an automatic retail machine*:

receiving via the communications unit a transmission from an electronic payment device of the automatic retail machine, the transmission *including a*

request to preemptively obtain authorization to make funds available for a cashless transaction with the automatic retail machine;

sending, to a server, the request via the communications unit of the mobile device;

*in response to **sending the request to the server, obtaining from the server an authorization grant of an amount of funds for use in conjunction with the cashless transaction** with the automatic retail machine;*

detecting, by an application executing on the mobile device, a trigger condition to perform the cashless transaction with the automatic retail machine;
and

in response to detecting the trigger condition, sending to the electronic payment device the authorization grant to enable completion of the cashless transaction at the automatic retail machine.

(Examiner has emboldened the language that Examiner deems to constitute elements separate from the abstract idea and italicized the portions that Examiner deems to be part of an abstract idea).

Examiner concurs with the analysis of claim 1 of U.S. Patent 10,719,833 provided on pages 27-28 that the claim is directed towards one of the four categories of statutory subject matter and therefore meets Step 1 of the analysis to be performed per the 2019 Revised Patent Subject Matter Eligibility Guidance (hereinafter referred to as 2019 PEG).

Examiner concurs that claim 1 of U.S. Patent 10,719,833 recites a judicial exception as was concluded in pages 28-31 of PGR-2021-00077 and would be held as

ineligible under Prong One of Step 2A of the 2019 PEG. However Examiner's analysis differs from that provided on page 29 of PGR-2021-00077 in that Examiner deems that the nature of the sending of information to the server, the detecting of a trigger condition by an application on the mobile device and the sending operation performed in response to the detecting of the trigger condition by the mobile device in conjunction with the electronic payment device of the automatic retail machine cannot be viewed as being part of an abstract idea but instead should be viewed as elements that must be evaluated under Prong Two of Step 2A and not under Prong One of Step 2A. Examiner will provide further reasoning as to why Examiner considers these operations to be elements and not part of the abstract idea in Examiner's analysis under Prong Two of Step 2A. However Examiner does concur in part with the analysis from PGR-2021-00077 that under Prong One of Step 2A that an abstract idea involving a commercial transaction is present in the claim including the obtaining of authorization and subsequently conducting of a purchase.

Examiner in evaluating whether claim 2 recites additional elements that integrate the abstract idea into a judicial exception under Prong Two of Step 2A. The first element that Examiner would point to is the electronic payment device of the automatic retail machine which is shown in Figure 5 as the adapter module:

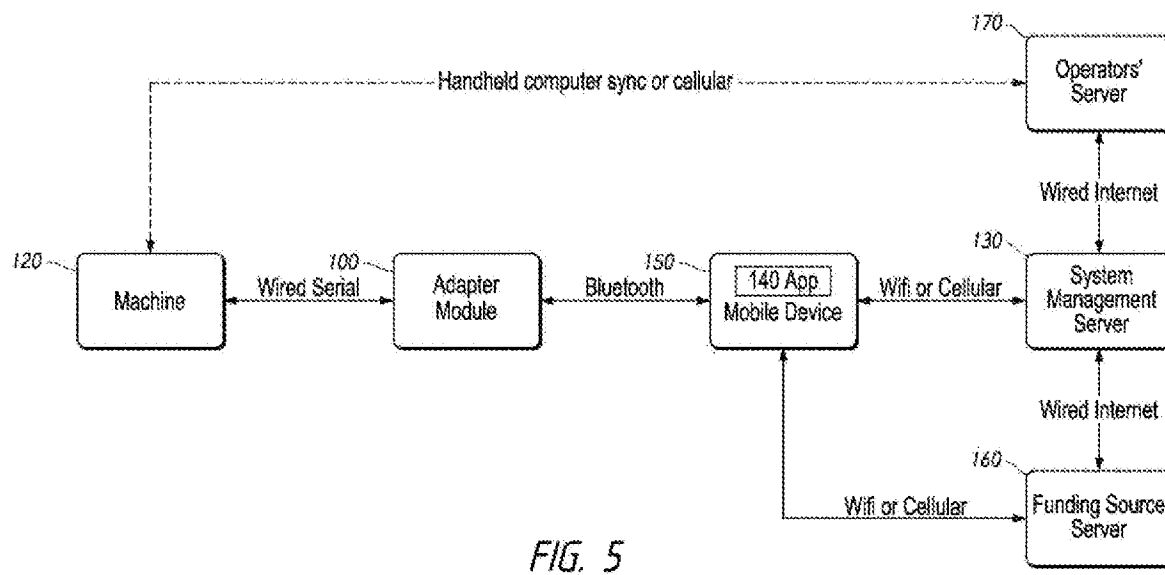


FIG. 5

In describing the adapter module at page 19 in the section regarding network connections the adapter module communicates with a user mobile device using “short-range communication technology (e.g. Bluetooth (e.g. Bluetooth 4.0, Bluetooth Smart, Bluetooth LE (Low Energy), near-field communication, Ultra Wideband (UWB), RFID, infrared wireless, induction wireless, or any wired or wireless technology that could be used *to communicate a small distance (e.g. approximately a hundred feet or closer)* that is known or yet to be discovered). *Neither the adapter module 100 nor the payment accepting unit 120, therefore require a traditional persistent long-range wireless network connection*”. The disclosure also describes at paragraphs 0132-0136 use cases for adapting to signal unavailability with regard to the absence of cellular or WiFi coverage within the payment zone. Examiner in reviewing the entirety of the disclosure believes that those of ordinary skill would view the communication between the machine/adapter module as being clearly directed towards short range communication i.e. approximately a hundred feet or closer and the communication between the mobile device and the

server as being a long range communication (WiFi or cellular) via the mechanisms described on page 19 under the network connections section.

Examiner would also point to Figures 11 and Figure 17:

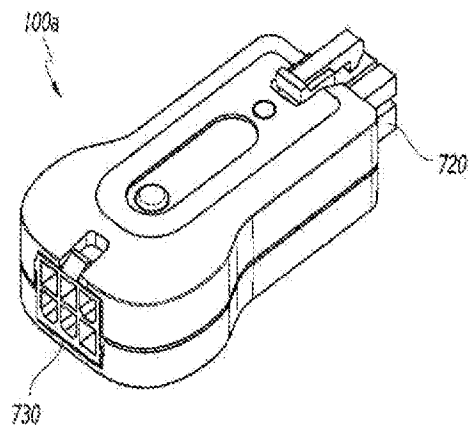


FIG. 11

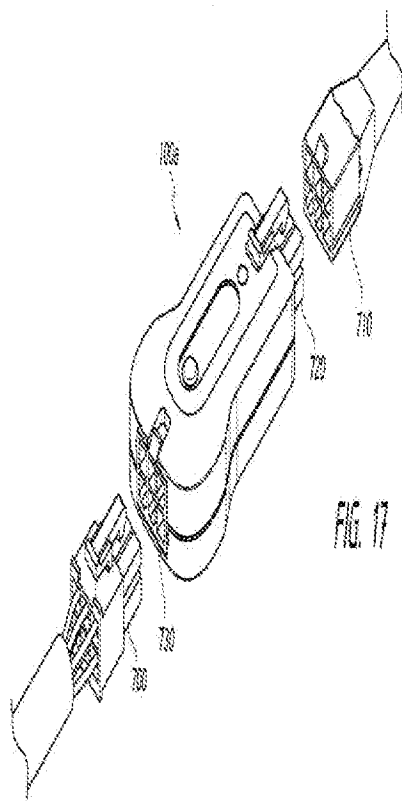


FIG. 17

These drawings indicate that the adapter module is a standalone device intended to be integrated into the existing MDB framework of the vending machine as known in the prior art at the time of the invention. Paragraph 0097 describes the installation procedure as one that can be performed within “as little as 30 seconds”. In Example 41 of the 2019 PEG at slide 151 titled “Cryptography: Background” one of the bullets regarding cryptography states that “Prior art cryptographic encoding and decoding methods require expensive encoding and decoding hardware and a secure way of sharing the private key used to encrypt and decrypt the message” and the next bullet states the problem “There is a need in the art to perform security and authentication functions efficiently over a public key system”. Examiner views the problem described in Example 41 as being similar to that described in the disclosure of the instant application with regard to the ability to perform cashless payments without a persistent connection (0016, 0017, 0098) because obtaining a persistent connection in the environment where a vending machine is placed may not be possible without retrofitting a building (for example installing a wired connection could involve removing drywall, fishing CAT5 cable through walls, adding the necessary wall fixture for the wired connection and retrofitting the vending machine to accept the wired connection) or through installation of a picocell in order to establish a cellular connection. The problems with establishing a long range connection can therefore be viewed as analogous to the problem described in Example 41 with regard to placement of expensive encoding and decoding hardware. Use of the adapter module with the short range communication capability in combination with the long range connection capability of the mobile device that when modified with the appropriate software to

function as a bridge between the vending machine and the server provides the vending machine with a capability for connecting with a server that the vending machine by itself would not be present. Notably none of the example claims that were deemed as meeting the practical application test of Prong Two of Step 2A in Examples 40-42 of the 2019 PEG contain limitations that alone were viewed as technological improvements but when taken in combination the elements were deemed as forming a practical application. This analysis is also reflected in the examples from MPEP § 2016.04(d) for evaluating whether additional elements integrate a judicial exception into a practical application. Therefore Examiner views that under Prong Two of Step 2A that the claim should be viewed as eligible as the claim clearly is providing a solution to a technical problem of being able to communicate with a remote server in an area where a signal is unavailable by performing the operations of the mobile device receiving the transmission from the electronic payment device of the automatic retail machine, sending the transmission to the server (which per paragraph 0024 is described as forwarding in step c), obtaining the grant from the server and sending that grant to the automatic retail machine (which per paragraph 0024 is described as forwarding per step g) upon detecting the trigger condition on the mobile device. Examiner is also including documents found that Examiner believes are pertinent to the 101 inquiry in the file wrapper including Mumford ("The Components of credit card vending", Automatic Merchandiser, October 9, 2009, pp. 42-47) which describes on page 44 the problems faced in attempting to use a WAN in conjunction with vending including dead zones within a building and "The benefits of offline vs. online vending machines", retrieved from

<https://web.archive.org/web/20181109215952/https://www.parlevelsystems.com/2018/10/23/online-offline-infographic/>, October 23, 2018, 5 pages) which explain the

advantages of online vending machines and cashless payments and explains that older machines cannot always physically accept telemetry devices which Examiner views as indicative that a technological problem is being solved by the claimed invention.

Therefore Examiner views that claims 2, 13 and 20 are eligible under 35 U.S.C. § 101.

Double Patenting

8. Claims 2, 13 and 20 would be subject to the provisions of non-statutory obviousness type double patenting over U.S. Patent 10,719,833, U.S. Patent 9,547,859 and U.S. Patent 8,856,045. Examiner contacted Applicant on September 7, 2022 to request that a terminal disclaimer naming the issued patents which was filed on the same day.

Allowable Subject Matter

9. Claims 2-21 are allowed.

10. The following is an examiner's statement of reasons for allowance:

11. Melone et al. (U.S. Patent Publication 2014/0074714, hereinafter referred to as Melone) appears to be the closest prior art of record with regard to the feature of teaching the preemptive obtaining of an authorization. Melone teaches in Figure 7 that an attendant authorizes dispensing at operation 710 using handheld device 704 and when dispensing is complete the handheld device generates a transaction identifier which is sent to payment server 708 at operation 722. The mobile device obtains a representation of the transaction (for example a QR code) at operation 724 and initiates payment. Melone also teaches a pre-authorized payment (0036, 0046) however it is

unclear if the transaction identifier is presented to the mobile device prior to pre-authorization such that it could be viewed as a request from the electronic payment device to preemptively obtain authorization to make funds available for a cashless transaction with the automatic retail machine as is being claimed. However even if such were the case it appears from the recitation of paragraph 0036 that the mobile device communicates information to the handheld device and the handheld device pre-authorizes the transaction based on communication with the mobile payment server and that the mobile device is then no longer utilized in the transaction. Therefore Melone is unclear at best about obtaining a request to preemptively obtain authorization and definitely does not teach the limitation of sending to a server the request via the communications unit of the mobile device. Berger et al. (U.S. Patent Publication 2004/0117262, hereinafter referred to as Berger) is also pertinent prior art in that Berger at least teaches the combination of an automatic retail machine, mobile device and server. Prior art references such as Low et al. (U.S. Patent Publication 2014/0032413, hereinafter referred to as Low) teach a combination of an offline retail machine communicating through a network by transmission of a short-range wireless signal to a user device which can then transmit the information to a vendor server (0026, 0044). Kolls et al. (U.S. Patent 7,690,495, hereinafter referred to as Kolls) teaches a similar ability albeit through a PDA that is carried to the machine (22:9-26). Lei et al. (U.S. Patent Publication 2003/0158891, hereinafter referred to as Lee) teaches a similar operation. Examiner does not see where any of the cited prior art fairly teaches or suggests the operation of receiving a request to preemptively obtain authorization to make funds available for a cashless transaction with an automatic retail machine. Nurel

“Recent Developments in Wireless Network Systems”, Izmir Institute of Technology, September 2001, 280 pages) discloses in section 9.1.2 on pages 236 and 237 the benefits of including wireless networking capability in a vending machine but does not disclose either the combination of short range and long-range capability or the use of unique codes. As none of the prior art considered by Examiner fairly teaches this combination of features claims 1-15 are held as being allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES D NIGH whose telephone number is (571)270-5486. The examiner can normally be reached 6:00 to 9:45 and 10:30 to 2:45.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Neha Patel can be reached on (571) 270-1492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES D NIGH/
Senior Examiner, Art Unit 3685

<i>Notice of References Cited</i>	Application/Control No. 16/934,392		Applicant(s)/Patent Under Reexamination Patel, Paresh K.	
	Examiner JAMES D NIGH		Art Unit 3685	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20140074714-A1	03-2014	MELONE; Cristian	G06Q20/322	235/487
*	B	US-20140064116-A1	03-2014	Linde; Joakim	H04L67/06	370/252
*	C	US-20140025958-A1	01-2014	Calman; Matthew A.	G06F21/6218	713/189
*	D	US-20130191789-A1	07-2013	CALMAN; MATTHEW A.	G06F3/017	715/863
*	E	US-20040117262-A1	06-2004	Berger, Jeffrey Keith	G06Q20/341	705/16
*	F	US-20130246171-A1	09-2013	Carapelli; Giovanni	G06Q20/325	705/14.51
*	G	US-10423949-B2	09-2019	Lyons; Garry	G06Q20/36	1/1
*	H	US-20150220381-A1	08-2015	Horgan; Kevin	G06F11/0748	714/27
*	I	US-20180276674-A1	09-2018	Ramatchandirane; Nadaradjane	G06Q20/18	1/1
*	J	US-20170330164-A1	11-2017	Suelberg; Thilo	G06Q10/087	1/1
*	K	US-20140032413-A1	01-2014	Low; Gak Wee	G07F9/026	705/44
*	L	US-7690495-B1	04-2010	Kolls; H. Brock	G07F9/026	194/350
*	M	US-20030158891-A1	08-2003	Lei, Jonathan L.	G06Q20/327	709/203

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Nurel "Recent Developments in Wireless Network Systems", Izmir Institute of Technology, September 2001, 280 pages) (Year: 2001)
	V	Mumford ("The Components of credit card vending", Automatic Merchandiser, October 9, 2009, pp. 42-47) (Year: 2009)
	W	"The benefits of offline vs. online vending machines", retrieved from https://web.archive.org/web/20181109215952/https://www.parlevelsystems.com/2018/10/23/online-offline-infographic/ , October 23, 2018, 5 pages) (Year: 2018)
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Search Notes</i> 	Application/Control No. 16/934,392	Applicant(s)/Patent Under Reexamination Patel, Paresh K.
	Examiner JAMES D NIGH	Art Unit 3685

CPC - Searched*		
Symbol	Date	Examiner
G06Q 20/405,18,322,3226,327,3278,36,3821,3823,3829,40,401	09/09/2022	JDN
G06Q 30/06	09/09/2022	JDN
G07F 9/001,002,023	09/09/2022	JDN
G06Q 2220/00	09/09/2022	JDN
H04L 9/50	09/09/2022	JDN
G06Q 20/326	09/09/2022	JDN

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
705	71	09/09/2022	JDN

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
PE2E Text, Classification and Inventor Search	09/09/2022	JDN
IP.Com Patent and NPL Search	09/09/2022	JDN
Dialog ProQuest NPL Search	09/09/2022	JDN
Google NPL Search	09/09/2022	JDN
Google Scholar NPL Search	09/09/2022	JDN

	/JAMES D NIGH/ Senior Examiner, Art Unit 3685
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<i>Search Notes</i> 	Application/Control No. 16/934,392	Applicant(s)/Patent Under Reexamination Patel, Paresh K.
	Examiner JAMES D NIGH	Art Unit 3685

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
705	71	09/09/2022	JDN

	/JAMES D NIGH/ Senior Examiner, Art Unit 3685
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	Examiner JAMES D NIGH	Art Unit 3685

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47										
CLAIM			DATE							
Final	Original	09/09/2022								
	1	-								
1	2	=								
2	3	=								
3	4	=								
4	5	=								
5	6	=								
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Issue Classification 	Application/Control No. 16/934,392	Applicant(s)/Patent Under Reexamination Patel, Paresh K.	
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CPC						
Symbol					Type	Version
G06Q	/	20	/	405	F	2013-01-01
G06Q	/	20	/	40	I	2013-01-01
G06Q	/	20	/	327	I	2013-01-01
G06Q	/	20	/	3829	I	2013-01-01
G06Q	/	20	/	3823	I	2013-01-01
G06Q	/	20	/	3278	I	2013-01-01
G06Q	/	20	/	36	I	2013-01-01
G06Q	/	30	/	06	I	2013-01-01
G07F	/	9	/	023	I	2013-01-01
G07F	/	9	/	002	I	2020-05-01
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G06Q	/	20	/	18	I	2013-01-01
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G06Q	/	20	/	401	I	2013-01-01
G06Q	/	20	/	3226	I	2013-01-01
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CPC Combination Sets					
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NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/JAMES D NIGH/ Senior Examiner, Art Unit 3685	09 September 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	2	5

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INTERNATIONAL CLASSIFICATION					
CLAIMED					
G06Q	/	20	/	40	
G06Q	/	20	/	18	
G06Q	/	20	/	32	
G06Q	/	20	/	36	
G06Q	/	20	/	38	
G06Q	/	30	/	06	
G07F	/	9	/	00	
G07F	/	9	/	02	
NON-CLAIMED					
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US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
705	71

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
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(Primary Examiner)	(Date)	2	5

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☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 20	
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2. The changing face of money: Will electronic money be adopted in the United States?..... 1

Search Strategy

Databases: ABI/INFORM® Professional Advanced, Abstracts in New Technology & Engineering, AdisInsight: Drugs, AdisInsight: Trials, Adis Pharmacoeconomics & Outcomes News, AGRICOLA, AGRIS, Allied & Complementary Medicine™, Analytical Abstracts, APA PsycInfo®, Aqualine, Aquatic Science & Fisheries Abstracts (ASFA), Australian Education Index, BIOSIS® Toxicology, BIOSIS Previews®, British Library Inside Conferences, British Nursing Index, Business & Industry, CAB ABSTRACTS, Chemical Business Newsbase, Chemical Engineering & Biotechnology Abstracts, Chemical Safety Newsbase, Civil Engineering Abstracts, ClinicalTrials.gov, Current Contents® Search, Derwent Drug File, Derwent Drug Registry, DH-DATA: Health Administration, Medical Toxicology & Environmental Health, DIOGENES® FDA Regulatory Updates, Drug Information Fulltext, Earthquake Engineering Abstracts, EconLit, Ei Compendex®, Ei EnCompassLIT, Embase®, Embase® French Local Literature, Embase Preprints, EMCare®, ERIC, ESPICOM Pharmaceutical & Medical Device News, FDAnews, FLUIDEX (Fluid Engineering Abstracts), Foodline®: MARKET, Foodline®: PRODUCT, Foodline®: SCIENCE, FSTA®, Gale Group Computer Database™, Gale Group Health Periodicals Database, Gale Group New Product Announcements / Plus®, Gale Group Newsletter Database™, Gale Group PharmaBiomed Business Journals, Gale Group PROMT®, Gale Group Trade & Industry Database™, GEOBASE, GeoRef, Global Health, HSELINE: Health and Safety, ICONDA - International Construction Database, IMS Company Profiles, IMS New Product Focus, IMS Pharma Trademarks, IMS R&D Focus, IMS R&D Focus Drug News, Inspec®, International Pharmaceutical Abstracts, Jane's Defense & Aerospace News, King's Fund, KOSMET: Cosmetic Science, Lancet Titles, Mechanical & Transportation Engineering Abstracts, MEDLINE®, Meteorological & Geostrophysical Abstracts, Morressier Life Science Conference Abstracts and Posters, New England Journal of Medicine, Northern Light Life Sciences Conference Abstracts, NTIS: National Technical Information Service, Oceanic Abstracts, PAIS International, Paperbase, PAPERCHEM, ProQuest Advanced Tech & Aerospace Professional, ProQuest Biological & Health Science Professional, ProQuest Dissertations and Theses Professional, ProQuest Environmental Science Professional, ProQuest Materials Research Professional, ProQuest Newsstand Professional, ProQuest Technology Research Professional, Proux Science Daily Essentials, Proux Science Drug Data Report, Proux Science Drugs Of The Future™, Publicly Available Content, Registry of Toxic Effects of Chemical Substances (RTECS®), SciSearch®: a Cited Reference Science Database, Social SciSearch®, ToxFile®, Transport Research International Documentation, TULSA™ (Petroleum Abstracts), UBM Computer Full Text, Weldasearch®, Zoological Record

Set#	Searched for	Results
S1	((preauthorization or (preemptive[*5] near/5 authorization)) and ((cellular or mobile) near/5 (device or phone)) and ((vending or retail) near/5 machine)) and (pd(19800101-20131218))	2°

° Duplicates are removed from the search and from the result count.

The components of credit card vending

Author: Mumford, Chris

Publication info: Automatic Merchandiser 51.9: 42,44,46-47. Endeavor Business Media. (Sep 2009)

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The changing face of money: Will electronic money be adopted in the United States?

Author: Good, Barbara Ann

Publication info: Case Western Reserve University, Weatherhead School of Management. ProQuest Dissertations Publishing, 1998. 9918692.

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Align sets

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nurs* finds up to 10 characters (e.g., nurse, nurses, nursing) with unlimited word variations. [Learn more](#)

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° Duplicates are removed from the search and from the result count.

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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	5	((("20140074714") or ("20140025958") or ("20140064116") or ("20040117262") or ("20130191789")).PN.	(US-PGPUB; USPAT)	AND	OFF	OFF	2019/10/21 10:52 AM
L2	2	((("8856045") or ("20140136301")).PN.	(US-PGPUB; USPAT)	AND	OFF	OFF	2020/03/06 05:36 AM
L3	1038	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218"	(US-PGPUB; USPAT)	AND	ON	ON	2020/03/06 05:40 AM
L4	548	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone))	(US-PGPUB; USPAT)	AND	ON	ON	2020/03/06 05:41 AM
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L6	53	((("5479602") or ("5955718") or ("6056194") or ("6390269") or ("6505095") or ("7131575") or ("8020763") or ("8596529") or ("8606702") or ("8881975") or ("9395888") or ("9424603") or ("9483763") or ("20020016740") or ("20030191811") or ("20030206542") or ("20070186105") or ("20070227856") or ("20070255653") or ("20080167017") or ("20100276484") or ("20100280956") or ("20110244799") or ("20110251892") or ("20120030047") or	(US-PGPUB; USPAT)	AND	OFF	OFF	2020/03/06 06:08 AM

		("20120066096") or ("20120108173") or ("20120150742") or ("20120255653") or ("20120258773") or ("20120330844") or ("20130054336") or ("20130275305") or ("20130331985") or ("20140085046") or ("20140085109") or ("20140089016") or ("20140143055") or ("20140143074") or ("20140188708") or ("20140278989") or ("20140279008") or ("20140279556") or ("20140324627") or ("20140351099") or ("20150051977") or ("20150170131") or ("20150278811") or ("20150302377") or ("20150332029") or ("20160196220") or ("20160335620") or ("20170006656")).PN.					
L7	0	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) 705/71.ccls.	(US-PGPUB; USPAT)	AND	ON	ON	2020/03/06 06:33 AM
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L14	3	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G06Q20/3226.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:35 AM
L15	4	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G06Q20/327.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:35 AM
L16	0	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G06Q20/3278.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:38 AM

L17	0	@ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G06Q20/36.cpc. (preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G06Q20/38.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:38 AM
L18	4	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G06Q20/3821.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:38 AM
L19	3	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G06Q20/3823.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:38 AM
L20	0	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G06Q20/3829.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:38 AM
L21	15	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G06Q20/40.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:38 AM
L22	7	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile)	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:39 AM

L23	15	near5 (device or phone)) ((vending or retail) near5 machine) G06Q20/401.cpc. (preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G06Q30/06.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:39 AM
L24	0	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G06Q2220/00.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:39 AM
L25	0	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G07F9/023.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:40 AM
L26	0	(preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine) G07F11/002.cpc.	(US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2020/03/06 06:40 AM
L27	33	("2014/0074714").URP N.	(USPAT)	AND	ON	ON	2020/03/06 06:40 AM
L28	27	("2014/0064116").URP N.	(USPAT)	AND	ON	ON	2020/03/06 06:48 AM
L29	566	("vending machine" near10 remote) ("vending machine" near5 network)	(US-PGPUB; USPAT)	AND	ON	ON	2022/08/31 07:27 AM
L30	13	("vending machine" near10 remote) ("vending machine" near5 network) (lack near5 network)	(US-PGPUB; USPAT)	AND	ON	ON	2022/08/31 07:31 AM
L31	366	("vending machine" near10 remote)	(US-PGPUB; USPAT)	AND	ON	ON	2022/08/31 08:52 AM

L32	52	("vending machine" near10 network) (remote near5 location) (preauthorization or (preemptive\$5 near5 authorization)) @ad<="20131218" ((cellular or mobile) near5 (device or phone)) ((vending or retail) near5 machine)	(US-PGPUB; USPAT)	AND	ON	ON	2022/08/31 12:38 PM
L33	68	((@ad<="20131218" OR @pd<="20131218" OR @rlad<="20131218" OR @prad<="20131218") NOT ("continuation-in-part" AND @ad>"20131218") (preauthorization OR (preemptive\$5 near5 authorization)) ((cellular OR mobile) near5 (device OR phone)) ((vending OR retail) near5 machine)	(US-PGPUB; USPAT)	AND	ON	ON	2022/08/31 12:39 PM
L34	106	((@ad<="20131218" OR @pd<="20131218" OR @rlad<="20131218" OR @prad<="20131218") NOT ("continuation-in-part" AND @ad>"20131218") (preauthorization OR (preemptive\$5 near5 authorization)) ((cellular OR mobile) near5 (device OR phone)) ((vending OR retail) near5 machine)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2022/08/31 12:39 PM
L35	26	((("PAYRANGE") near3 ("INC"))).AS,AANM.	(USPAT)	AND	ON	ON	2022/08/31 12:51 PM
L36	108	((("PATEL") near3 ("Paresh"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	AND	ON	ON	2022/08/31 12:53 PM
L37	46	((("PATEL") near3 ("Paresh"))).INV. (authoriz\$ near10 funds)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	AND	ON	ON	2022/08/31 12:53 PM
L38	243	(20020016740 20020164953 20030110097 20030191811 20030206542 20040049454 20040133653 20050043011 20	(US-PGPUB; USPAT)	AND	ON	ON	2022/08/31 02:52 PM

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		0130267121 20130267 176 20130275303 2013 0275305 20130278622 20130297422 2013031 1379 20130311382 201 30331985 2013033229 3 20130346305 201400 19367 20140040028 20 140040117 201400525 24 20140067542 20140 085046 20140085109 2 0140089016 20140100 977 20140108108 2014 0122298 20140136301 20140136411 2014014 3055 20140143074 201 40172179 2014018085 2 20140188708 201402 01066 20140249995 20 140278989 201402791 01 20140279556 20140 289047 20140317611 2 0140324627 20140351 099 20140361872 2014 0378057 20150051977 20150073980 2015008 1462 20150088698 201 50100152 2015010590 1 20150120546 201501 20555 20150149992 20 150154579 201501693 12 20150170131 20150 170132 20150170136 2 0150178702 20150235 202 20150278811 2015 0287085 20150302377 20150317720 2015033 2029 20150346994 201 50373537 2015000642 1 20160019604 201600 63476 20160086145 20 160092859 201601962 20 20160232515 20160 292469 20160335620 2 0170006656 20170193 478 20170193508 2018 0005220 5479602 5844 808 5880733 5892900 5955718 6056194 6390 269 6462644 6505095 6584309 6793134 7085 556 7127236 7131575 7455223 7464867 7672 680 7690495 7721958 7848980 7962369 7983 670 8020763 8346670 8356754 8376227 8396 589 8412626 8438066					
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L39	53	8479190 8517766 8548 426 8577734 8583496 8596528 8596529 8600 899 8606702 8615445 8645971 8700530 8707 276 8712893 8769643 8788341 8794734 8810 430 8819659 8838481 8850421 8881975 8898 620 9001047 9037492 9210247 9262771 9395 888 9424603 9483763 9547859 9875473 1016 3292 10304057 D66989 9).pn. ("5479602") or ("5955718") or ("6056194") or ("6390269") or ("6505095") or ("7131575") or ("8020763") or ("8596529") or ("8606702") or ("8881975") or ("9395888") or ("9424603") or ("9483763") or ("20020016740") or ("20030191811") or ("20030206542") or ("20070186105") or ("20070227856") or ("20070255653") or ("20080167017") or ("20100276484") or ("20100280956") or ("20110244799") or ("20110251892") or ("20120030047") or ("20120066096") or ("20120108173") or ("20120150742") or ("20120255653") or ("20120258773") or ("20120330844") or ("20130054336") or ("20130275305") or ("20130331985") or ("20140085046") or ("20140085109") or ("20140089016") or ("20140143055") or ("20140143074") or ("20140188708") or ("20140278989") or ("20140279008") or ("20140279556") or	(US-PGPUB; USPAT)	AND	OFF	OFF	2022/08/31 03:11 PM
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L40	215276	("20140324627") or ("20140351099") or ("20150051977") or ("20150170131") or ("20150278811") or ("20150302377") or ("20150332029") or ("20160196220") or ("20160335620") or ("20170006656")).PN. (@ad<="20131218" OR @pd<="20131218" OR @rlad<="20131218" OR @prad<="20131218") NOT ("continuation-in- part" AND @ad>"20131218") hotspot	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2022/09/01 11:01 AM
L41	91952	(@ad<="20131218" OR @pd<="20131218" OR @rlad<="20131218" OR @prad<="20131218") NOT ("continuation-in- part" AND @ad>"20131218") hotspot network	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2022/09/01 11:02 AM
L42	34331	(@ad<="20131218" OR @pd<="20131218" OR @rlad<="20131218" OR @prad<="20131218") NOT ("continuation-in- part" AND @ad>"20131218") (hotspot near20 network)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	AND	ON	ON	2022/09/01 11:03 AM

L43	27905	(@ad<="20131218" OR @pd<="20131218" OR @rlad<="20131218" OR @prad<="20131218") NOT ("continuation-in- part" AND @ad>"20131218") (hotspot near20 network) (cellular OR mobile)	IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2022/09/01 11:03 AM
L44	9	"20090106160".pn. OR "6810234".pn. OR "8059101".pn. OR "20130126607".pn. OR "20140074723".pn. OR "20140064116".pn. OR "20090306819".pn. OR "20030236872".pn. OR "20030158891".pn.	(US-PGPUB; USPAT)	AND	ON	ON	2022/09/02 09:39 AM
L45	7	"20040122685".pn. OR "20080040265".pn. OR "20180197167".pn. OR "20180374076".pn. OR "20190236586".pn. OR "10380573".pn. OR "11227275".pn.	(US-PGPUB; USPAT)	AND	ON	ON	2022/09/09 08:34 AM
L46	3	"7690495".pn. OR "20140032413".pn. OR "20030158891".pn.	(US-PGPUB; USPAT)	AND	ON	ON	2022/09/09 08:58 AM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed September 7, 2022	
				Application Number	16/934,392
					July 21, 2020
				First Named Inventor	Paresh K. Patel
				Art Unit	3685
				Examiner Name	James D. Nigh
Sheet	1	of	1	Attorney Docket Number	104402-5043-US

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number Number - Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		2004/0122685 A1	06-24-2004	Bunce et al.	
		2008/0040265 A1	02-14-2008	Rackley	
		2018/0197167 A1	07-12-2018	Ganesan et al.	
		2018/0374076 A1	12-27-2018	Wheeler et al.	
		2019/0236586 A1	08-01-2019	Mei et al.	
		10,380,573 B2	08-13-2019	Lin et al.	
		11,227,275 B2	01-18-2022	Van Heerden et al.	
FOREIGN PATENT DOCUMENTS					
Examiner Initials	Cite No.	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
NON-PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			

Examiner Signature	/JAMES D NIGH/	Date Considered	09/09/2022
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DB2/ 43987797.1

Bibliographic Data

Application No: 16/934,392

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☐ No ☐ Met After Allowance

Verified and Acknowledged:

/JAMES D NIGH/

Examiner's Signature

Initials

Title:

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
07/21/2020	705	3685	104402-5043-US
RULE			

APPLICANTS

PAYRANGE INC., Portland, OR,

INVENTORS

Paresh K. Patel, Portland, OR, UNITED STATES

CONTINUING DATA

This application is a CON of 15406492 01/13/2017 PAT 10719833

15406492 is a CON of 14335762 07/18/2014 PAT 9547859

14335762 is a CON of 14214644 03/14/2014 PAT 8856045

14214644 is a CIP of 29477025 12/18/2013 PAT D755183

14214644 has PRO of 61917936 12/18/2013

FOREIGN APPLICATIONS

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Internet-enabled **mobile** handheld devices for **mobile** commerce

WC Hu, J Yeh, HJ Chu, C Lee - *Contemporary Management ...*, 2005 - cmr-journal.org

... use their handheld devices to **authorize** payment for premium ... operating system that supports **preemptive** multitasking. In mid... **vending machine** or pay a parking fee by using their **cellular** ...

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WC Hu, C Lee, J Yeh - *Mobile commerce applications*, 2004 - igi-global.com

... use their handheld devices to **authorize** payment for premium ... in a **vending machine** or a parking fee by using their **cellular** ... operating system that supports **preemptive** multitasking. In mid...

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C Lee - *Mobile Commerce Applications*, 2004 - books.google.com

... their handheld devices to **authorize** payment for premium content ... in a **vending machine** or a parking fee by using their **cellular** ... operating system that supports **preemptive** multitasking. In ...

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... that let you use your **mobile phone** to videoconference your kids ... At the signal, the **vending machine** automatically drops the ... promotions to consumers without their explicit **permission**. ...

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JA Fishman, VL Alexander, GE Gates, AM Malarcher... - 1996 - stacks.cdc.gov

... 29) Restrictions on **vending machine** ... 31) Whether a retail over-the-counter or **vending machine license** is ... and whether the retail tobacco **license** may be suspended or revoked if ...

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E Noam - aspeninstitute.org

... As a final example, suppose a **vending machine** with an ... In 1996, Congress could have adopted a **preemptive** federalist ... problems of their own that **permit** us to pretend that we have en ...

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Regulating Cigarettes.(Non) sense and Sensibility

L Noah - S. Ill. ULJ, 1997 - HeinOnline

... of tobacco products, prohibit some **vending machine** sales, and mandate the inclusion of ... ambiguous statutory language **authorizing** the FDA to impose restrictions on a **device's** "sale..."

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[https://scholar.google.com/scholar?start=0&q=intext:\(preauthorization+OR+\(preemptive*+AROUND\(5\)+authorization\)\)+AND+intext:\(\(cellular+OR+mobile\)+AROUND\(5\)+\(device+OR+phone\)\)+AND+inte...](https://scholar.google.com/scholar?start=0&q=intext:(preauthorization+OR+(preemptive*+AROUND(5)+authorization))+AND+intext:((cellular+OR+mobile)+AROUND(5)+(device+OR+phone))+AND+inte...) 1/2

9/1/22, 8:18 AM

intext:(preauthorization OR (preemptive* AROUND(5)... - Google Scholar

Restricting minors' access to tobacco products: An examination of state legislation and policy innovation (as of December 31, 1998)

JF Chirqui - 2000 - search.proquest.com

... Number of states enacting a **preemptive** or enabling provision..... 89 Results of ...
in the federal regulations (eg, **vending machine** location restrictions, product sample bans). In ...

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Winner of the Computer Law Association 2006 Information Technology Law Writing Competition: gone in a blink: the overlooked privacy problems caused by ...

SL Smith - Marquette Intellectual Property Law Review, 2007 - go.gale.com

... (91) scams to obtain sufficient **authentication** information from a ... requirements, perhaps
as a **preemptive** move in hopes of ... garage sale and to every **vending machine** in between. ...

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Mobile Computing, 2E

AK Talukdar - 2010 - Tata McGraw-Hill Education

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Search History

16934392

Report Run Date: 2022-09-01 UTC

Searches: 9

Markers: 0

Search #	Timestamp	Results	Page
1	2022-08-31 11:40 UTC	3,566,366	3
2	2022-08-31 11:53 UTC	6	3
3	2022-08-31 11:54 UTC	436,590	4
4	2022-08-31 11:54 UTC	0	4
5	2022-09-01 11:16 UTC	436,639	4
6	2022-09-01 11:17 UTC	0	5
7	2022-09-01 11:17 UTC	3,566,829	6
8	2022-09-01 11:18 UTC	352	6
9	2022-09-01 11:18 UTC	~71	6



Content: Patent Publications (167)

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1 2022-08-31 11:40 UTC | 3,566,366 results from

De-Dup: None | Cut-off: None | Sort: Relevance

Main Concept: Document

US20210142325 Method and system for performing mobile device-to-machine payments [\[view\]](#)

Concept Modifiers: None

Filters: None

2 2022-08-31 11:53 UTC | 6 results from

De-Dup: None | Cut-off: None | Sort: Relevance

Main Concept: [Same as Search 1](#)

Concept Modifiers: None

Filters (2):

[Classic Syntax limited to: \("vending machine" near10 remote\) \("vending machine" near10 network\) \(lack* near5 network\)](#)

[Earliest Priority Date: From 1980-01-01 To 2014-03-14](#)

Content: Non-Patent Literature (23)

IEEE Xplore Publications: IEEE Periodicals | IEEE Xplore Publications: IEEE Conferences | IEEE Xplore Publications: IEEE Standards | IEEE Xplore Publications: IEEE Early Access | IEEE Xplore Publications: SMPTE Periodicals | IEEE Xplore Publications: SMPTE Conferences | IEEE Xplore Publications: SMPTE Standards | IEEE Xplore Publications: MIT Press eBooks | IEEE Xplore Publications: Wiley-IEEE eBooks | IEEE Xplore Publications: IBM Periodicals | IEEE Xplore Publications: URSI Periodicals | IEEE Xplore Publications: VDE Conferences | IEEE Xplore Publications: Periodicals from China | IP.com Prior Art Database: The IP.com Journal | IP.com Prior Art Database: Internet Society RFC | IP.com Prior Art Database: IBM TDB Archive | IP.com Prior Art Database: Legacy Journals | IP.com Prior Art Database: Software Patent Institute | OnePetro.org: Periodicals at OnePetro.org | OnePetro.org: Conferences at OnePetro.org | Other Literature: IBM Redbooks | Other Literature: PubMed Central | Other Literature: arXiv.org

3 2022-08-31 11:54 UTC | 436,590 results from 

De-Dup: None | Cut-off: None | Sort: Relevance

Main Concept: Document

 [US20210142325 Method and system for performing mobile device-to-machine payments](#) [\(view\)](#)

Concept Modifiers: None

Filters: None

4 2022-08-31 11:54 UTC | 0 results from 

De-Dup: None | Cut-off: None | Sort: Relevance

Main Concept: [Same as Search 3](#)

Concept Modifiers: None

Filters (2):

[Classic Syntax limited to: \("vending machine" near10 remote\) \("vending machine" near10 network\) \(lack* near5 network\)](#)

[Publication Date: From 1980-01-01 To 2014-03-14](#)

5 2022-09-01 11:16 UTC | 436,639 results from 

De-Dup: None | Cut-off: None | Sort: Relevance

Main Concept: [Same as Search 3](#)

EX1002, Page 071

Concept Modifiers: None

Filters: None

6 2022-09-01 11:17 UTC | 0 results from

De-Dup: None | Cut-off: None | Sort: Relevance

Main Concept: Same as Search 3

Concept Modifiers: None

Filters (2):

Classic Syntax limited to: (preauthorization OR (preemptive* near5 authorization)) ((cellular OR mobile) near5 (device OR phone)) ((vending OR retail) near5 machine)

Publication Date: From 1980-01-01 To 2013-12-18



Content: Patent Publications (167)

US Patents | US Designs | US Applications | EPO Patents | EPO Applications | China Patents | China Applications | Japan Patents | Japan Applications | Korea Patents | Korea Applications | WIPO Applications | Argentina Patents | Argentina Applications | Brazil Patents | Brazil Applications | Canada Patents | Canada Applications | Chile Patents | Chile Applications | Colombia Applications | Costa Rica Applications | Cuba Patents | Cuba Applications | Dominican Republic Applications | Ecuador Patents | Ecuador Applications | El Salvador Applications | Guatemala Applications | Honduras Applications | Mexico Patents | Mexico Applications | Nicaragua Patents | Panama Applications | Peru Applications | Trinidad & Tobago Patents | Uruguay Applications | Austria Patents | Austria Applications | Belarus Patents | Belgium Patents | Belgium Applications | Bosnia & Herzegovina Patents | Bosnia & Herzegovina Applications | Bulgaria Patents | Bulgaria Applications | Croatia Patents | Croatia Applications | Czech Republic Patents | Czech Republic Applications | Czechoslovakia Patents | Czechoslovakia Applications | Denmark Patents | Denmark Applications | Estonia Patents | Estonia Applications | EUPO Patents | Finland Patents | Finland Applications | France Patents | France Applications | Germany Patents | Germany Applications | Great Britain Patents | Great Britain Applications | Greece Patents | Greece Applications | Hungary Patents | Hungary Applications | Iceland Patents | Iceland Applications | Ireland Patents | Ireland Applications | Italy Patents | Italy Applications | Latvia Patents | Latvia Applications | Lithuania Patents | Lithuania Applications | Luxembourg Patents | Malta Patents | Monaco Patents | Montenegro Patents | Montenegro Applications | Netherlands Patents | Netherlands Applications | Norway Patents | Norway Applications | Poland Patents | Poland Applications | Portugal Patents | Portugal Applications | Republic of Moldova Patents | Republic of Moldova Applications | Romania Patents | Romania Applications | San Marino Patents | San Marino Applications | Serbia Patents | Serbia Applications | Slovakia Patents | Slovakia Applications | Slovenia Patents | Slovenia Applications | Spain Patents | Spain Applications | Sweden Patents | Sweden Applications | Switzerland Patents | Switzerland Applications | Ukraine Patents | Ukraine Applications | Yugoslavia/Serbia and Montenegro Patents | Yugoslavia/Serbia and Montenegro Applications | Armenia Patents | Armenia Applications | Australia Patents | Australia Applications | Cyprus Patents | Gulf Cooperation Council Patents | Hong Kong Patents | India Patents | India Applications | Indonesia Patents | Indonesia Applications | Israel Applications | Jordan Patents | Jordan Applications | Kyrgyzstan Patents | Macao Applications | Malaysia Patents | Mongolia Patents | New Zealand Patents | Philippines Patents | Philippines Applications | Saudi Arabia Patents | Saudi Arabia Applications | Singapore Patents | Singapore Applications | Taiwan Patents | Taiwan Applications | Tajikistan Patents | Tajikistan Applications | Thailand Patents | Thailand Applications | Uzbekistan Patents | Vietnam Patents | Algeria Patents | ARIPO Patents | ARIPO Applications | Egypt Patents | Kenya Patents | Malawi Patents | Morocco Patents | Morocco Applications | OAPI Patents | South Africa Patents | Tunisia Applications | Zambia Patents | Zimbabwe Patents | EAPO Patents | EAPO Applications | Georgia Patents | Georgia Applications | Kazakhstan Patents | Kazakhstan Applications | Russia Patents |

EX1002, Page 072

7 2022-09-01 11:17 UTC | 3,566,829 results from 

De-Dup: None | Cut-off: None | Sort: Relevance

Main Concept: Document

 US20210142325 Method and system for performing mobile device-to-machine payments ([view](#))

Concept Modifiers: None

Filters: None

8 2022-09-01 11:18 UTC | 352 results from 

De-Dup: None | Cut-off: None | Sort: Relevance

Main Concept: [Same as Search 7](#)

Concept Modifiers: None

Filters (2):

[Classic Syntax limited to:](#) (preauthorization OR (preemptive* near5 authorization)) ((cellular OR mobile) near5 (device OR phone)) ((vending OR retail) near5 machine)

[Earliest Priority Date:](#) From 1980-01-01 To 2013-12-18

9 2022-09-01 11:18 UTC | ~71 results from 

De-Dup: Extended Family Numbers | Cut-off: None | Sort: Relevance

Main Concept: [Same as Search 7](#)

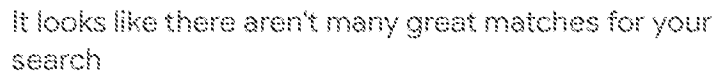
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed September 19, 2022	
				Application Number	16/934,392
					July 21, 2020
				First Named Inventor	Paresh K. Patel
				Art Unit	3685
				Examiner Name	James D. Nigh
Sheet	1	of	1	Attorney Docket Number	104402-5043-US

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number Number - Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		2014/0006451 A1	01-02-2014	Mullis et al.	
		2019/0244465 A1	08-08-2019	Saunders et al.	
		5,854,994 A	12-29-1998	Canada et al.	
		11,182,794 B1	11-23-2021	Aument	
		11,373,147 B1	06-28-2022	Moore	
FOREIGN PATENT DOCUMENTS					
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		PayRange, Inc., Non-Final Office Action, 17/147,305, 31AUG2022, 6 pgs.			

Examiner Signature		Date Considered	
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APPLICATION #
16/934,392

RECEIPT DATE / TIME
09/19/2022 05:47:48 PM ET

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104402-5043-US

Title of Invention

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 2603

FILED BY Julie Maes

PATENT CENTER # 60981766

FILING DATE 07/21/2020

CUSTOMER # 24341

FIRST NAMED
INVENTOR Paresh K. Patel

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Gary Williams

Documents

TOTAL DOCUMENTS: 3

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
5043-144919SEP2022.pdf	1	Information Disclosure Statement (IDS) Form (SB08)	93 KB
Warning: This is not a USPTO supplied IDS fillable form. Data in the form cannot be automatically loaded to other USPTO systems.			
5043-IDS19SEP2022.pdf	4	Transmittal Letter	114 KB
NFOA-17147305- 31AUG2022.pdf	6	Non Patent Literature	345 KB

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NFOA-17147305- 31AUG2022.pdf	BCFD2D4AC5F13FDD4A3DA652BA1422461FB2E8A984E3904D 395CB1E08E0197D5E8F374A1C737877C83A66C8384A82C6144 B36CCD6B67E4DF307656511894C20C

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If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel	Confirmation No.:	2603
Serial No.:	16/934,392	Art Unit:	3685
Filed:	July 21, 2020	Examiner:	James D. Nigh
For:	<i>Method and System for Performing Mobile Device-to-Machine Payments</i>	Attorney Docket No.:	104402-5043-US

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

1. Enclosures accompanying this Information Disclosure Statement are:
 - 1a. ☒ A list of all patents, publications, applications, or other information submitted for consideration by the office.
 - 1b. A legible copy of:
 - ☐ Each foreign patent;
 - ☐ Each publication or that portion which caused it to be listed on the PTO-1449;
 - ☐ For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or portion of the application which caused it to be listed on the PTO-1449 including any claims directed to that portion;
 - ☒ all other information or portion which caused it to be listed on the PTO-1449.
 - 1c. ☐ An English language copy of search report(s) from a counterpart foreign application or PCT International Search Report.
 - 1d. ☐ Explanations of relevancy (ATTACHMENT 1(d), hereto) or English language abstracts of the non-English language publications.

2. ☒ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(b):
- ☐ Within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
 - ☐ Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
 - ☒ Before the mailing of the first Office action on the merits;
 - ☐ Before the mailing of a first Office action after the filing of a request for continued examination under §1.114.

3. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) after the period specified in 37 C.F.R. §1.97(b), but before the mailing date of any of a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311 or an action that otherwise closes prosecution in the application.

(Check either Item 3a, 3b or 3c)

- 3a. ☐ The Certification Statement in Item 5 below is applicable. Accordingly, no fee is required.
- 3b. ☐ The \$260.00 (large entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).
- 3c. ☐ The \$130.00 (small entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).

(Items 3b or 3c to be checked if any reference known for more than 3 months)

4. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(d) after the period specified in 37 C.F.R. §1.97(c), but on or before the date of payment of the issue fee.

(Check Item 4a, and 4b or 4c)

- 4a. ☐ The Certification Statement in Item 5 below is applicable.
- 4b. ☐ The \$260.00 (large entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).
- 4c. ☐ The \$130.00 (small entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).
5. ☐ Certification Statement (applicable if Item 3a or Item 4a is checked)

(Check either Item 5a, 5b, 5c or 5d)

- 5a. ☐ In accordance with 37 C.F.R. §1.97(e)(1), it is certified that each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- 5b. ☐ In accordance with 37 C.F.R. §1.97(e)(2), it is certified that no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this information disclosure statement.
- 5c. ☐ Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- 5d. ☐ Pursuant to 37 C.F.R. §1.704(d), each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
6. ☒ Copies of each cited U.S. patent and each U.S. patent application publication are not enclosed pursuant to the USPTO OG Notice dated 05 August 2003 waiving the requirement under 37 C.F.R. 1.98(a)(2)(i) for U.S. patent applications filed after June 30, 2003.
7. ☐ This application is a continuing application under 37 C.F.R. §1.53(b) or (d).
- (Check appropriate Items 7a, 7b and/or 7c)*
- 7a. ☐ A Petition to Withdraw from issue under 37 C.F.R. §1.313(b)(5) is concurrently filed herewith.
- 7b. ☐ Copies of publications listed on Form PTO-1449 from prior application Serial No. _____ filed _____, of which this application claims priority under 35 U.S.C. §120, are not being submitted pursuant to 37 C.F.R. §1.98(d).
- 7c. ☐ Copies of the publications listed on the attached Form PTO-1449 that were not previously cited in prior application Serial No. _____ filed _____, are provided herewith.

8. ☐ This is a Supplemental Information Disclosure Statement. (Check Item 8a)
- 8a. ☐ This Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(f) supplements the Information Disclosure Statement filed on . A bona fide attempt was made to comply with 37 C.F.R. §1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental Information Disclosure Statement can be considered as if properly filed on .
9. ☐ In accordance with 37 C.F.R. §1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:
- (Check Item 9a, 9b, or 9c)*
- 9a. ☐ satisfied because all non-English language publications were cited on the enclosed English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found by the foreign office.
- 9b. ☐ set forth in the application.
- 9c. ☐ enclosed as an attachment hereto.
10. ☒ The Commissioner is authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement and/or Petition to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104402-5043-US).
11. ☒ No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than a search report of a foreign counterpart application or PCT International Search Report if submitted herewith). 37 C.F.R. §§1.97(g) and (h).

Respectfully submitted,

Date: September 19, 2022

/Douglas J. Crisman/ Douglas J. Crisman MORGAN, LEWIS & BOCKIUS <small>LLP</small> 1400 Page Mill Road Palo Alto, CA 94304 (650) 843-4000	39,951 (Reg. No.)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed September 7, 2022	
				Application Number	16/934,392
					July 21, 2020
				First Named Inventor	Paresh K. Patel
				Art Unit	3685
				Examiner Name	James D. Nigh
Sheet	1	of	1	Attorney Docket Number	104402-5043-US

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number Number - Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		2004/0122685 A1	06-24-2004	Bunce et al.	
		2008/0040265 A1	02-14-2008	Rackley	
		2018/0197167 A1	07-12-2018	Ganesan et al.	
		2018/0374076 A1	12-27-2018	Wheeler et al.	
		2019/0236586 A1	08-01-2019	Mei et al.	
		10,380,573 B2	08-13-2019	Lin et al.	
		11,227,275 B2	01-18-2022	Van Heerden et al.	
FOREIGN PATENT DOCUMENTS					
Examiner Initials	Cite No.	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
NON-PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			

Examiner Signature		Date Considered	
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel	Confirmation No.:	2603
Serial No.:	16/934,392	Art Unit:	3685
Filed:	July 21, 2020	Examiner:	James D. Nigh
For:	Method and system for performing mobile device-to-machine payments	Attorney Docket No.:	104402-5043-US

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

1. Enclosures accompanying this Information Disclosure Statement are:
 - 1a. ☒ A list of all patents, publications, applications, or other information submitted for consideration by the office.
 - 1b. A legible copy of:
 - ☐ Each foreign patent;
 - ☐ Each publication or that portion which caused it to be listed on the PTO-1449;
 - ☐ For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or portion of the application which caused it to be listed on the PTO-1449 including any claims directed to that portion;
 - ☐ all other information or portion which caused it to be listed on the PTO-1449.
 - 1c. ☐ An English language copy of search report(s) from a counterpart foreign application or PCT International Search Report.
 - 1d. ☐ Explanations of relevancy (ATTACHMENT 1(d), hereto) or English language abstracts of the non-English language publications.

2. ☒ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(b):
- ☐ Within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
 - ☐ Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
 - ☒ Before the mailing of the first Office action on the merits;
 - ☐ Before the mailing of a first Office action after the filing of a request for continued examination under §1.114.

3. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) after the period specified in 37 C.F.R. §1.97(b), but before the mailing date of any of a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311 or an action that otherwise closes prosecution in the application.

(Check either Item 3a, 3b or 3c)

- 3a. ☐ The Certification Statement in Item 5 below is applicable. Accordingly, no fee is required.
- 3b. ☐ The \$260.00 (large entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).
- 3c. ☐ The \$130.00 (small entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).

(Items 3b or 3c to be checked if any reference known for more than 3 months)

4. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(d) after the period specified in 37 C.F.R. §1.97(c), but on or before the date of payment of the issue fee.

(Check Item 4a, and 4b or 4c)

- 4a. ☐ The Certification Statement in Item 5 below is applicable.
- 4b. ☐ The \$260.00 (large entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).
- 4c. ☐ The \$130.00 (small entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).

5. ☐ Certification Statement (applicable if Item 3a or Item 4a is checked)

(Check either Item 5a, 5b, 5c or 5d)

- 5a. ☐ In accordance with 37 C.F.R. §1.97(e)(1), it is certified that each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- 5b. ☐ In accordance with 37 C.F.R. §1.97(e)(2), it is certified that no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this information disclosure statement.
- 5c. ☐ Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- 5d. ☐ Pursuant to 37 C.F.R. §1.704(d), each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
6. ☒ Copies of each cited U.S. patent and each U.S. patent application publication are not enclosed pursuant to the USPTO OG Notice dated 05 August 2003 waiving the requirement under 37 C.F.R. 1.98(a)(2)(i) for U.S. patent applications filed after June 30, 2003.
7. ☐ This application is a continuing application under 37 C.F.R. §1.53(b) or (d).
- (Check appropriate Items 7a, 7b and/or 7c)*
- 7a. ☐ A Petition to Withdraw from issue under 37 C.F.R. §1.313(b)(5) is concurrently filed herewith.
- 7b. ☐ Copies of publications listed on Form PTO-1449 from prior application Serial No. _____ filed _____, of which this application claims priority under 35 U.S.C. §120, are not being submitted pursuant to 37 C.F.R. §1.98(d).
- 7c. ☐ Copies of the publications listed on the attached Form PTO-1449 that were not previously cited in prior application Serial No. _____ filed _____, are provided herewith.

8. ☐ This is a Supplemental Information Disclosure Statement. (Check Item 8a)
- 8a. ☐ This Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(f) supplements the Information Disclosure Statement filed on . A bona fide attempt was made to comply with 37 C.F.R. §1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental Information Disclosure Statement can be considered as if properly filed on .
9. ☐ In accordance with 37 C.F.R. §1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:
- (Check Item 9a, 9b, or 9c)*
- 9a. ☐ satisfied because all non-English language publications were cited on the enclosed English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found by the foreign office.
- 9b. ☐ set forth in the application.
- 9c. ☐ enclosed as an attachment hereto.
10. ☒ The Commissioner is authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement and/or Petition to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104402-5043-US).
11. ☒ No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than a search report of a foreign counterpart application or PCT International Search Report if submitted herewith). 37 C.F.R. §§1.97(g) and (h).

Respectfully submitted,

Date: September 07, 2022

/Douglas J. Crisman/	39,951
Douglas J. Crisman	(Reg. No.)
MORGAN, LEWIS & BOCKIUS <small>LLP</small>	
1400 Page Mill Road	
Palo Alto, CA 94304	
(650) 843-4000	

DB2/ 43987907.1



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
16/934,392

RECEIPT DATE / TIME
09/07/2022 05:57:24 PM ET

ATTORNEY DOCKET #
104402-5043-US

Title of Invention

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 2603

FILED BY Karka Sagastume

PATENT CENTER # 60946727

FILING DATE 07/21/2020

CUSTOMER # 24341

FIRST NAMED
INVENTOR Paresh K. Patel

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Douglas Crisman

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
1449.pdf	1	Information Disclosure Statement (IDS) Form (SB08)	137 KB

Warning: This is not a USPTO supplied IDS fillable form. Data in the form cannot be automatically loaded to other USPTO systems.

IDS.pdf	4	Transmittal Letter	188 KB
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Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
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1449.pdf

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IDS.pdf

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 9A5093C1E4D4504F02881E1456682CA595E4DF777300D9B0FA
 5C836AD4223913C36271F3521060E

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



**UNITED STATES
PATENT AND TRADEMARK OFFICE**

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

APPROVAL LETTER

APPLICATION #
16/934,392

FILING DATE
07/21/2020

APPLICANT/PATENT UNDER REEXAMINATION
Paresh Patel

Title of Invention

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

Electronic terminal disclaimer filed on 09/07/2022

☒ **Approved**

This patent is subject to a Terminal Disclaimer

Approved / Disapproved by: Electronic Terminal Disclaimer automatically approved



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
16/934,392

RECEIPT DATE / TIME
09/07/2022 12:30:35 PM ET

ATTORNEY DOCKET #
104402-5043-US

Title of Invention

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 2603

FILED BY Benjamin Pezzner

PATENT CENTER # 60944464

FILING DATE 07/21/2020

CUSTOMER # 24341

FIRST NAMED
INVENTOR Paresh K. Patel

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY -

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
petition-request.pdf	3	Terminal Disclaimer-Filed (Electronic)	49 KB
grantLetter.pdf	1	Terminal Disclaimer-Electronic- Approved	19 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
petition-request.pdf	83B437BC1BFD2DAF06049C7FC112476A5F1DA6FB8686375D1 EBC66D934D2637D6E1B5AA2F6AAA5D4CE9EDC9F0EA490857

B7211717E9B78AE84E8069EF0E698FD

grantLetter.pdf

74AB1FBF5F222DDFA12BCED3E8C330C06D3746777B7CA5EF
6D8BE449D471D4291FAC8FE70E8E8F385193213CABE88BA3B
EB54CAFDE079A2A9B511F420637A307

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #
16/934,392

RECEIPT DATE / TIME
09/07/2022 12:30:35 PM ET

ATTORNEY DOCKET #
104402-5043-US

Title of Invention

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 2603

FILED BY Benjamin Pezzner

PATENT CENTER # 60944464

AUTHORIZED BY -

CUSTOMER # 24341

FILING DATE 07/21/2020

CORRESPONDENCE
ADDRESS -

FIRST NAMED
INVENTOR Paresh K. Patel

Payment Information

PAYMENT METHOD
CARD / 8177

PAYMENT TRANSACTION ID
E202297C30493017

PAYMENT AUTHORIZED BY
Benjamin Pezzner

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
2814	STATUTORY DISCLAIMER, INCLUDING TERMINAL DISCLAIMER	170.00	1	170.00
TOTAL AMOUNT:				\$170.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

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UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION

APPLICATION #
16934392

FILING DATE
07/21/2020

FIRST NAMED INVENTOR
Paresh Patel

ATTORNEY DOCKET #
104402-5043-US

Title of Invention

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS



Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action



This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent interest
PAYRANGE INC.	100%
Total	100%

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

Application #	Filing Date
---------------	-------------

as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the

instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

Patent #
10719833
9547859
8856045

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.



Terminal disclaimer fee under 37 CFR 1.20(d) included with Electronic Terminal Disclaimer request.

Applicant claims the following entity status:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further 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 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I certify, in accordance with 37 CFR 1.4(d)(4) that I am: An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Signature	Name	Registration #
/Benjamin Pezzner/	Benjamin Pezzner	70711

* Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP 324.

Electronic Acknowledgement Receipt

EFS ID:	46426307
Application Number:	16934392
International Application Number:	
Confirmation Number:	2603
Title of Invention:	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS
First Named Inventor/Applicant Name:	Paresh K. Patel
Customer Number:	24341
Filer:	Douglas James Crisman/vladimir skliba
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104402-5043-US
Receipt Date:	17-AUG-2022
Filing Date:	21-JUL-2020
Time Stamp:	07:05:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	PayRange_NoticeReasonsRejection_JP2017527866_29AUG2019.pdf	393569 5e82350122a04638a4b5620c5e393573db574569	no	10

Warnings:

Information:					
2	Non Patent Literature	PayRange_NoticeReasonsRejection_JP2018543707_04SEP2020.pdf	146887	no	4
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Warnings:					
Information:					
3	Non Patent Literature	PayRange_NoticeReasonsRejection_JP2020101558_07OCT2021.pdf	58539	no	2
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Warnings:					
Information:					
4	Non Patent Literature	PayRange_Summons_EP148286172_02APR2020.pdf	619032	no	12
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Warnings:					
Information:					
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Warnings:					
Information:					
6	Non Patent Literature	Raja_AStochasticGame_2015.pdf	714040	no	8
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Warnings:					
Information:					
7	Non Patent Literature	SmartVendingMachineDemo_03DEC2013.pdf	52328	no	1
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Warnings:					
Information:					
8	Non Patent Literature	SquareMobileCreditCard_30APR2011.pdf	227467	no	1
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Warnings:					
Information:					
Total Files Size (in bytes):			EX1002: 22746718		

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New Applications Under 35 U.S.C. 111

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National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 104402-5001WO	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2014/071284	International filing date (<i>day/month/year</i>) 18 December 2014 (18.12.2014)	Priority date (<i>day/month/year</i>) 18 December 2013 (18.12.2013)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant PAYRANGE, INC.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| ☒ | Box No. I | Basis of the report |
| ☐ | Box No. II | Priority |
| ☐ | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| ☐ | Box No. IV | Lack of unity of invention |
| ☒ | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| ☐ | Box No. VI | Certain documents cited |
| ☐ | Box No. VII | Certain defects in the international application |
| ☐ | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Date of issuance of this report 21 June 2016 (21.06.2016) Authorized officer El Mostafa Moussaid e-mail: pt03.pct@wipo.int
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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43*bis*.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2014/071284

International filing date (day/month/year)
18.12.2014

Priority date (day/month/year)
18.12.2013

International Patent Classification (IPC) or both national classification and IPC
INV. G06Q20/32 G06Q20/36 G06Q20/40 G06Q30/06

Applicant
PAYRANGE, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040
Fax: +31 70 340 - 3016

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Telephone No. +31 70 340-0





Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
- a. (means)
- ☐ on paper
 - ☐ in electronic form
- b. (time)
- ☐ in the international application as filed
 - ☐ together with the international application in electronic form
 - ☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>2-17, 19-26</u>
	No: Claims	<u>1, 18</u>
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-26</u>
Industrial applicability (IA)	Yes: Claims	<u>1-26</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following documents:

- D1 US 2011/251910 A1 (DIMMICK JAMES [US]) 13 October 2011 (2011-10-13)
- D2 WO 2013/132995 A1 (SONY CORP [JP]) 12 September 2013 (2013-09-12)
- D3 US 2005/101295 A1 (RUPP STEPHAN [DE] ET AL) 12 May 2005 (2005-05-12)
- D4 US 8 438 066 B1 (YUEN BILLY [US] ET AL) 7 May 2013 (2013-05-07)
- D5 US 2012/316963 A1 (MOSHFEHGH MEHRAN [US]) 13 December 2012 (2012-12-13)

2 The present application does not meet the criteria of Article 33(1) PCT For the following reasons:

- 2.1 Document D1 discloses a mobile-device-to-machine payment system for facilitating a cashless transaction for purchase of at least one product or service by a user from a payment accepting unit having input mechanisms, the user having a mobile device having both short-range communication technology and long-range communication technology, the payment accepting unit capable of dispensing at least one product or service (par. 32-36, 43-47, 144-145 and fig. 1), said system comprising:
- (a) an adapter module associated with the payment accepting unit, said adapter having short-range communication technology for communicating with the short-range communication technology of the mobile device (par. 46, 50, 79);
 - (b) a server having long-range communication technology for communicating with the long-range communication technology of the mobile device (par. 41, 81); 81



(c) said adapter module for sending an authorization request for funds to the mobile device using short-range communication technology, the mobile device forwarding said authorization request for funds to said server using long-range communication technology (par. 50, 55-60, 81); and

(d) said server for sending an authorization grant for funds to the mobile device using long-range communication technology, the mobile device forwarding said authorization grant for funds to said adapter module using short-range communication technology (par. 61-62, 68, 82, 84);

(e) wherein the payment accepting unit dispenses the at least one product or service in response to receiving user input to the payment accepting unit input mechanism if said adapter module has received said authorization grant (par. 68, 82).

Thus, the subject-matter of claim1 is not new in the sense of of Article 33(2) PCT.

- 2.2 The same reasoning applies to the corresponding claim 18 which is also not new in the sense of of Article 33(2) PCT.
- 2.3 Given that document D1 discloses the use of encryption in order to secure the communication exchange during the payment, including the use of SSL (see par. 45, 73), the subject-mater of dependent claims 2-3 would be obvious to the skilled person (Article 33(3) PCT).
- 2.4 Dependent claims 4-5 define specific steps of the payment method being conditional upon the mobile device being in a particular zone around the adapter. Such arrangement, where RSSI is used to determine the position of the device in relation to particular zones set around the payment accepting unit and wherein payment is possible only within a particular zone but not within another zone, where other actions are automatically triggered, is well known from the prior art (see D5, par. 74-75, 100, 105) and it will be obvious to the skilled person to apply it in the context of the payment system of D1 (Article 33(3) PCT).
- 2.5 Similarly, with reference to dependent claims 6 and 7, it should be noted that the use of hands-free mode in the context of mobile payments is well known from the prior art (see D5, par. 74) and it will be obvious to the skilled person to apply it in the context of the payment system of D1 (Article 33(3) PCT).
- 2.6 Dependent claims 8 and 9 define straightforward constructional details which the skilled person would select, in accordance with circumstances, without the exercise of any inventive effort (Article 33(3) PCT).

- 2.7 The subject-matter of claim 10 does not involve an inventive step for the reasons set out above with regard to claims 1 and 4-5 (Article 33(3) PCT).
- 2.8 Dependent claims 11-17 and 19-26 do not involve an inventive step for the reasons set out above with regard to dependent claims 2-9 (Article 33(3) PCT).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 104402-5015WO	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2016/015763	International filing date (<i>day/month/year</i>) 29 January 2016 (29.01.2016)	Priority date (<i>day/month/year</i>) 30 January 2015 (30.01.2015)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant PAYRANGE, INC.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| ☒ | Box No. I | Basis of the report |
| ☐ | Box No. II | Priority |
| ☐ | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| ☐ | Box No. IV | Lack of unity of invention |
| ☒ | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| ☐ | Box No. VI | Certain documents cited |
| ☐ | Box No. VII | Certain defects in the international application |
| ☐ | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

<p style="text-align: center;">The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 82 70</p>	<p>Date of issuance of this report 01 August 2017 (01.08.2017)</p> <p>Authorized officer Simin Baharlou</p> <p>e-mail: pct.team9@wipo.int</p>
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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43*bis*.1)

To:		Date of mailing (day/month/year) see form PCT/ISA/210 (second sheet)	
see form PCT/ISA/220			
Applicant's or agent's file reference see form PCT/ISA/220		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/US2016/015763	International filing date (day/month/year) 29.01.2016	Priority date (day/month/year) 30.01.2015	
International Patent Classification (IPC) or both national classification and IPC INV. G06Q30/02 G06Q20/18 G06Q30/06			
Applicant PAYRANGE, INC.			

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
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- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Fax: +49 89 2399 - 4465	Date of completion of this opinion see form PCT/ISA/210	Authorized Officer Moser, Raimund Telephone No. +49 89 2399-0	
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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-12</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-12</u>
Industrial applicability (IA)	Yes: Claims	<u>1-12</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Prior art

1.1 Reference is made to the following documents:

D1 US 8 856 045 B1 (PATEL PARESH K [US] ET AL) 7 October 2014 (2014-10-07)

D2 US 2014/136301 A1 (VALDES JUAN [US]) 15 May 2014 (2014-05-15)

2 Overview

2.1 The present invention discloses a method for extending automatic retail machines/vending machines with mobile payment. Hereto, a smartphone acts as a relay between a payment module of a vending machine and a remote server for transaction processing. Furthermore, after purchasing a product a corresponding code can be obtained (e.g., by scanning with the smartphone) and sent to the server for promotion validation.

3 Inventive step, Article 33(3) PCT

3.1 Document D1 is considered to be the closest prior art to the subject-matter of claim 1 and discloses (the references in parentheses applying to this document):

A method, comprising:

at a mobile device including a display, one or more processors, and memory: displaying one or more funds ~~promotional offers~~ on the display (col. 10, ll. 46-51; col. 12, ll. 15-51; Fig. 10C);

detecting a user input selecting a respective fund ~~promotional offer~~ of the one or more funds ~~promotional offers~~ (col. 10, ll. 38-49; col. 23, ll. 17-25; Fig. 10A);

initiating performance of a transaction with an automatic retail machine coupled with a payment module, wherein the transaction corresponds to purchase of a product stocked by the automatic retail machine (col. 23, ll. 17-25);

receiving a transaction completion notification from the payment module, wherein the transaction completion notification indicates that the product ~~corresponding to the selected respective promotional offer~~ was vended by the automatic retail machine (col. 29, ll. 53-60; Fig. 7);

~~in response to receiving the transaction completion notification, providing a prompt to the user of the mobile device to obtain a product code for the vended product to validate the respective promotional offer;~~

~~obtaining the product code for the vended product;~~

~~after obtaining the product code, transmitting the product code to the server; and,~~

~~in response to transmitting the product code:~~

~~receiving promotion validation information from the server; and~~

~~displaying the promotion validation information on the display, wherein the promotion validation information indicates whether the respective promotional offer was validated.~~

The subject-matter of claim 1 differs from that of document D1 in:

(i) displaying promotional offers for selection;

(ii) in response to receiving the transaction completion notification, providing a prompt to the user of the mobile device to obtain a product code for the vended product to validate the respective promotional offer; obtaining the product code for the vended product; after obtaining the product code, transmitting the product code to the server; and, in response to transmitting the product code: receiving promotion validation information from the server; and displaying the promotion validation information on the display, wherein the promotion validation information indicates whether the respective promotional offer was validated.

The above difference relates to a business scheme for providing promotional offers to a user, redeeming said offers after the purchase of a product, and providing promotion validation information to the user.

Such scheme is given to the person skilled in the art as constraint to be met when implementing the present system.

Its implementation clearly requires technical means for providing and displaying promotional offers, acquiring data for determining a purchased product, validating a promotion and providing validation information to the user. However, the person skilled in the art presented with the above business

scheme would implement the necessary technical means, thereby employing standard data processing and programming means as these are generic means that, even in light of the description, perform no more than their well-known purpose.

D2 is cited as an example that said implementation is well-known in the art. It discloses a validation and redemption system for promotional items using mobile devices for scanning merchant tags. In particular, D2 discloses:

- (i) displaying promotional offers for selection (par. 59 and 61);
- (ii) in response to receiving the transaction completion notification, providing a prompt to the user of the mobile device to obtain a product code for the vended product to validate the respective promotional offer (par. 61); obtaining the product code for the vended product (par. 45, 47, 61); after obtaining the product code, transmitting the product code to the server (par. 61); and, in response to transmitting the product code: receiving promotion validation information from the server (par. 62, 66-67); and displaying the promotion validation information on the display (par. 67), wherein the promotion validation information indicates whether the respective promotion offer was validated (par. 67).

Accordingly, the subject-matter of claim 1 is not inventive (Article 33(3) PCT).

- 3.2 The same applies *mutatis mutandis* to independent claims 11 and 12 which are also not inventive (Article 33(3) PCT).
- 3.3 Dependent claims 2-10 do not refer to an allowable claim and do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step. Said features relate to implementation options which are directly derivable from the underlying business constraints, e.g., the rules for identifying promotional offers, are known from D1 and/or D2 (broadcasting an authorization code/unique identifier, implicit, see D1, Fig. 7, col. 14, ll. 53-65, and col. 28, ll. 55-64; sending an authorization grant token, see D1, col. 28, ll. 52-67; scanning a product code, see D2, par. 45; sending transaction data to the server, see D1, Fig. 7; a mobile device with two transceivers, see D1, col. 3, ll. 46-64), or relate to further refinements of the underlying business scheme (i.e., rules for validating promotional offers, the type of data to be provided to a user).

Accordingly, the subject-matter of claims 2-10 is not inventive (Article 33(3) PCT).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 104402-5026WO	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2017/015676	International filing date (<i>day/month/year</i>) 30 January 2017 (30.01.2017)	Priority date (<i>day/month/year</i>) 29 January 2016 (29.01.2016)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant PAYRANGE, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	This REPORT consists of a total of 9 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">☒</td> <td style="width: 30%;">Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☐	Box No. VII	Certain defects in the international application	☒	Box No. VIII	Certain observations on the international application
☒	Box No. I	Basis of the report																							
☐	Box No. II	Priority																							
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<p style="text-align: center;">The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 82 70</p>	<p>Date of issuance of this report 31 July 2018 (31.07.2018)</p> <p>Authorized officer Athina Nickitas-Etienne</p> <p>e-mail: pct.team4@wipo.int</p>
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Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2017/015676

International filing date (day/month/year)
30.01.2017

Priority date (day/month/year)
29.01.2016

International Patent Classification (IPC) or both national classification and IPC
INV. G06Q20/40

Applicant
PAYRANGE, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
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- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040
Fax: +31 70 340 - 3016

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Horat, David

Telephone No. +31 70 340-0



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
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 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
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5. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-20</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-20</u>
Industrial applicability (IA)	Yes: Claims	<u>1-20</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

1 **Re Item V**

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1.1 Reference is made to the following documents:

- D1 US 2015/178702 A1 (PATEL PARESH K [US])
25 June 2015 (2015-06-25)
- D2 US 2015/170132 A1 (PATEL PARESH K [US])
18 June 2015 (2015-06-18)
- D3 US 2015/170131 A1 (PATEL PARESH K [US])
18 June 2015 (2015-06-18)
- D4 US 8 856 045 B1 (PATEL PARESH K [US] ET AL)
7 October 2014 (2014-10-07)
- D5 US 2015/169312 A1 (PATEL PARESH K [US] ET AL)
18 June 2015 (2015-06-18)

1.2 The current application is about a method and system for processing and dispensing vending machine refunds (see application claim 1 and description [0001]).

1.3 D1 relates to the field of pay-to-machine payment processing systems (see D1 [0001]).

1.3.1 D1 uses the same wording, it is from the same applicant and it provides most of the features of the current application.

1.3.2 The main differences between the current application and D1 are:

- application figure 26B with corresponding description paragraphs [00209]-[00213] about a specific configuration starting figure 26A (also disclosed in D1 figure 26) regarding a refunds process;
- application figures 30A-30G with corresponding description paragraphs [00269]-[00276] under the title "REFUNDS PROCESSING" regarding a user interface for preparing the refunds process;
- application figures 31A-31B with corresponding description paragraphs [00277]-[00278] about mounting options for the device which has the user interface which are a normal design procedure to the skilled person;

- application description [00279]-[00285] about options of the system which are either disclosed in D1 (e.g. network connection, auth codes, etc.) or a normal design procedure to the skilled person; and
- application description [00286]-[00289] which is the same text as in the original application claims.

1.4 D1 (see the passages cited in the search report) discloses in terms of claim 1:

A method of processing and dispensing ~~vending machine refunds~~, the method comprising:

at an electronic payment module with one or more processors, memory, a slave interface that couples the electronic payment module with a payment accepting unit via an electronic payment interface, and one or more host interfaces that couple the electronic payment module with at least one payment peripheral of the payment accepting unit:

performing as a virtual payment peripheral for the payment accepting unit by registering the device as a slave to the payment accepting unit;

performing as a virtual payment accepting unit for the at least one payment peripheral of the payment accepting unit by registering the at least one payment peripheral as a slave to the electronic payment module;

receiving, from a device that is distinct from the electronic payment module, a request to ~~issue an approved refund of a predetermined amount and one or more criteria that must be satisfied before dispensing the approved refund of the predetermined amount; and~~

~~in accordance with a determination that the one or more criteria are met, issuing (i) a signal to the payment accepting unit, via the slave interface, that the at least one payment peripheral is unavailable and~~

~~(ii) a signal to the at least one payment peripheral, via the one or more host interfaces, to dispense the approved refund of the predetermined amount.~~

1.4.1 The differences between claim 1 and D1 are:

a request to issue an approved refund of a predetermined amount and one or more criteria that must be satisfied before dispensing the approved refund of the predetermined amount; and

in accordance with a determination that the one or more criteria are met, issuing (i) a signal to the payment accepting unit, via the slave interface, that the at least one payment peripheral is unavailable and

(ii) a signal to the at least one payment peripheral, via the one or more host interfaces, to dispense the approved refund of the predetermined amount.

1.4.2 The technical character of the differences resides in:

a signal to the the payment accepting unit via the slave interface and

a signal to the at least one payment peripheral, via the one or more host interfaces.

Nevertheless, these technical features are already disclosed in D1 ([0176]-[0188], [0202]-[0207], [0216]-[0218] and claim 8).

1.4.3 The differences relate to a non-technical administrative scheme for processing and dispensing vending machine refunds, the method comprising:

receiving a request to issue an approved refund of a predetermined amount and one or more criteria that must be satisfied before dispensing the approved refund of the predetermined amount; and

in accordance with a determination that the one or more criteria are met, disabling a the at least one payment peripheral and

dispense the approved refund of the predetermined amount.

1.4.4 The above steps define merely a non-technical administrative process. The above process does not achieve a technical effect or solve a technical problem by technical features. When regarded on its own said process would constitute subject-matter excluded from patentability. Moreover, this process could be performed by human operators instead of machines.

1.4.5 Although the claim defines data processing means, neither the claim nor the application as a whole describe any technical interaction between the features constituting the non-technical process and the technical features which would go beyond the mere automation of the administrative related steps. The steps constituting the non-technical business process cannot be seen to make any contribution, either independently or in combination with other features, to the solution of a technical problem and are thus not relevant for assessing inventive step (PCT Guidelines 9.07).

1.4.6 The examiner cannot derive any technical effect which may be achieved by the distinguishing features. Therefore, no objective technical problem can be derived other than the implementation of the non-technical process on the system of D1.

- 1.4.7 The skilled person is a computer programmer, because software running on a computer system has to be created.
- 1.4.8 The computer programmer would consider the implementation of the non-technical process on a computer to be an obvious programming task. When implementing it the computer programmer does not have to overcome any technical problem, commonplace programming skills and computer knowledge will suffice.
- 1.4.9 Therefore, the subject-matter of claim 1 does not involve an inventive step under Article 33(3) PCT.
- 1.5 The additional features of claims 2-8 are either disclosed in D1 (see the passages of the search report) or are obvious implementation details of further steps of the non-technical administrative process for processing and dispensing vending machine refunds, rendering its subject-matter not inventive under Article 33(3) PCT.
- 1.6 The same reasoning as for process claims 1-8 applies mutatis mutandis to corresponding apparatus claim 9 and product claim 10, rendering its subject-matter not inventive under Article 33(3) PCT.
- 1.7 The same reasoning as for process claims 1-8 applies mutatis mutandis to corresponding process claims 11-17, rendering its subject-matter not inventive under Article 33(3) PCT.
- 1.8 The specific configurations disclosed in dependent claims 18-20 are just a normal design procedure to the skilled person, and thus, its subject-matter is not inventive under Article 33(3) PCT.
- 1.9 Notwithstanding the above objections, the examiner would like to note that the same objections may be raised, mutatis mutandis, when starting from any of the cited prior art documents D2-D5, rendering the subject-matter of claims 1-20 not inventive under Article 33(3) PCT.

2 **Re Item VIII**

Certain observations on the international application

- 2.1 The application does not meet the requirements of Article 6 PCT, because claim 1 is not clear because it states "registering the device" but there is no antecedent "device".
- 2.2 The application does not meet the requirements of Article 6 PCT, because claims 18 and 19 are not clear because they both refer to method claims 1-17 but not all claims 1-17 are methods. Moreover, there are two different methods embodied in claims 1-8 and claims 11-17 respectively which are different so claims 18 and 19 should refer to one or the other.
- 2.3 The application does not meet the requirements of Article 6 PCT, because claim 20 is not clear because it refers to two different independent claims (18 and 19).
- 2.4 Although claims 1, 11, 18 and 19 have been drafted as separate independent method claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and/or in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 104402-5027WO	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2017/018194	International filing date (<i>day/month/year</i>) 16 February 2017 (16.02.2017)	Priority date (<i>day/month/year</i>) 17 February 2016 (17.02.2016)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant PAYRANGE, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	This REPORT consists of a total of 7 sheets, including this cover sheet.																								
In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																									
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;">☒</td> <td style="width: 30%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☒	Box No. VII	Certain defects in the international application	☐	Box No. VIII	Certain observations on the international application
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☐	Box No. VIII	Certain observations on the international application																							
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

<p style="text-align: center;">The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 82 70</p>	<p>Date of issuance of this report 21 August 2018 (21.08.2018)</p> <p>Authorized officer Kihwan Moon</p> <p>e-mail: pct.team1@wipo.int</p>
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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43*bis*.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2017/018194

International filing date (day/month/year)
16.02.2017

Priority date (day/month/year)
17.02.2016

International Patent Classification (IPC) or both national classification and IPC
INV. G06Q30/06 G07F7/00 G06Q20/16 G06Q20/18 G06Q20/20 G06Q20/32

Applicant
PAYRANGE, INC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0
Fax: +49 89 2399 - 4465

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Gabriel, Christiaan

Telephone No. +49 89 2399-0



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-21</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-21</u>
Industrial applicability (IA)	Yes: Claims	<u>1-21</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

item V

1 Reference is made to the following documents:

D1 US 2015/170131 A1 (PATEL PARESH K [US]) 18 June 2015
(2015-06-18)

D2 US 2015/235202 A1 (ZABALA JOSE RAFAEL [US]) 20 August
2015 (2015-08-20)

D3 US 8 600 899 B1 (DAVIS PAUL R [US]) 3 December 2013
(2013-12-03)

D4 US 2003/158891 A1 (LEI JONATHAN L [US] ET AL) 21 August
2003 (2003-08-21)

2 The requirements of Article 33(3) PCT are not met, for the following reasons:

2.1 D1 discloses:

"A method of determining electric pulses to provide to an unattended machine based on remotely-configured options for the unattended machine, the method comprising:

at an application executing on a mobile device:

detecting, based on a broadcast received from a pulse-providing device that is coupled with the unattended machine, presence of the unattended machine in proximity to the mobile device (par. 125,126; it follows from par. 85, 211 that the operation of the system in this respect is the same irrespective of whether the adapter module is a pulse providing device or not);

after detecting the presence of the unattended machine, receiving, from a server, ~~information about a first set of remotely-configured options for interacting with the unattended machine;~~

~~in response to receiving the information about the first set of remotely-configured options, displaying, in the application, user interface objects that allow for selection of respective options in the first set of remotely-configured options;~~

~~detecting a selection of a first user interface object that corresponds to a first option in the first set of remotely-configured options;~~

~~after detecting the selection of the first user interface object, receiving, from the server, information that includes an authorization grant for the first option~~ at the unattended machine, wherein the information includes specifications regarding electric pulses to be provided to the unattended machine by the

pulse-providing device ~~in accordance with the first option~~ (1612 in fig. 29a, par. 216; "authorization amount" in par. 126);
in accordance with a determination that a trigger condition has been satisfied, sending the authorization grant and the pulse information to the pulse-providing device ("AuthGrant" in par. 215, fig. 8C; "authorization amount" in par. 126) and
after sending the information that includes the authorization grant and the specifications to the pulse-providing device, receiving an indication, from the pulse-providing device, that the electric pulses were provided to the unattended machine according to the specifications ("1620" in fig. 29B, par. 221).

- 2.2 D1 does not disclose, after detecting the presence of the unattended machine, and prior to receiving the authorisation grant:
"receiving, from [the] server, information about a first set of remotely-configured options for interacting with the unattended machine;
in response to receiving the information about the first set of remotely-configured options, displaying, in the application, user interface objects that allow for selection of respective options in the first set of remotely-configured options;
detecting a selection of a first user interface object that corresponds to a first option in the first set of remotely-configured options;
- 2.3 These features make it possible to send different amounts of money to the unattended (vending) machine in one go (see e.g. par. 252 of the present application).
- 2.4 It is noted that financial/business schemes are as such not technical and they cannot contribute to an inventive step. In the present case, the options to allow a user to select different pricing options and to send money according to the selected option to the vending machine (e.g. in accordance with discount options, as in par. 254) is a non-technical business requirement.
- 2.5 The technical implementation of this requirement is the use of the server for providing the options to the user at the GUI of the mobile phone, and providing the data required by the pulse-providing device.
- 2.6 Facing this requirement, it would be immediately evident to a skilled person responsible for finding an implementation, that in the system of D1, the user must select the pricing options at the mobile device. Concerning the location where the pricing options should be configured, there are the options to

perform this in the pulse-providing device, in the mobile device, or in the server. In particular in a situation where flexibility should be offered for providing pricing options, the most straightforward implementation would be to configure all options at the server and provide them to the app at transaction time. Implementing such pricing options in the pulse-providing device would require more complex circuitry which would not be easy to reconfigure. Implementing the pricing options at the mobile phone would e.g. require frequent app updates. Moreover, D1 teaches that such the amount of funds/pulses must be encrypted at the server for security reasons (see par. 88), which also points at using the server for storing and forwarding the pricing options. Document D2 (par. 71, 82, fig. 13) shows a similar system in which discount options are configured at a server and downloaded to a mobile phone app at transaction time. Consequently, the implementation as claimed is obvious, and the subject-matter of claim 1 does not involve an inventive step (Article 33(3) PCT).

- 2.7 For similar reasons, the subject-matter of the corresponding independent claims 11-13 and 19-21 lacks an inventive step (article 33(3) PCT).
- 2.8 The further features of dependent claims 2-6 and 14-18 are either business aspects as such (e.g. pricing options), or obvious implementations of business requirements, neither of which can contribute to an inventive step (Article 33(3) PCT).
- 2.9 The further features of dependent claims 7-10 are known from D1 (see the passages in the search report) and hence cannot contribute to an inventive step (Article 33(3) PCT).

item VII

- 1 The features of the claims should have been provided with reference signs placed in parenthesis to increase the intelligibility of the claims (Rule 6.2 (b) PCT). This applies to both the preamble and the characterising portion of all claims.
- 2 In order to indicate more completely the background art useful for understanding the invention, the above-mentioned documents D1-D3 should have been acknowledged in the description (Rule 5.1 (a) (ii) PCT).
- 3 The vague and imprecise statement in par. 281 imply that the subject-matter for which protection is sought may be different to that defined by the claims,

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

Applicant's or agent's file reference 104402-5038WO	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2019/060777	International filing date (<i>day/month/year</i>) 11 November 2019 (11.11.2019)	Priority date (<i>day/month/year</i>) 12 November 2018 (12.11.2018)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant PAYRANGE, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> . I(a).																								
2.	This REPORT consists of a total of 7 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">☒</td> <td style="width: 30%;">Box No. I</td> <td style="width: 80%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">☐</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☐	Box No. VII	Certain defects in the international application	☐	Box No. VIII	Certain observations on the international application
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4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44 <i>bis</i> .3(c) and 93 <i>bis</i> .1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44 <i>bis</i> .2).																								

<p style="text-align: center;">The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p>	<p>Date of issuance of this report 11 May 2021 (11.05.2021)</p> <hr/> <p>Authorized officer</p> <p style="text-align: center;">Athina Nickitas-Etienne</p> <p>e-mail pct.team4@wipo.int</p>
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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2019/060777

International filing date (day/month/year)
11.11.2019

Priority date (day/month/year)
12.11.2018

International Patent Classification (IPC) or both national classification and IPC
INV. G06Q20/32 G06Q20/22 G06Q20/02

Applicant
PAYRANGE, INC.

1. This opinion contains indications relating to the following items:

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- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

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For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040
Fax: +31 70 340 - 3016

Date of completion of
this opinion

see form
PCT/ISA/210

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Brugelmans, Jan

Telephone No. +31 70 340-0



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-14</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-14</u>
Industrial applicability (IA)	Yes: Claims	<u>1-14</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following documents:

- D1 US 2011/178883 A1 (GRANBERY J HASTINGS [US] ET AL) 21 July 2011 (2011-07-21)
- D2 US 2018/005220 A1 (LARACEY KEVIN [US] ET AL) 4 January 2018 (2018-01-04)
- D3 US 2014/108108 A1 (ARTMAN TUOMAS [US] ET AL) 17 April 2014 (2014-04-17)
- D4 US 2014/052524 A1 (ANDERSEN ROBERT [US]) 20 February 2014 (2014-02-20)
- D5 US 2016/232515 A1 (JHAS AMIT [CA] ET AL) 11 August 2016 (2016-08-11)
- D6 US 2009/076896 A1 (DEWITT JAY ALLEN [US] ET AL) 19 March 2009 (2009-03-19)
- D7 US 2010/320266 A1 (WHITE SPENCER NEIL [US]) 23 December 2010 (2010-12-23)
- D8 US 2011/238476 A1 (CARR MICHAEL [US] ET AL) 29 September 2011 (2011-09-29)
- D9 US 2014/279101 A1 (DUPLAN LUCAS ANDREW [US] ET AL) 18 September 2014 (2014-09-18)
- D10 WO 2016/123545 A1 (PAYRANGE INC [US]) 4 August 2016 (2016-08-04)

2 The present application does not meet the criteria of Article 33(3) PCT, because the subject-matter of claims 1-14 does not involve an inventive step.

3 Independent claim 1

3.1 Document D1 discloses a method, comprising:

at a consumer device including a display, one or more processors, a communications unit, and memory, performing by an application executing on the consumer device (Fig.1:Ref.20; [0019],[0025])):

- identifying a first merchant device in proximity to the consumer device based at least in part on broadcasted information transmitted by the first merchant device, wherein the broadcasted information includes a first identifier corresponding to the first merchant device ([0016],[0020],[0033],[0037]);
- transmitting via the communications unit of the consumer device the first identifier to a server ([0033],[0038]) and

- receiving from the server an electronic communication including:
 - first merchant identification information of a first merchant associated with the first merchant device, ~~wherein the first merchant identification information includes one or more of a name, logo, picture, address, phone, or email of the first merchant~~; and first merchant transaction information identifying a proposed in-person transaction between the consumer device and the first merchant, wherein the first merchant transaction information includes a preset transaction amount, an available offer, or an available reward ([0039]);
- displaying on the display of the consumer device the first merchant identification information ([0039]);
- ~~receiving from a user of the consumer device selection of the first merchant identification information;~~

~~in response to receiving the selection of the first merchant identification information:~~

- displaying the first merchant transaction information ([0039]-[0040]);
 - receiving from the user of the consumer device first supplemental transaction information, wherein the first supplemental transaction information is a selection of the preset transaction amount, a selection of the available offer, a selection of the available reward, or a free form payment amount ([0040]); and
- transmitting the first supplemental transaction information to the server ([0040]); and

in response to transmitting the first supplemental transaction information to the server,

- receiving confirmation from the server that the proposed transaction between the consumer device and the first merchant has been completed ([0040]).

3.2 The subject-matter of claim 1 therefore differs from this known method of D1 in that wherein the first merchant identification information includes one or more of a name, logo, picture, address, phone, or email of the first merchant and in that the method comprises receiving from a user of the consumer device selection of the first merchant identification information, whereby the displaying of the first

merchant transaction information is done in response to receiving the selection of the first merchant identification information and is therefore new with regard to D1.

- 3.3 These differentiating features relate to an underlying administrative/business scheme whereby the user has the ability to select amongst a plurality of merchants based on e.g. names, logos, addresses before being provided with information such as offers.

The problem to be solved by the present invention may therefore be regarded as to implement this administrative/business scheme as a non-technical (user) requirement.

- 3.4 Solving the problem is only a matter of reprogramming the devices/server of D1 according to the non-technical (user) requirement. In addition it is noted that the difference can also be seen as an obvious implementation detail of the user interface, whereby for example the user is provided with merchant buttons which can be selected and, if selected, further details of available offers of the selected merchant are presented. However, no credible improvements can be detected, based on the features of claim 1.

- 3.5 Therefore the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

- 4 Dependent claims 2-7 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step (Article 33(3) PCT), the reasons being as follows:

The additional features of claims 2-7 are disclosed in D1 and/or related to obvious implementation of further non-technical requirements and/or are well known to the skilled person (see e.g. documents D2-D10).

It is noted that all these claims have an underlying administrative/business scheme, whereby nearby merchants and their offers are presented to the user according to their distance or user preferences. The use of e.g. signal strengths (see e.g. claim 5) are well known techniques for defining distances or positioning of transceivers.

- 5 The same reasoning applies, mutatis mutandis, to the subject-matter of the claims 8-14, which therefore are also considered not inventive.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 104402-5001WO	FOR FURTHER ACTION <div style="float: right; font-size: small;">see Form PCT/ISA/220 as well as, where applicable, item 5 below.</div>	
International application No. PCT/US2014/071284	International filing date (<i>day/month/year</i>) 18 December 2014 (18-12-2014)	(Earliest) Priority Date (<i>day/month/year</i>) 18 December 2013 (18-12-2013)
Applicant PAYRANGE, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6**bis**(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1
☒ as suggested by the applicant
☐ as selected by this Authority, because the applicant failed to suggest a figure
☐ as selected by this Authority, because this figure better characterizes the invention
b. ☐ none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2014/071284

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06Q20/32 G06Q20/36 G06Q20/40 G06Q30/06
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/251910 A1 (DIMMICK JAMES [US]) 13 October 2011 (2011-10-13) page 3, paragraph 32 - page 4, paragraph 48 page 4, paragraph 50 - page 5, paragraph 53 page 5, paragraph 55 - page 6, paragraph 62 page 6, paragraph 68-69 page 7, paragraph 73 - page 8, paragraph 86 figure 1	1-26
X	----- W0 2013/132995 A1 (SONY CORP [JP]) 12 September 2013 (2013-09-12) page 7, paragraph 18 - page 36, paragraph 122 figure 1 ----- -/-	1-26

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

16 March 2015

Date of mailing of the international search report

25/03/2015

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Rachkov, Vassil

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2014/071284

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/101295 A1 (RUPP STEPHAN [DE] ET AL) 12 May 2005 (2005-05-12) page 2, paragraph 19 - page 4, paragraph 37 figures -----	1-26
A	US 8 438 066 B1 (YUEN BILLY [US] ET AL) 7 May 2013 (2013-05-07) column 3, line 40 - column 12, line 8 figures 1, 3A -----	1-26
A	US 2012/316963 A1 (MOSHFEGHI MEHRAN [US]) 13 December 2012 (2012-12-13) page 2, paragraph 22 - page 15, paragraph 127 -----	1-26

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2014/071284

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2011251910 A1	13-10-2011	NONE	

WO 2013132995 A1	12-09-2013	CN 104145284 A	12-11-2014
		EP 2824629 A1	14-01-2015
		US 2015073994 A1	12-03-2015
		WO 2013132995 A1	12-09-2013

US 2005101295 A1	12-05-2005	AT 339742 T	15-10-2006
		CN 1614641 A	11-05-2005
		DE 60308385 T2	20-09-2007
		EP 1530177 A1	11-05-2005
		US 2005101295 A1	12-05-2005

US 8438066 B1	07-05-2013	NONE	

US 2012316963 A1	13-12-2012	US 2012316963 A1	13-12-2012
		US 2015058125 A1	26-02-2015

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2014/071284

International filing date (day/month/year)
18.12.2014

Priority date (day/month/year)
18.12.2013

International Patent Classification (IPC) or both national classification and IPC
INV. G06Q20/32 G06Q20/36 G06Q20/40 G06Q30/06

Applicant
PAYRANGE, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040
Fax: +31 70 340 - 3016

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Telephone No. +31 70 340-0



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2014/071284

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
 - a. (means)
 - ☐ on paper
 - ☐ in electronic form
 - b. (time)
 - ☐ in the international application as filed
 - ☐ together with the international application in electronic form
 - ☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>2-17, 19-26</u>
	No: Claims	<u>1, 18</u>
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-26</u>
Industrial applicability (IA)	Yes: Claims	<u>1-26</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following documents:

- D1 US 2011/251910 A1 (DIMMICK JAMES [US]) 13 October 2011 (2011-10-13)
- D2 WO 2013/132995 A1 (SONY CORP [JP]) 12 September 2013 (2013-09-12)
- D3 US 2005/101295 A1 (RUPP STEPHAN [DE] ET AL) 12 May 2005 (2005-05-12)
- D4 US 8 438 066 B1 (YUEN BILLY [US] ET AL) 7 May 2013 (2013-05-07)
- D5 US 2012/316963 A1 (MOSHFEGHI MEHRAN [US]) 13 December 2012 (2012-12-13)

2 The present application does not meet the criteria of Article 33(1) PCT For the following reasons:

- 2.1 Document D1 discloses a mobile-device-to-machine payment system for facilitating a cashless transaction for purchase of at least one product or service by a user from a payment accepting unit having input mechanisms, the user having a mobile device having both short-range communication technology and long-range communication technology, the payment accepting unit capable of dispensing at least one product or service (par. 32-36, 43-47, 144-145 and fig. 1), said system comprising:
- (a) an adapter module associated with the payment accepting unit, said adapter having short-range communication technology for communicating with the short-range communication technology of the mobile device (par. 46, 50, 79);
 - (b) a server having long-range communication technology for communicating with the long-range communication technology of the mobile device (par. 41, 81); 81

(c) said adapter module for sending an authorization request for funds to the mobile device using short-range communication technology, the mobile device forwarding said authorization request for funds to said server using long-range communication technology (par. 50, 55-60, 81); and
(d) said server for sending an authorization grant for funds to the mobile device using long-range communication technology, the mobile device forwarding said authorization grant for funds to said adapter module using short-range communication technology (par. 61-62, 68, 82, 84);
(e) wherein the payment accepting unit dispenses the at least one product or service in response to receiving user input to the payment accepting unit input mechanism if said adapter module has received said authorization grant (par. 68, 82).

Thus, the subject-matter of claim1 is not new in the sense of of Article 33(2) PCT.

- 2.2 The same reasoning applies to the corresponding claim 18 which is also not new in the sense of of Article 33(2) PCT.
- 2.3 Given that document D1 discloses the use of encryption in order to secure the communication exchange during the payment, including the use of SSL (see par. 45, 73), the subject-mater of dependent claims 2-3 would be obvious to the skilled person (Article 33(3) PCT).
- 2.4 Dependent claims 4-5 define specific steps of the payment method being conditional upon the mobile device being in a particular zone around the adapter. Such arrangement, where RSSI is used to determine the position of the device in relation to particular zones set around the payment accepting unit and wherein payment is possible only within a particular zone but not within another zone, where other actions are automatically triggered, is well known from the prior art (see D5, par. 74-75, 100, 105) and it will be obvious to the skilled person to apply it in the context of the payment system of D1 (Article 33(3) PCT).
- 2.5 Similarly, with reference to dependent claims 6 and 7, it should be noted that the use of hands-free mode in the context of mobile payments is well known from the prior art (see D5, par. 74) and it will be obvious to the skilled person to apply it in the context of the payment system of D1 (Article 33(3) PCT).
- 2.6 Dependent claims 8 and 9 define straightforward constructional details which the skilled person would select, in accordance with circumstances, without the exercise of any inventive effort (Article 33(3) PCT).

- 2.7 The subject-matter of claim 10 does not involve an inventive step for the reasons set out above with regard to claims 1 and 4-5 (Article 33(3) PCT).
- 2.8 Dependent claims 11-17 and 19-26 do not involve an inventive step for the reasons set out above with regard to dependent claims 2-9 (Article 33(3) PCT).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 104402-5015WO	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/US2016/015763	International filing date (<i>day/month/year</i>) 29 January 2016 (29-01-2016)	(Earliest) Priority Date (<i>day/month/year</i>) 30 January 2015 (30-01-2015)
Applicant PAYRANGE, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6**bis**(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1

- ☒ as suggested by the applicant
☐ as selected by this Authority, because the applicant failed to suggest a figure
☐ as selected by this Authority, because this figure better characterizes the invention

b. ☐ none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2016/015763

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06Q30/02 G06Q20/18 G06Q30/06
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 8 856 045 B1 (PATEL PARESH K [US] ET AL) 7 October 2014 (2014-10-07) abstract figure 7 figure 10A figure 10C column 3, line 46 - line 64 column 10, line 38 - line 51 column 12, line 15 - line 51 column 14, line 53 - line 65 column 23, line 17 - line 25 column 28, line 52 - line 67 column 29, line 53 - line 60	1-12
A	----- US 2014/136301 A1 (VALDES JUAN [US]) 15 May 2014 (2014-05-15) abstract paragraph [0045] - paragraph [0061] paragraph [0062] - paragraph [0067] -----	1-12



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

30 March 2016

Date of mailing of the international search report

08/04/2016

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Moser, Raimund

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2016/015763

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 8856045	B1	07-10-2014	US 8856045 B1 07-10-2014
			US 2015170130 A1 18-06-2015
			US 2015227928 A1 13-08-2015
			WO 2015095599 A1 25-06-2015

US 2014136301	A1	15-05-2014	NONE

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2016/015763

International filing date (day/month/year)
29.01.2016

Priority date (day/month/year)
30.01.2015

International Patent Classification (IPC) or both national classification and IPC
INV. G06Q30/02 G06Q20/18 G06Q30/06

Applicant
PAYRANGE, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0
Fax: +49 89 2399 - 4465

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Moser, Raimund

Telephone No. +49 89 2399-0



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-12</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-12</u>
Industrial applicability (IA)	Yes: Claims	<u>1-12</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Prior art

1.1 Reference is made to the following documents:

D1 US 8 856 045 B1 (PATEL PARESH K [US] ET AL) 7 October 2014 (2014-10-07)

D2 US 2014/136301 A1 (VALDES JUAN [US]) 15 May 2014 (2014-05-15)

2 Overview

2.1 The present invention discloses a method for extending automatic retail machines/vending machines with mobile payment. Hereto, a smartphone acts as a relay between a payment module of a vending machine and a remote server for transaction processing. Furthermore, after purchasing a product a corresponding code can be obtained (e.g., by scanning with the smartphone) and sent to the server for promotion validation.

3 Inventive step, Article 33(3) PCT

3.1 Document D1 is considered to be the closest prior art to the subject-matter of claim 1 and discloses (the references in parentheses applying to this document):

A method, comprising:

at a mobile device including a display, one or more processors, and memory: displaying one or more funds ~~promotional offers~~ on the display (col. 10, ll. 46-51; col. 12, ll. 15-51; Fig. 10C);

detecting a user input selecting a respective fund ~~promotional offer~~ of the one or more funds ~~promotional offers~~ (col. 10, ll. 38-49; col. 23, ll. 17-25; Fig. 10A);

initiating performance of a transaction with an automatic retail machine coupled with a payment module, wherein the transaction corresponds to purchase of a product stocked by the automatic retail machine (col. 23, ll. 17-25);

receiving a transaction completion notification from the payment module, wherein the transaction completion notification indicates that the product ~~corresponding to the selected respective promotional offer~~ was vended by the automatic retail machine (col. 29, ll. 53-60; Fig. 7);

~~in response to receiving the transaction completion notification, providing a prompt to the user of the mobile device to obtain a product code for the vended product to validate the respective promotional offer;~~

~~obtaining the product code for the vended product;~~

~~after obtaining the product code, transmitting the product code to the server; and,~~

~~in response to transmitting the product code:~~

~~receiving promotion validation information from the server; and~~

~~displaying the promotion validation information on the display, wherein the promotion validation information indicates whether the respective promotional offer was validated.~~

The subject-matter of claim 1 differs from that of document D1 in:

(i) displaying promotional offers for selection;

(ii) in response to receiving the transaction completion notification, providing a prompt to the user of the mobile device to obtain a product code for the vended product to validate the respective promotional offer; obtaining the product code for the vended product; after obtaining the product code, transmitting the product code to the server; and, in response to transmitting the product code: receiving promotion validation information from the server; and displaying the promotion validation information on the display, wherein the promotion validation information indicates whether the respective promotion offer was validated.

The above difference relates to a business scheme for providing promotional offers to a user, redeeming said offers after the purchase of a product, and providing promotion validation information to the user.

Such scheme is given to the person skilled in the art as constraint to be met when implementing the present system.

Its implementation clearly requires technical means for providing and displaying promotional offers, acquiring data for determining a purchased product, validating a promotion and providing validation information to the user. However, the person skilled in the art presented with the above business

scheme would implement the necessary technical means, thereby employing standard data processing and programming means as these are generic means that, even in light of the description, perform no more than their well-known purpose.

D2 is cited as an example that said implementation is well-known in the art. It discloses a validation and redemption system for promotional items using mobile devices for scanning merchant tags. In particular, D2 discloses:

- (i) displaying promotional offers for selection (par. 59 and 61);
- (ii) in response to receiving the transaction completion notification, providing a prompt to the user of the mobile device to obtain a product code for the vended product to validate the respective promotional offer (par. 61); obtaining the product code for the vended product (par. 45, 47, 61); after obtaining the product code, transmitting the product code to the server (par. 61); and, in response to transmitting the product code: receiving promotion validation information from the server (par. 62, 66-67); and displaying the promotion validation information on the display (par. 67), wherein the promotion validation information indicates whether the respective promotion offer was validated (par. 67).

Accordingly, the subject-matter of claim 1 is not inventive (Article 33(3) PCT).

- 3.2 The same applies *mutatis mutandis* to independent claims 11 and 12 which are also not inventive (Article 33(3) PCT).
- 3.3 Dependent claims 2-10 do not refer to an allowable claim and do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step. Said features relate to implementation options which are directly derivable from the underlying business constraints, e.g., the rules for identifying promotional offers, are known from D1 and/or D2 (broadcasting an authorization code/unique identifier, implicit, see D1, Fig. 7, col. 14, ll. 53-65, and col. 28, ll. 55-64; sending an authorization grant token, see D1, col. 28, ll. 52-67; scanning a product code, see D2, par. 45; sending transaction data to the server, see D1, Fig. 7; a mobile device with two transceivers, see D1, col. 3, ll. 46-64), or relate to further refinements of the underlying business scheme (i.e., rules for validating promotional offers, the type of data to be provided to a user).

Accordingly, the subject-matter of claims 2-10 is not inventive (Article 33(3) PCT).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 104402-5026WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2017/015676	International filing date (day/month/year) 30 January 2017 (30-01-2017)	(Earliest) Priority Date (day/month/year) 29 January 2016 (29-01-2016)
Applicant PAYRANGE, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No. III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1

- ☒ as suggested by the applicant
☐ as selected by this Authority, because the applicant failed to suggest a figure
☐ as selected by this Authority, because this figure better characterizes the invention

b. ☐ none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2017/015676

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06Q20/40

ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2015/178702 A1 (PATEL PARESH K [US]) 25 June 2015 (2015-06-25) the whole document ~~~~~	1-20
X	US 2015/170132 A1 (PATEL PARESH K [US]) 18 June 2015 (2015-06-18) the whole document ~~~~~	1-20
X	US 2015/170131 A1 (PATEL PARESH K [US]) 18 June 2015 (2015-06-18) the whole document ~~~~~	1-20
X	US 8 856 045 B1 (PATEL PARESH K [US] ET AL) 7 October 2014 (2014-10-07) the whole document ~~~~~	1-20
X	US 2015/169312 A1 (PATEL PARESH K [US] ET AL) 18 June 2015 (2015-06-18) the whole document ~~~~~	1-20

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

4 April 2017

Date of mailing of the international search report

18/04/2017

Name and mailing address of the ISA/

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Authorized officer

Lorenz David

EX1002, Page 159

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2017/015676

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2015178702	A1	25-06-2015	NONE
US 2015170132	A1	18-06-2015	NONE
US 2015170131	A1	18-06-2015	NONE
US 8856045	B1	07-10-2014	EP 3084699 A1 26-10-2016
		US 8856045 B1	07-10-2014
		US 2015170130 A1	18-06-2015
		US 2015227928 A1	13-08-2015
		US 2016098711 A1	07-04-2016
		WO 2015095599 A1	25-06-2015
US 2015169312	A1	18-06-2015	US 2015169312 A1 18-06-2015
		US 2015170129 A1	18-06-2015
		US 2015170136 A1	18-06-2015
		US 2015170145 A1	18-06-2015

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2017/015676

International filing date (day/month/year)
30.01.2017

Priority date (day/month/year)
29.01.2016

International Patent Classification (IPC) or both national classification and IPC
INV. G06Q20/40

Applicant
PAYRANGE, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 30 40 00 00

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Horat, David EX1002, Page 16



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2017/015676

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-20</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-20</u>
Industrial applicability (IA)	Yes: Claims	<u>1-20</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

1 Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1.1 Reference is made to the following documents:

- D1 US 2015/178702 A1 (PATEL PARESH K [US])
25 June 2015 (2015-06-25)
- D2 US 2015/170132 A1 (PATEL PARESH K [US])
18 June 2015 (2015-06-18)
- D3 US 2015/170131 A1 (PATEL PARESH K [US])
18 June 2015 (2015-06-18)
- D4 US 8 856 045 B1 (PATEL PARESH K [US] ET AL)
7 October 2014 (2014-10-07)
- D5 US 2015/169312 A1 (PATEL PARESH K [US] ET AL)
18 June 2015 (2015-06-18)

1.2 The current application is about a method and system for processing and dispensing vending machine refunds (see application claim 1 and description [0001]).

1.3 D1 relates to the field of pay-to-machine payment processing systems (see D1 [0001]).

1.3.1 D1 uses the same wording, it is from the same applicant and it provides most of the features of the current application.

1.3.2 The main differences between the current application and D1 are:

- application figure 26B with corresponding description paragraphs [00209]-[00213] about a specific configuration starting figure 26A (also disclosed in D1 figure 26) regarding a refunds process;
- application figures 30A-30G with corresponding description paragraphs [00269]-[00276] under the title "REFUNDS PROCESSING" regarding a user interface for preparing the refunds process;
- application figures 31A-31B with corresponding description paragraphs [00277]-[00278] about mounting options for the device which has the user interface which are a normal design procedure to the skilled person;

- application description [00279]-[00285] about options of the system which are either disclosed in D1 (e.g. network connection, auth codes, etc.) or a normal design procedure to the skilled person; and
- application description [00286]-[00289] which is the same text as in the original application claims.

1.4 D1 (see the passages cited in the search report) discloses in terms of claim 1:

A method of processing and dispensing ~~vending machine refunds~~, the method comprising:

at an electronic payment module with one or more processors, memory, a slave interface that couples the electronic payment module with a payment accepting unit via an electronic payment interface, and one or more host interfaces that couple the electronic payment module with at least one payment peripheral of the payment accepting unit:

performing as a virtual payment peripheral for the payment accepting unit by registering the device as a slave to the payment accepting unit;

performing as a virtual payment accepting unit for the at least one payment peripheral of the payment accepting unit by registering the at least one payment peripheral as a slave to the electronic payment module;

receiving, from a device that is distinct from the electronic payment module, a request to issue an approved refund of a predetermined amount and one or more criteria that must be satisfied before dispensing the approved refund of the predetermined amount; and

~~in accordance with a determination that the one or more criteria are met, issuing (i) a signal to the payment accepting unit, via the slave interface, that the at least one payment peripheral is unavailable and~~

~~(ii) a signal to the at least one payment peripheral, via the one or more host interfaces, to dispense the approved refund of the predetermined amount.~~

1.4.1 The differences between claim 1 and D1 are:

a request to issue an approved refund of a predetermined amount and one or more criteria that must be satisfied before dispensing the approved refund of the predetermined amount; and

in accordance with a determination that the one or more criteria are met, issuing (i) a signal to the payment accepting unit, via the slave interface, that the at least one payment peripheral is unavailable and

(ii) a signal to the at least one payment peripheral, via the one or more host interfaces, to dispense the approved refund of the predetermined amount.

1.4.2 The technical character of the differences resides in:

a signal to the the payment accepting unit via the slave interface and

a signal to the at least one payment peripheral, via the one or more host interfaces.

Nevertheless, these technical features are already disclosed in D1 ([0176]-[0188], [0202]-[0207], [0216]-[0218] and claim 8).

1.4.3 The differences relate to a non-technical administrative scheme for processing and dispensing vending machine refunds, the method comprising:

receiving a request to issue an approved refund of a predetermined amount and one or more criteria that must be satisfied before dispensing the approved refund of the predetermined amount; and

in accordance with a determination that the one or more criteria are met, disabling a the at least one payment peripheral and

dispense the approved refund of the predetermined amount.

1.4.4 The above steps define merely a non-technical administrative process. The above process does not achieve a technical effect or solve a technical problem by technical features. When regarded on its own said process would constitute subject-matter excluded from patentability. Moreover, this process could be performed by human operators instead of machines.

1.4.5 Although the claim defines data processing means, neither the claim nor the application as a whole describe any technical interaction between the features constituting the non-technical process and the technical features which would go beyond the mere automation of the administrative related steps. The steps constituting the non-technical business process cannot be seen to make any contribution, either independently or in combination with other features, to the solution of a technical problem and are thus not relevant for assessing inventive step (PCT Guidelines 9.07).

1.4.6 The examiner cannot derive any technical effect which may be achieved by the distinguishing features. Therefore, no objective technical problem can be derived other than the implementation of the non-technical process on the system of D1.

- 1.4.7 The skilled person is a computer programmer, because software running on a computer system has to be created.
- 1.4.8 The computer programmer would consider the implementation of the non-technical process on a computer to be an obvious programming task. When implementing it the computer programmer does not have to overcome any technical problem, commonplace programming skills and computer knowledge will suffice.
- 1.4.9 Therefore, the subject-matter of claim 1 does not involve an inventive step under Article 33(3) PCT.
- 1.5 The additional features of claims 2-8 are either disclosed in D1 (see the passages of the search report) or are obvious implementation details of further steps of the non-technical administrative process for processing and dispensing vending machine refunds, rendering its subject-matter not inventive under Article 33(3) PCT.
- 1.6 The same reasoning as for process claims 1-8 applies mutatis mutandis to corresponding apparatus claim 9 and product claim 10, rendering its subject-matter not inventive under Article 33(3) PCT.
- 1.7 The same reasoning as for process claims 1-8 applies mutatis mutandis to corresponding process claims 11-17, rendering its subject-matter not inventive under Article 33(3) PCT.
- 1.8 The specific configurations disclosed in dependent claims 18-20 are just a normal design procedure to the skilled person, and thus, its subject-matter is not inventive under Article 33(3) PCT.
- 1.9 Notwithstanding the above objections, the examiner would like to note that the same objections may be raised, mutatis mutandis, when starting from any of the cited prior art documents D2-D5, rendering the subject-matter of claims 1-20 not inventive under Article 33(3) PCT.

2 **Re Item VIII**

Certain observations on the international application

- 2.1 The application does not meet the requirements of Article 6 PCT, because claim 1 is not clear because it states "registering the device" but there is no antecedent "device".
- 2.2 The application does not meet the requirements of Article 6 PCT, because claims 18 and 19 are not clear because they both refer to method claims 1-17 but not all claims 1-17 are methods. Moreover, there are two different methods embodied in claims 1-8 and claims 11-17 respectively which are different so claims 18 and 19 should refer to one or the other.
- 2.3 The application does not meet the requirements of Article 6 PCT, because claim 20 is not clear because it refers to two different independent claims (18 and 19).
- 2.4 Although claims 1, 11, 18 and 19 have been drafted as separate independent method claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and/or in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 104402-5027WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2017/018194	International filing date (day/month/year) 16 February 2017 (16-02-2017)	(Earliest) Priority Date (day/month/year) 17 February 2016 (17-02-2016)
Applicant PAYRANGE, INC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6**bis**(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant
- ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 32

- ☐ as suggested by the applicant
- ☐ as selected by this Authority, because the applicant failed to suggest a figure
- ☒ as selected by this Authority, because this figure better characterizes the invention

b. ☐ none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2017/018194

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06Q30/06 G07F7/00 G06Q20/16 G06Q20/18 G06Q20/20
G06Q20/32

ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06Q G07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2015/170131 A1 (PATEL PARESH K [US]) 18 June 2015 (2015-06-18) paragraphs [0085], [0125] - [0129], [0202] - [0206], [0211], [0215] - [0217], [0221], [0226], [0227]; figures 28A, 28B	1-21
A	US 2015/235202 A1 (ZABALA JOSE RAFAEL [US]) 20 August 2015 (2015-08-20) abstract figures 13,15 paragraphs [0009], [0011], [0071], [0082], [0101], [0102]	1-21
A	US 8 600 899 B1 (DAVIS PAUL R [US]) 3 December 2013 (2013-12-03) abstract; figure 2	1-21
	----- -/-	

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

E earlier application or patent but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

Z document member of the same patent family

Date of the actual completion of the international search

5 April 2017

Date of mailing of the international search report

12/04/2017

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,

Authorized officer

Gabriel Christiaan

EX1002, Page 170

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2017/018194

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/158891 A1 (LEI JONATHAN L [US] ET AL) 21 August 2003 (2003-08-21) figure 2 paragraphs [0028], [0029] *****	1-21

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2017/018194

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2015170131	A1	18-06-2015	NONE
US 2015235202	A1	20-08-2015	NONE
US 8600899	B1	03-12-2013	US 8600899 B1 03-12-2013
		US 2014100977 A1	10-04-2014
US 2003158891	A1	21-08-2003	NONE

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43*bis*.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2017/018194

International filing date (day/month/year)
16.02.2017

Priority date (day/month/year)
17.02.2016

International Patent Classification (IPC) or both national classification and IPC
INV. G06Q30/06 G07F7/00 G06Q20/16 G06Q20/18 G06Q20/20 G06Q20/32

Applicant
PAYRANGE, INC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Gabriel, CH 1002, Page 17



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2017/018194

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-21</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-21</u>
Industrial applicability (IA)	Yes: Claims	<u>1-21</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

item V

1 Reference is made to the following documents:

D1 US 2015/170131 A1 (PATEL PARESH K [US]) 18 June 2015
(2015-06-18)

D2 US 2015/235202 A1 (ZABALA JOSE RAFAEL [US]) 20 August
2015 (2015-08-20)

D3 US 8 600 899 B1 (DAVIS PAUL R [US]) 3 December 2013
(2013-12-03)

D4 US 2003/158891 A1 (LEI JONATHAN L [US] ET AL) 21 August
2003 (2003-08-21)

2 The requirements of Article 33(3) PCT are not met, for the following reasons:

2.1 D1 discloses:

"A method of determining electric pulses to provide to an unattended machine based on remotely-configured options for the unattended machine, the method comprising:

at an application executing on a mobile device:

detecting, based on a broadcast received from a pulse-providing device that is coupled with the unattended machine, presence of the unattended machine in proximity to the mobile device (par. 125,126; it follows from par. 85, 211 that the operation of the system in this respect is the same irrespective of whether the adapter module is a pulse providing device or not);

after detecting the presence of the unattended machine, receiving, from a server, ~~information about a first set of remotely-configured options for interacting with the unattended machine;~~

~~in response to receiving the information about the first set of remotely-configured options, displaying, in the application, user interface objects that allow for selection of respective options in the first set of remotely-configured options;~~

~~detecting a selection of a first user interface object that corresponds to a first option in the first set of remotely-configured options;~~

~~after detecting the selection of the first user interface object, receiving, from the server, information that includes an authorization grant for the first option at the unattended machine, wherein the information includes specifications regarding electric pulses to be provided to the unattended machine by the~~

pulse-providing device in accordance with the first option (1612 in fig. 29a, par. 216; "authorization amount" in par. 126);
in accordance with a determination that a trigger condition has been satisfied, sending the authorization grant and the pulse information to the pulse-providing device ("AuthGrant" in par. 215, fig. 8C; "authorization amount" in par. 126) and
after sending the information that includes the authorization grant and the specifications to the pulse-providing device, receiving an indication, from the pulse-providing device, that the electric pulses were provided to the unattended machine according to the specifications ("1620" in fig. 29B, par. 221).

- 2.2 D1 does not disclose, after detecting the presence of the unattended machine, and prior to receiving the authorisation grant:
"receiving, from [the] server, information about a first set of remotely-configured options for interacting with the unattended machine;
in response to receiving the information about the first set of remotely-configured options, displaying, in the application, user interface objects that allow for selection of respective options in the first set of remotely-configured options;
detecting a selection of a first user interface object that corresponds to a first option in the first set of remotely-configured options;
- 2.3 These features make it possible to send different amounts of money to the unattended (vending) machine in one go (see e.g. par. 252 of the present application).
- 2.4 It is noted that financial/business schemes are as such not technical and they cannot contribute to an inventive step. In the present case, the options to allow a user to select different pricing options and to send money according to the selected option to the vending machine (e.g. in accordance with discount options, as in par. 254) is a non-technical business requirement.
- 2.5 The technical implementation of this requirement is the use of the server for providing the options to the user at the GUI of the mobile phone, and providing the data required by the pulse-providing device.
- 2.6 Facing this requirement, it would be immediately evident to a skilled person responsible for finding an implementation, that in the system of D1, the user must select the pricing options at the mobile device. Concerning the location where the pricing options should be configured, there are the options to

perform this in the pulse-providing device, in the mobile device, or in the server. In particular in a situation where flexibility should be offered for providing pricing options, the most straightforward implementation would be to configure all options at the server and provide them to the app at transaction time. Implementing such pricing options in the pulse-providing device would require more complex circuitry which would not be easy to reconfigure. Implementing the pricing options at the mobile phone would e.g. require frequent app updates. Moreover, D1 teaches that such the amount of funds/pulses must be encrypted at the server for security reasons (see par. 88), which also points at using the server for storing and forwarding the pricing options. Document D2 (par. 71, 82, fig. 13) shows a similar system in which discount options are configured at a server and downloaded to a mobile phone app at transaction time. Consequently, the implementation as claimed is obvious, and the subject-matter of claim 1 does not involve an inventive step (Article 33(3) PCT).

- 2.7 For similar reasons, the subject-matter of the corresponding independent claims 11-13 and 19-21 lacks an inventive step (article 33(3) PCT).
- 2.8 The further features of dependent claims 2-6 and 14-18 are either business aspects as such (e.g. pricing options), or obvious implementations of business requirements, neither of which can contribute to an inventive step (Article 33(3) PCT).
- 2.9 The further features of dependent claims 7-10 are known from D1 (see the passages in the search report) and hence cannot contribute to an inventive step (Article 33(3) PCT).

item VII

- 1 The features of the claims should have been provided with reference signs placed in parenthesis to increase the intelligibility of the claims (Rule 6.2 (b) PCT). This applies to both the preamble and the characterising portion of all claims.
- 2 In order to indicate more completely the background art useful for understanding the invention, the above-mentioned documents D1-D3 should have been acknowledged in the description (Rule 5.1 (a) (ii) PCT).
- 3 The vague and imprecise statement in par. 281 imply that the subject-matter for which protection is sought may be different to that defined by the claims,

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 104402-5038WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2019/060777	International filing date (day/month/year) 11 November 2019 (11-11-2019)	(Earliest) Priority Date (day/month/year) 12 November 2018 (12-11-2018)
Applicant PAYRANGE, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II)

3. ☐ Unity of invention is lacking (see Box No. III)

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 13

- ☐ as suggested by the applicant
☐ as selected by this Authority, because the applicant failed to suggest a figure
☒ as selected by this Authority, because this figure better characterizes the invention

b. ☐ none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2019/060777

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06Q20/32 G06Q20/22 G06Q20/02
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/178883 A1 (GRANBERY J HASTINGS [US] ET AL) 21 July 2011 (2011-07-21) abstract; figures paragraphs [0002], [0016] - [0020], [0033] - [0061]	1-14
A	US 2018/005220 A1 (LARACEY KEVIN [US] ET AL) 4 January 2018 (2018-01-04) abstract; figures	1-14
A	US 2014/108108 A1 (ARTMAN TUOMAS [US] ET AL) 17 April 2014 (2014-04-17) abstract; figures	1-14
A	US 2014/052524 A1 (ANDERSEN ROBERT [US]) 20 February 2014 (2014-02-20) abstract; figures	1-14
	-/--	

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

30 January 2020

Date of mailing of the international search report

06/02/2020

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,

Authorized officer

EX1002, Page 180

Brouwer, J. van

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2019/060777

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2016/232515 A1 (JHAS AMIT [CA] ET AL) 11 August 2016 (2016-08-11) abstract; figures ~~~~~	1-14
A	US 2009/076896 A1 (DEWITT JAY ALLEN [US] ET AL) 19 March 2009 (2009-03-19) abstract; figures ~~~~~	1-14
A	US 2010/320266 A1 (WHITE SPENCER NEIL [US]) 23 December 2010 (2010-12-23) abstract; figures ~~~~~	1-14
A	US 2011/238476 A1 (CARR MICHAEL [US] ET AL) 29 September 2011 (2011-09-29) abstract; figures ~~~~~	1-14
A	US 2014/279101 A1 (DUPLAN LUCAS ANDREW [US] ET AL) 18 September 2014 (2014-09-18) abstract; figures ~~~~~	1-14
A	WO 2016/123545 A1 (PAYRANGE INC [US]) 4 August 2016 (2016-08-04) the whole document ~~~~~	1-14

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2019/060777

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2011178883 A1	21-07-2011	US 2011178883 A1	21-07-2011
		US 2012130895 A1	24-05-2012
		US 2019080310 A1	14-03-2019
US 2018005220 A1	04-01-2018	US 2018005220 A1	04-01-2018
		WO 2018005875 A1	04-01-2018
US 2014108108 A1	17-04-2014	EP 2909799 A1	26-08-2015
		US 2014108108 A1	17-04-2014
		US 2019370861 A1	05-12-2019
		WO 2014062230 A1	24-04-2014
US 2014052524 A1	20-02-2014	US 2014052524 A1	20-02-2014
		US 2014052615 A1	20-02-2014
		WO 2013184844 A2	12-12-2013
US 2016232515 A1	11-08-2016	CA 2924742 A1	26-03-2015
		US 2016232515 A1	11-08-2016
		WO 2015039254 A1	26-03-2015
US 2009076896 A1	19-03-2009	AU 2007358750 A1	19-03-2009
		BR PI0722009 A2	18-03-2014
		CA 2698524 A1	19-03-2009
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		US 2011313858 A1	22-12-2011
		WO 2009035468 A1	19-03-2009
US 2010320266 A1	23-12-2010	NONE	
US 2011238476 A1	29-09-2011	CA 2794085 A1	29-09-2011
		CA 2921085 A1	29-09-2011
		CN 102822855 A	12-12-2012
		EP 2550633 A1	30-01-2013
		EP 3203424 A1	09-08-2017
		JP 5540145 B2	02-07-2014
		JP 5683730 B2	11-03-2015
		JP 5714199 B1	07-05-2015
		JP 5872083 B2	01-03-2016
		JP 2013522777 A	13-06-2013
		JP 2014170579 A	18-09-2014
		JP 2015122082 A	02-07-2015
		JP 2015149080 A	20-08-2015
		KR 20120125381 A	14-11-2012
		KR 20150003922 A	09-01-2015
		KR 20150139981 A	14-12-2015
		KR 20170015553 A	08-02-2017
		KR 20170127072 A	20-11-2017
		US 2011238476 A1	29-09-2011
		WO 2011119407 A1	29-09-2011
US 2014279101 A1	18-09-2014	NONE	
WO 2016123545 A1	04-08-2016	EP 3251070 A1	06-12-2017
		JP 2018511089 A	19-04-2018
		US 9262771 B1	16-02-2016
		US 2016225010 A1	04-08-2016
		US 2018222522 A1	08-11-2019

Information on patent family members

PCT/US2019/060777

Patent document
cited in search report

Publication
date

Patent family member(s)

Publication
date

WO 2016123545 A1

04-08-2016

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2019/060777

International filing date (day/month/year)
11.11.2019

Priority date (day/month/year)
12.11.2018

International Patent Classification (IPC) or both national classification and IPC
INV. G06Q20/32 G06Q20/22 G06Q20/02

Applicant
PAYRANGE, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

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For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 78 646 6040

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Bruegelmans, Jan

EX1002, Page 18



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2019/060777

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-14</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-14</u>
Industrial applicability (IA)	Yes: Claims	<u>1-14</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following documents:

- | | |
|-----|---|
| D1 | US 2011/178883 A1 (GRANBERY J HASTINGS [US] ET AL) 21 July 2011 (2011-07-21) |
| D2 | US 2018/005220 A1 (LARACEY KEVIN [US] ET AL) 4 January 2018 (2018-01-04) |
| D3 | US 2014/108108 A1 (ARTMAN TUOMAS [US] ET AL) 17 April 2014 (2014-04-17) |
| D4 | US 2014/052524 A1 (ANDERSEN ROBERT [US]) 20 February 2014 (2014-02-20) |
| D5 | US 2016/232515 A1 (JHAS AMIT [CA] ET AL) 11 August 2016 (2016-08-11) |
| D6 | US 2009/076896 A1 (DEWITT JAY ALLEN [US] ET AL) 19 March 2009 (2009-03-19) |
| D7 | US 2010/320266 A1 (WHITE SPENCER NEIL [US]) 23 December 2010 (2010-12-23) |
| D8 | US 2011/238476 A1 (CARR MICHAEL [US] ET AL) 29 September 2011 (2011-09-29) |
| D9 | US 2014/279101 A1 (DUPLAN LUCAS ANDREW [US] ET AL) 18 September 2014 (2014-09-18) |
| D10 | WO 2016/123545 A1 (PAYRANGE INC [US]) 4 August 2016 (2016-08-04) |

2 The present application does not meet the criteria of Article 33(3) PCT, because the subject-matter of claims 1-14 does not involve an inventive step.

3 Independent claim 1

3.1 Document D1 discloses a method, comprising:
at a consumer device including a display, one or more processors, a communications unit, and memory, performing by an application executing on the consumer device (Fig.1:Ref.20; [0019],[0025]):

- identifying a first merchant device in proximity to the consumer device based at least in part on broadcasted information transmitted by the first merchant device, wherein the broadcasted information includes a first identifier corresponding to the first merchant device ([0016],[0020],[0033],[0037]);
- transmitting via the communications unit of the consumer device the first identifier to a server ([0033],[0038]) and

- receiving from the server an electronic communication including:
 - first merchant identification information of a first merchant associated with the first merchant device, ~~wherein the first merchant identification information includes one or more of a name, logo, picture, address, phone, or email of the first merchant;~~ and first merchant transaction information identifying a proposed in-person transaction between the consumer device and the first merchant, wherein the first merchant transaction information includes a preset transaction amount, an available offer, or an available reward ([0039]);
 - displaying on the display of the consumer device the first merchant identification information ([0039]);
 - ~~receiving from a user of the consumer device selection of the first merchant identification information;~~

~~in response to receiving the selection of the first merchant identification information:~~

- displaying the first merchant transaction information ([0039]-[0040]);
 - receiving from the user of the consumer device first supplemental transaction information, wherein the first supplemental transaction information is a selection of the preset transaction amount, a selection of the available offer, a selection of the available reward, or a free form payment amount ([0040]); and
- transmitting the first supplemental transaction information to the server ([0040]); and

in response to transmitting the first supplemental transaction information to the server,

- receiving confirmation from the server that the proposed transaction between the consumer device and the first merchant has been completed ([0040]).

3.2 The subject-matter of claim 1 therefore differs from this known method of D1 in that wherein the first merchant identification information includes one or more of a name, logo, picture, address, phone, or email of the first merchant and in that the method comprises receiving from a user of the consumer device selection of the first merchant identification information, whereby the displaying of the first

merchant transaction information is done in response to receiving the selection of the first merchant identification information and is therefore new with regard to D1.

- 3.3 These differentiating features relate to an underlying administrative/business scheme whereby the user has the ability to select amongst a plurality of merchants based on e.g. names, logos, addresses before being provided with information such as offers.

The problem to be solved by the present invention may therefore be regarded as to implement this administrative/business scheme as a non-technical (user) requirement.

- 3.4 Solving the problem is only a matter of reprogramming the devices/server of D1 according to the non-technical (user) requirement. In addition it is noted that the difference can also be seen as an obvious implementation detail of the user interface, whereby for example the user is provided with merchant buttons which can be selected and, if selected, further details of available offers of the selected merchant are presented. However, no credible improvements can be detected, based on the features of claim 1.

- 3.5 Therefore the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

- 4 Dependent claims 2-7 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step (Article 33(3) PCT), the reasons being as follows:

The additional features of claims 2-7 are disclosed in D1 and/or related to obvious implementation of further non-technical requirements and/or are well known to the skilled person (see e.g. documents D2-D10).

It is noted that all these claims have an underlying administrative/business scheme, whereby nearby merchants and their offers are presented to the user according to their distance or user preferences. The use of e.g. signal strengths (see e.g. claim 5) are well known techniques for defining distances or positioning of transceivers.

- 5 The same reasoning applies, mutatis mutandis, to the subject-matter of the claims 8-14, which therefore are also considered not inventive.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 104402-5041WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2021/042632	International filing date (day/month/year) 21 July 2021 (21-07-2021)	(Earliest) Priority Date (day/month/year) 21 July 2020 (21-07-2020)
Applicant PAYRANGE, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6**bis**(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant
- ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1

- ☒ as suggested by the applicant
- ☐ as selected by this Authority, because the applicant failed to suggest a figure
- ☐ as selected by this Authority, because this figure better characterizes the invention

b. ☐ none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2021/042632

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06F13/38 G06Q20/32 G07F9/00
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06F G07G G06Q G07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2017/143079 A1 (PAYRANGE INC [US]) 24 August 2017 (2017-08-24) paragraph [0021] - paragraph [0022] paragraph [0071] paragraph [0082] paragraph [00100] - paragraph [00101] paragraph [0095] - paragraph [0098] paragraph [0098] - paragraph [0099] paragraph [00148] - paragraph [00151] paragraph [00152] figure 19	1-30
Y	US 2014/143074 A1 (KOLLS H BROCK [US]) 22 May 2014 (2014-05-22) paragraph [0017] - paragraph [0024] paragraph [0027] - paragraph [0028] paragraph [0156] - paragraph [0170] paragraph [0435] - paragraph [0467] ----- -/-	1-30

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

9 November 2021

Date of mailing of the international search report

17/11/2021

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,

Authorized officer

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Mounihan Mounihan

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2021/042632

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 571 607 A2 (FRANCE TELECOM [FR]) 7 September 2005 (2005-09-07) the whole document *****	1,11,21

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2021/042632

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2017143079 A1	24-08-2017	EP 3417419 A1	26-12-2018
		EP 3800607 A1	07-04-2021
		ES 2858526 T3	30-09-2021
		JP 6898339 B2	07-07-2021
		JP 2019508813 A	28-03-2019
		JP 2021152930 A	30-09-2021
		WO 2017143079 A1	24-08-2017
US 2014143074 A1	22-05-2014	US 8596529 B1	03-12-2013
		US 2014143074 A1	22-05-2014
EP 1571607 A2	07-09-2005	DE 69534181 T2	23-02-2006
		EP 0662674 A1	12-07-1995
		EP 1571607 A2	07-09-2005
		FR 2714987 A1	13-07-1995
		JP H0855175 A	27-02-1996
		JP 2008276790 A	13-11-2008

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2021/042632

International filing date (day/month/year)
21.07.2021

Priority date (day/month/year)
21.07.2020

International Patent Classification (IPC) or both national classification and IPC
INV. G06F13/38 G06Q20/32 G07F9/00

Applicant
PAYRANGE, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Moynihan, Elizabeth
EX1002, Page 19



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-30</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-30</u>
Industrial applicability (IA)	Yes: Claims	<u>1-30</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reference may be made to the following documents:

- D1** WO 2017/143079 A1 (PAYRANGE INC [US]) 24 August 2017 (2017-08-24)
- D2** US 2014/143074 A1 (KOLLS H BROCK [US]) 22 May 2014 (2014-05-22)
- D3** EP 1 571 607 A2 (FRANCE TELECOM [FR]) 7 September 2005 (2005-09-07)

1 Article 33(3) PCT

1.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-30 does not involve an inventive step in the sense of Article 33(3) PCT.

1.2 The subject matter of the claimed invention seeks coverage for an electronic device for retrofitting a machine such as a vending machine. This device facilitates external access to external peripheral devices such as payment acceptors. A slave interface couples the electronic device to a machine controller of the machine via a multi-drop bus (MDB). Both the electronic device and further peripherals are registered as slave devices to the machine controller and electronic device respectively. A mobile device may communicate with the electronic device for carrying out transactions with the peripheral device.

1.3 Document D1 is considered the closest prior art document and discloses the following with respect to claim 1: (references to D1 are in parentheses):

An electronic device for retrofitting a machine to provide external access to one or more electronic peripheral devices of the machine, the electronic device comprising:

(see figure 19)

a slave interface configured to couple the electronic device to a machine controller of the machine via a multi-drop bus (MDB);

a host interface configured to couple the electronic device to ~~a first peripheral device of the one or more electronic peripheral devices of the machine, wherein the first peripheral device is configured to communicate via MDB protocol and is decoupled from the MDB of the machine;~~

(see paragraph [00101] - "The shown adapter modules 100 are preferably designed to be used as an inline dongle for in-line insertion within, for example, a MDB of a machine 120. The wire used in MDB technology uses male and female connection ends or adapters to allow the attachment of peripherals.")

a wireless transceiver;

one or more processors; and

non-transitory memory storing one or more programs to be executed by the one or more processors, the one or more programs comprising instructions for:

(see paragraph [0082] - "Communications between user mobile devices 150 and the adapter module 100 of the payment accepting unit 120 take place using.... any wired or wireless technology...")

registering the electronic device as a slave to the machine controller;

(see figure 8F - adapter module registers as cashless device.)

~~registering the first peripheral device as a slave to the electronic device;~~

receiving, from a mobile device via the wireless transceiver, a request to access signals generated by the first peripheral device;

validating the request, wherein validation of the request indicates that the mobile device is authorized, by a remote server, to access the signals generated by the first peripheral device; and

(see paragraph [00152] - [00153] "After receiving the authorization request, the server 130 processes (1006) the authorization requestThe server 130 sends...an authorization grant token to the mobile device 150. ")

~~sending a first reset command to the first peripheral device via the host interface, wherein the first reset command includes a directive to update a signal destination address of the first peripheral device from a controller address of the machine controller to a device address of the electronic device.~~

1.4 As can be seen from the above cited passages and figures of D1, claim 1 differs over these disclosures with respect to the following underlined features:

(i) a host interface configured to couple the electronic device to a first peripheral device of the one or more electronic peripheral devices of the machine, wherein the first peripheral device is configured to communicate via MDB protocol and is decoupled from the MDB of the machine.

(ii) registering the first peripheral device as a slave to the electronic device.

(iii) receiving, from a mobile device via the wireless transceiver, a request to access signals generated by the first peripheral device;

validating the request, wherein validation of the request indicates that the mobile device is authorized, by a remote server, to access the signals generated by the first peripheral device; and

(iv) sending a first reset command to the first peripheral device via the host interface, wherein the first reset command includes a directive to update a signal destination address of the first peripheral device from a controller address of the machine controller to a device address of the electronic device.

1.5 These features are all interrelated and pertain to the configuration of a first peripheral device as a slave device to communicate via a MDB protocol, and to allow a mobile device to communicate with said first peripheral device. These features provide the technical effect of increasing the functionality of the adapter device and the number of devices that may connect to a retrofitted machine.

1.6 As such, the objective technical problem is how increase the payment functionality of a retrofitted machine.

1.7 The skilled person would have looked at ways to improve the functionality of the adapter device of D1, and in doing so would have discovered Document D2. Paragraph [0027] discloses "a system and method for implementing an MDB protocol gateway for the purpose of supporting a plurality of peripheral devices each of which may be implementing a different version of MDB protocol then the vending equipment's vending machine controller (VMC)." Document D2 further discloses in paragraph [0436] how these peripheral devices are arranged in a master and slave mode with respect to the machine controller of D2 - "once the peripherals are connected to the VMC, the VMC typically operates as the master device and each of the peripheral devices are designated as slave peripheral devices. Such slave peripheral devices can include bill acceptor 904, coin mechanism 906, card reader 908, and online module 910."

1.8 Although the precise sequence of the communication steps of claim 1 for updating a signal address of a peripheral device are not disclosed by D2, these steps are obviously implicitly present for the designation of the peripherals as slave devices.

- 1.9 The Examiner has been unable to identify where the inventive step would manifest in the adaption of the disclosures of D1 with those of D2, thus arriving at the subject matter of claim 1. As such, claim 1 is lacking an inventive step in the sense of Article 33(3) PCT.
- 1.10 For similar reasoning, the subject matter of independent claims 11 and 21 are also lacking an inventive step in the sense of Articles 33(3) PCT.
- 1.11 Claims 2-6, 9-10, 12-16, 19-20, 22-26 & 29-30 seek coverage for further communication steps between the electronic device, the first peripheral device and the mobile device. However, these steps merely relate to exchanging of messages governing the interaction of the claimed devices. The Examiner has been unable to identify any further or surprising technical effect over the disclosures of D1 in combination with D2.
- 1.12 Claims 7-8, 17-18 & 27-28 are disclosed by D1 (see figure 19).

Electronic Acknowledgement Receipt

EFS ID:	46426303
Application Number:	16934392
International Application Number:	
Confirmation Number:	2603
Title of Invention:	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS
First Named Inventor/Applicant Name:	Paresh K. Patel
Customer Number:	24341
Filer:	Douglas James Crisman/vladimir skliba
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104402-5043-US
Receipt Date:	17-AUG-2022
Filing Date:	21-JUL-2020
Time Stamp:	07:02:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	Nurel_RecentDevelopmentsIn Wireless_SEP2001.pdf	11349536	no	280
			628c38705d52f141684d021e2fcaebc9e39cac		

Warnings:

Information:					
2	Non Patent Literature	PayRange_CommA943_148286172_19DEC2017.pdf	216035	no	6
			c3a850e093e1be07dc065bd93d0e366f8177461c		
Warnings:					
Information:					
3	Non Patent Literature	PayRange_CommA943_167069319_29JUN2018.pdf	315731	no	8
			3c60a0079a134d17a19f0c1dd82af87909823c5a		
Warnings:					
Information:					
4	Non Patent Literature	PayRange_CommR161_167069319_21SEP2017.pdf	98822	no	2
			697ac9848333e0ca08a38c80f6410bfef48b6ff8		
Warnings:					
Information:					
5	Non Patent Literature	PayRange_CommR161_EP148286172_21SEP2016.pdf	100759	no	2
			b52b7bedda24dfbdd280f05b292f29af1d9541dc		
Warnings:					
Information:					
6	Non Patent Literature	PayRange_CommR713_EP148286172_19NOV2020.pdf	301030	no	7
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Warnings:					
Information:					
7	Non Patent Literature	PayRange_CommR713_EP177089299_12JUN2020.pdf	310504	no	7
			4271c17adba7675c0f42c9da04bceef13be29aac		
Warnings:					
Information:					
8	Non Patent Literature	PayRange_ESR_EP202031340_01MAR2021.pdf	305751	no	7
			074d4fa82966dac9887f5aab3080f44290f6cc4		
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Information:					

9	Non Patent Literature	PayRange_ESR_EP211656921_14SEP2021.pdf	477959	no	10
			fc7e9bb2320b89029476cb852b549967e2e ce289		
Warnings:					
Information:					
10	Non Patent Literature	PayRange_IPRP_PCTUS2014071284_21JUN2016.pdf	298445	no	6
			7935ab296794c00a755adc9779d13233128 e2ef3		
Warnings:					
Information:					
11	Non Patent Literature	PayRange_IPRP_PCTUS2016015763_01AUG2017.pdf	273457	no	7
			78faf601e34146598de366122cc662c21899 8a78		
Warnings:					
Information:					
12	Non Patent Literature	PayRange_IPRP_PCTUS2017015676_31JUL2018.pdf	348203	no	9
			4b8e6b30636aa2fca9fe37c2618abd0be1d 5b91a		
Warnings:					
Information:					
13	Non Patent Literature	PayRange_IPRP_PCTUS2017018194_21AUG2018.pdf	282416	no	7
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Warnings:					
Information:					
14	Non Patent Literature	PayRange_IPRP_PCTUS2019060777_11MAY2021.pdf	266262	no	7
			c8d24467e52ad097a9acfa77e291f675b7d b1658		
Warnings:					
Information:					
15	Non Patent Literature	PayRange_ISRWO_PCTUS2014071284_25MAR2015.pdf	360822	no	9
			6fbd2f9900d77552af9e0fc7f963e4ff347d7 dd4		
Warnings:					
Information:					

16	Non Patent Literature	PayRange_ISRWO_PCTUS2016015763_08APR2016.pdf	330752	no	9
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Warnings:					
Information:					
17	Non Patent Literature	PayRange_ISRWO_PCTUS2017015676_18APR2017.pdf	588639	no	11
			251935b782116053068017749a91f15eeba8b90f		
Warnings:					
Information:					
18	Non Patent Literature	PayRange_ISRWO_PCTUS2017018194_12APR2017.pdf	518905	no	10
			25400c7027e003b35f79e1dd35ea56be472f562d		
Warnings:					
Information:					
19	Non Patent Literature	PayRange_ISRWO_PCTUS2019060777_06FEB2020.pdf	568992	no	11
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Warnings:					
Information:					
20	Non Patent Literature	PayRange_ISRWO_PCTUS2021042632_17NOV2021.pdf	535805	no	11
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Warnings:					
Information:					
Total Files Size (in bytes):			17848825		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	46426299
Application Number:	16934392
International Application Number:	
Confirmation Number:	2603
Title of Invention:	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS
First Named Inventor/Applicant Name:	Paresh K. Patel
Customer Number:	24341
Filer:	Douglas James Crisman/vladimir skliba
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104402-5043-US
Receipt Date:	17-AUG-2022
Filing Date:	21-JUL-2020
Time Stamp:	06:57:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Foreign Reference	WO2009070430A2.pdf	7488377	no	178
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Warnings:

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2	Foreign Reference	WO2013132995A1.pdf	2634443	no	38
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3	Foreign Reference	WO2013177416A2.pdf	5145903	no	95
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4	Foreign Reference	WO2014093857A1.pdf	1476238	no	28
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5	Foreign Reference	WO2016123545A1.pdf	4528019	no	77
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Information:					
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8	Non Patent Literature	RobocopyEs_13FEB2018.pdf	456558	no	2
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9	Non Patent Literature	Adams_HowCanStationaryKiosks.pdf	174846	no	6
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10	Non Patent Literature	Balan_mFerio_JUN2009.pdf	1344176	no	14
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11	Non Patent Literature	Balfe_eEMV_OCT2008.pdf	1300309	no	12
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13	Non Patent Literature	Carlson_Specification_US60871898_26DEC2006.pdf	7505687	no	169
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14	Non Patent Literature	Frolick_AssessingM_Commerce.pdf	1049154	no	10
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15	Non Patent Literature	Google_Chromecast_12DEC2013.pdf	402086	no	4
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16	Non Patent Literature	HowToPayTheNewWay.pdf	1246259	no	4
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 17, 2022	
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				Art Unit	3685
				Examiner Name	James D. Nigh
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				Examiner Name	James D. Nigh
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				Application Number	16/934,392
				Filing Date	July 21, 2020
				First Named Inventor	Pareesh K. Patel
				Art Unit	3685
				Examiner Name	James D. Nigh
Sheet	7	of	11	Attorney Docket Number	104402-5043-US

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				Filing Date	July 21, 2020
				First Named Inventor	Paresh K. Patel
				Art Unit	3685
				Examiner Name	James D. Nigh
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				Application Number	16/934,392
				Filing Date	July 21, 2020
				First Named Inventor	Paresh K. Patel
				Art Unit	3685
				Examiner Name	James D. Nigh
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Electronic Acknowledgement Receipt

EFS ID:	46426295
Application Number:	16934392
International Application Number:	
Confirmation Number:	2603
Title of Invention:	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS
First Named Inventor/Applicant Name:	Paresh K. Patel
Customer Number:	24341
Filer:	Douglas James Crisman/vladimir skliba
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104402-5043-US
Receipt Date:	17-AUG-2022
Filing Date:	21-JUL-2020
Time Stamp:	06:50:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		104402_5043_US_IDS.pdf	1466554	yes	15
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel	Confirmation No.:	2603
Serial No.:	16/934,392	Art Unit:	3685
Filed:	July 21, 2020	Examiner:	James D. Nigh
For:	Method and System for Performing Mobile Device-to-Machine Payments	Attorney Docket No.:	104402-5043-US

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

1. Enclosures accompanying this Information Disclosure Statement are:

- 1a. ☒ A list of all patents, publications, applications, or other information submitted for consideration by the office.
- 1b. A legible copy of:
 - ☒ Each foreign patent;
 - ☒ Each publication or that portion which caused it to be listed on the PTO-1449;
 - ☐ For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or portion of the application which caused it to be listed on the PTO-1449 including any claims directed to that portion;
 - ☒ all other information or portion which caused it to be listed on the PTO-1449.
- 1c. ☒ An English language copy of search report(s) from a counterpart foreign application or PCT International Search Report.
- 1d. ☐ Explanations of relevancy (ATTACHMENT 1(d), hereto) or English language abstracts of the non-English language publications.

2. ☒ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(b):
- ☐ Within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
 - ☐ Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
 - ☒ Before the mailing of the first Office action on the merits;
 - ☐ Before the mailing of a first Office action after the filing of a request for continued examination under §1.114.

3. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) after the period specified in 37 C.F.R. §1.97(b), but before the mailing date of any of a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311 or an action that otherwise closes prosecution in the application.

(Check either Item 3a, 3b or 3c)

- 3a. ☐ The Certification Statement in Item 5 below is applicable. Accordingly, no fee is required.
- 3b. ☐ The \$260.00 (large entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).
- 3c. ☐ The \$130.00 (small entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).

(Items 3b or 3c to be checked if any reference known for more than 3 months)

4. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(d) after the period specified in 37 C.F.R. §1.97(c), but on or before the date of payment of the issue fee.

(Check Item 4a, and 4b or 4c)

- 4a. ☐ The Certification Statement in Item 5 below is applicable.
- 4b. ☐ The \$260.00 (large entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).
- 4c. ☐ The \$130.00 (small entity) fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is to be charged to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. _____).

5. ☐ Certification Statement (applicable if Item 3a or Item 4a is checked)

(Check either Item 5a, 5b, 5c or 5d)

- 5a. ☐ In accordance with 37 C.F.R. §1.97(e)(1), it is certified that each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- 5b. ☐ In accordance with 37 C.F.R. §1.97(e)(2), it is certified that no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this information disclosure statement.
- 5c. ☐ Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- 5d. ☐ Pursuant to 37 C.F.R. §1.704(d), each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
6. ☒ Copies of each cited U.S. patent and each U.S. patent application publication are not enclosed pursuant to the USPTO OG Notice dated 05 August 2003 waiving the requirement under 37 C.F.R. 1.98(a)(2)(i) for U.S. patent applications filed after June 30, 2003.
7. ☐ This application is a continuing application under 37 C.F.R. §1.53(b) or (d).
- (Check appropriate Items 7a, 7b and/or 7c)*
- 7a. ☐ A Petition to Withdraw from issue under 37 C.F.R. §1.313(b)(5) is concurrently filed herewith.
- 7b. ☐ Copies of publications listed on Form PTO-1449 from prior application Serial No. _____ filed _____, of which this application claims priority under 35 U.S.C. §120, are not being submitted pursuant to 37 C.F.R. §1.98(d).
- 7c. ☐ Copies of the publications listed on the attached Form PTO-1449 that were not previously cited in prior application Serial No. _____ filed _____, are provided herewith.

8. ☐ This is a Supplemental Information Disclosure Statement. (Check Item 8a)
- 8a. ☐ This Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(f) supplements the Information Disclosure Statement filed on . A bona fide attempt was made to comply with 37 C.F.R. §1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental Information Disclosure Statement can be considered as if properly filed on .
9. ☐ In accordance with 37 C.F.R. §1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:
- (Check Item 9a, 9b, or 9c)
- 9a. ☐ satisfied because all non-English language publications were cited on the enclosed English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found by the foreign office.
- 9b. ☐ set forth in the application.
- 9c. ☐ enclosed as an attachment hereto.
10. ☒ The Commissioner is authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement and/or Petition to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104402-5043-US).
11. ☒ No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than a search report of a foreign counterpart application or PCT International Search Report if submitted herewith). 37 C.F.R. §§1.97(g) and (h).

Respectfully submitted,

Date: August 17, 2022

/Douglas J. Crisman/	39,951
Douglas J. Crisman	(Reg. No.)
MORGAN, LEWIS & BOCKIUS LLP	
1400 Page Mill Road	
Palo Alto, CA 94304	
(650) 843-4000	



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/934,392	07/21/2020	Paresh K. Patel	104402-5043-US

CONFIRMATION NO. 2603

PUBLICATION NOTICE



OC000000125568945

24341
Morgan, Lewis & Bockius LLP (PA)
1400 Page Mill Road
Palo Alto, CA 94304-1124

Title:METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

Publication No.US-2021-0142325-A1

Publication Date:05/13/2021

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <https://portal.uspto.gov/pair/PublicPair>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/934,392	07/21/2020	2876	910	104402-5043-US	20	3

CONFIRMATION NO. 2603

UPDATED FILING RECEIPT

24341

Morgan, Lewis & Bockius LLP (PA)
1400 Page Mill Road
Palo Alto, CA 94304-1124



Date Mailed: 02/05/2021

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Paresh K. Patel, Portland, OR;

Applicant(s)

PAYRANGE INC., Portland, OR;

Power of Attorney: The patent practitioners associated with Customer Number 24341

Domestic Priority data as claimed by applicant

This application is a CON of 15/406,492 01/13/2017 PAT 10719833
which is a CON of 14/335,762 07/18/2014 PAT 9547859
which is a CON of 14/214,644 03/14/2014 PAT 8856045
which claims benefit of 61/917,936 12/18/2013
and is a CIP of 29/477,025 12/18/2013 PAT D755183

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 07/29/2020

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/934,392**

Projected Publication Date: 05/13/2021

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

Preliminary Class

235

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 16/934,392			
APPLICATION AS FILED - PART I									
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)		
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	80		N/A			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	350		N/A			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	400		N/A			
TOTAL CLAIMS (37 CFR 1.16(j))	20	minus 20 = *	x 50 =	0.00	OR				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *	x 240 =	0.00					
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00					
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00					
			TOTAL	830		TOTAL			
* If the difference in column 1 is less than zero, enter "0" in column 2.									
APPLICATION AS AMENDED - PART II									
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total (37 CFR 1.16(i))	*	Minus **	=	x =	OR	x =		
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =	OR	x =		
	Application Size Fee (37 CFR 1.16(s))					OR			
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR			
			TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE			
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total (37 CFR 1.16(i))	*	Minus **	=	x =	OR	x =		
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =	OR	x =		
	Application Size Fee (37 CFR 1.16(s))					OR			
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR			
			TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.									



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :C46575

Sale Accounting Date:02/03/2021

Sale Item Reference Number
16934392

Effective Date
02/01/2021

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I202123F33291052	2254	EXTENSION FOR RESPONSE WITHIN 4TH MONTH	\$1,160.00	Deposit Account

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel	Confirmation No.:	2603
Serial No.:	16/934,392	Art Unit:	2876
Filed:	July 21, 2020	Examiner:	Not yet assigned
For:	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS	Attorney Docket No:	104402-5043-US

**RESPONSE TO THE NOTICE TO FILE MISSING PARTS
OF NONPROVISIONAL APPLICATION
WITH PETITION FOR EXTENSION OF TIME**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Notice to File Missing Parts mailed July 30, 2020, enclosed is the Notice to File Missing Parts of Nonprovisional Application for the above-identified application.

An Application Data Sheet was submitted with the application and no changes need to be made.

Also enclosed please find a Fee Transmittal Form setting forth the calculation for the statutory basic filing, search and examination fees, together with the surcharge due in this matter. The fees calculated for the statutory basic filing, search and examination fees together with the surcharge are \$910.

Petition for Extension of Time under 37 CFR 1.136. It is respectfully requested that the time for response to the Notice to File Missing Parts dated July 30, 2020 be extended for a period of four (4) months from September 30, 2020 to January 30, 2021 (January 30, 2021 fell on a Saturday).

Payment has been made via Financial Manager, however, the Director is hereby authorized to charge any required fees to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104402-5043-US).

Respectfully submitted,

Date: February 1, 2021

/Douglas J. Crisman/ 39,951
Douglas J. Crisman (Reg. No.)
MORGAN, LEWIS & BOCKIUS LLP
1400 Page Mill Road
Palo Alto, CA 94304
(650) 843-4000



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/934,392	07/21/2020	Paresh K. Patel	104402-5043-US

CONFIRMATION NO. 2603

FORMALITIES LETTER



24341
Morgan, Lewis & Bockius LLP (PA)
1400 Page Mill Road
Palo Alto, CA 94304-1124

Date Mailed: 07/30/2020

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
- The application search fee must be submitted.
- The application examination fee must be submitted.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.

The surcharge is due for any one of:

- late submission of the basic filing fee, search fee, or examination fee,
- late submission of inventor's oath or declaration,
- filing an application that does not contain at least one claim on filing, or
- submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. Small entity discount is in effect. If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- \$ 75 basic filing fee.
- \$ 80 surcharge.
- \$ 330 search fee.
- \$ 380 examination fee.
- \$(0) previous unapplied payment amount.
- \$ 865 TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice".
<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/jmilani/

<p style="text-align: center;">UTILITY PATENT APPLICATION FEE TRANSMITTAL</p> <p><i>(Only for new nonprovisional applications under 37 CFR § 1.53(b))</i></p>	Attorney Docket No.		104402-5043-US
	First Inventor		Paresh K. Patel
	Title		METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS
	Electronically filed		February 1, 2021

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BASIC FILING, SEARCH AND EXAMINATION FEES - Undiscounted

Application Type	Filing Fees	Search Fees	Examination Fees	Fees Paid (\$)
Utility	\$ 80	\$ 350	\$ 400	\$ 830

EXCESS CLAIM FEES

Type	No. Filed	Less	Extra	Extra Rate (\$)	Fee (\$)
Total Claims	20	- 20	0	\$ 100 each	\$0
Independent	3	- 3	0	\$ 480 each	\$0
				Multiple Dependency Fee If Applicable (\$860)	\$0

APPLICATION SIZE FEE (Specification and Drawings)

Total Sheets	Extra Sheets	No. of each add'l 50 or fraction thereof	Fee (\$)
93 x .75 - 100	0 / 50	0 (round up to whole no.) x \$420	\$0

Sub Total	\$830
Surcharge	\$ 80
TOTAL FILING FEE	\$910

Payment has been made via Financial Manager, however, the Director is hereby authorized to charge any required fees to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104402-5043-US).

Respectfully submitted,

Date: February 1, 2021

/Douglas J. Crisman/
Douglas J. Crisman
MORGAN, LEWIS & BOCKIUS LLP
1400 Page Mill Road
Palo Alto, CA 94304
(650) 843-4000

39,951
(Reg. No.)

Electronic Patent Application Fee Transmittal

Application Number:	16934392			
Filing Date:	21-Jul-2020			
Title of Invention:	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS			
First Named Inventor/Applicant Name:	Paresh K. Patel			
Filer:	Douglas James Crisman/Linda Quintana			
Attorney Docket Number:	104402-5043-US			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	80	80
UTILITY SEARCH FEE	2111	1	350	350
UTILITY EXAMINATION FEE	2311	1	400	400
Pages:				
Claims:				
Miscellaneous-Filing:				
LATE FILING FEE FOR OATH OR DECLARATION	2051	1	80	80
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				910

Electronic Acknowledgement Receipt

EFS ID:	41806007
Application Number:	16934392
International Application Number:	
Confirmation Number:	2603
Title of Invention:	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS
First Named Inventor/Applicant Name:	Paresh K. Patel
Customer Number:	24341
Filer:	Douglas James Crisman/Linda Quintana
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104402-5043-US
Receipt Date:	01-FEB-2021
Filing Date:	21-JUL-2020
Time Stamp:	19:36:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$910
RAM confirmation Number	E202121J36346326
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Response to Pre-Exam Formalities Notice	104402-5043-US_ResponseToNTFMP.pdf	131632	no	2
			179b2749842e611b532483de6372f1336b9e8b70		
Warnings:					
Information:					
2	Applicant Response to Pre-Exam Formalities Notice	104402-5043-US_CopyofNTFMP.pdf	67638	no	2
			597316b0fe4c6099f1e4f5f437022f9cbf552680		
Warnings:					
Information:					
3	Fee Worksheet (SB06)	104402-5043-US_FeeWorksheet.pdf	155621	no	1
			86534931fa83a2af7da4bca0ded58ae818f403b7		
Warnings:					
Information:					
4	Preliminary Amendment	104402-5043-US_PreliminaryAmendment.pdf	157602	no	8
			8875155e5c1c7a5f15a65d66ed68ff0d22ac2185		
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	37318	no	2
			08dbdc2d365d1b6ed323af91c97476d5dd867e41		
Warnings:					
Information:					
Total Files Size (in bytes):			549811		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronically filed February 1, 2021

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel et al.	Confirmation No.:	2603
Serial No.:	16/934,392	Art Unit:	2876
Filed:	July 21, 2020	Examiner:	To be assigned
For:	<i>Method and System for Performing Mobile Device-To- Machine Payments</i>	Atty. Docket No.:	104402-5043-US

PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The enclosed is a Preliminary Amendment for the above identified patent application.

The Commissioner is hereby authorized to charge any required fee(s) to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104402-5043-US).

IN THE CLAIMS:

Rewrite the pending claims and add new claims as follows:

1. (Canceled)
2. (New) A method of payment processing, the method comprising:
 - at a mobile device with one or more processors, memory, and a communications unit, and prior to user selection of any items or services provided by an automatic retail machine:
 - receiving via the communications unit a transmission from an electronic payment device of the automatic retail machine, the transmission including a request to preemptively obtain authorization to make funds available for a cashless transaction with the automatic retail machine;
 - sending, to a server, the request via the communications unit of the mobile device;
 - in response to sending the request to the server, obtaining from the server an authorization grant of an amount of funds for use in conjunction with the cashless transaction with the automatic retail machine;
 - detecting, by an application executing on the mobile device, a trigger condition to perform the cashless transaction with the automatic retail machine; and
 - in response to detecting the trigger condition, sending to the electronic payment device the authorization grant to enable completion of the cashless transaction at the automatic retail machine.
3. (New) The method of claim 2, wherein:
 - the transmission at least includes authorization zone threshold criterion; and
 - after receiving the transmission, initiating a handshake process with the electronic payment device, wherein the handshake process includes:
 - sending, to the electronic payment device, mobile device information corresponding to the mobile device via a first transceiver of the mobile device; and
 - receiving, from the electronic payment device, electronic payment device information, wherein the electronic payment device information at least includes an identifier corresponding to the electronic payment device.

4. (New) The method of claim 3, wherein sending the mobile device information comprises:
in accordance with a determination that the authorization zone threshold criterion is satisfied, sending the mobile device information to the electronic payment device via the first transceiver, wherein the mobile device information indicates that the authorization zone threshold criterion is satisfied; and
wherein the mobile device obtains the request in response to sending the mobile device information.
5. (New) The method of claim 3, wherein the electronic payment device information further includes an indication that hands-free mode is available and payment zone threshold criterion.
6. (New) The method of claim 5, wherein the mobile device information further includes device identification information corresponding to a model type of the mobile device; and
wherein the payment zone threshold criterion is based at least in part on the device identification information.
7. (New) The method of claim 5, wherein detecting the trigger condition comprises:
determining whether the payment zone threshold criterion is satisfied; and
in accordance with a determination that the payment zone threshold criterion is satisfied, detecting the trigger condition without user input from a user at the mobile device.
8. (New) The method of claim 2, wherein detecting the trigger condition comprises:
detecting a user input from a user of the mobile device; and
in response to detecting the user input, detecting the trigger condition to perform the cashless transaction with the automatic retail machine.
9. (New) The method of claim 2, further comprising:
in response to obtaining the authorization grant, presenting a notification to a user of the mobile device indicating (i) a connection has been established with the electronic payment device, and (ii) the amount of funds for the transaction.
10. (New) The method of claim 2, wherein the authorization grant includes an identifier corresponding to the electronic payment device, an identifier corresponding to the mobile device,

an amount of funds, an authorization grant token, and an expiration period for the authorization grant token.

11. (New) The method of claim 10, wherein at least a portion of the request and the authorization grant token are encrypted with a unique encryption key corresponding to the electronic payment device.

12. (New) The method of claim 2, wherein the automated retail machine is a vending machine, a parking meter, a toll booth, a laundromat washer or dryer, an arcade game, a kiosk, a photo booth, a toll booth, or a transit ticket dispensing machine.

13. (New) A mobile device, comprising:

- a first transceiver corresponding to a short-range communication mode, and a second transceiver, distinct from the first transceiver, corresponding to a long-range communication mode distinct from the short-range communication mode;

- one or more processors; and

- memory storing one or more programs to be executed by the one or more processors, the one or more programs comprising instructions for, prior to user selection of any items or services provided by an automatic retail machine:

- receiving via the communications unit a transmission from an electronic payment device of the automatic retail machine, the transmission including a request to preemptively obtain authorization to make funds available for a cashless transaction with the automatic retail machine;

- sending, to a server, the request via the communications unit of the mobile device;

- in response to sending the request to the server, obtaining from the server an authorization grant of an amount of funds for use in conjunction with the cashless transaction with the automatic retail machine;

- detecting, by an application executing on the mobile device, a trigger condition to perform the cashless transaction with the automatic retail machine; and

- in response to detecting the trigger condition, sending to the electronic payment device the authorization grant to enable completion of the cashless transaction at the automatic retail machine.

14. (New) The mobile device of claim 13, wherein
the transmission at least includes authorization zone threshold criterion; and
after receiving the transmission, initiating a handshake process with the electronic
payment device, wherein the handshake process includes:
 sending, to the electronic payment device, mobile device information at least
including user identification information corresponding to the user of the mobile device via the
first transceiver; and
 receiving, from the electronic payment device, electronic payment device
information, wherein the electronic payment device information at least includes an identifier
corresponding to the electronic payment device.
15. (New) The mobile device of claim 14, wherein sending the mobile device information
comprises:
 in accordance with a determination that the authorization zone threshold criterion is
satisfied, sending the mobile device information to the electronic payment device via the first
transceiver, wherein the mobile device information indicates that the authorization zone
threshold criterion is satisfied; and
 wherein the mobile device obtains the request in response to sending the mobile device
information.
16. (New) The mobile device of claim 14, wherein the electronic payment device information
further includes an indication that hands-free mode is available and payment zone threshold
criterion.
17. (New) The mobile device of claim 16, wherein the mobile device information further
includes device identification information corresponding to a model type of the mobile device;
and
 wherein the payment zone threshold criterion is based at least in part on the device
identification information.
18. (New) The mobile device of claim 16, wherein detecting the trigger condition comprises:
determining whether the payment zone threshold criterion is satisfied; and

in accordance with a determination that the payment zone threshold criterion is satisfied, detecting the trigger condition without user input from a user at the mobile device.

19. (New) The mobile device of claim 13, wherein detecting the trigger condition comprises: detecting a user input from a user of the mobile device; and in response to detecting the user input, detecting the trigger condition to perform the cashless transaction with the automatic retail machine.

20. (New) A non-transitory computer readable storage medium storing one or more programs, the one or more programs comprising instructions, which, when executed by a mobile device with one or more processors and a first transceiver corresponding to a short-range communication mode, and a second transceiver, distinct from the first transceiver, corresponding to a long-range communication mode distinct from the short-range communication mode, cause the mobile device to perform operations comprising:

prior to user selection of any items or services provided by an automatic retail machine: receiving via the first transceiver a transmission from an electronic payment device of the automatic retail machine, the transmission including a request to preemptively obtain authorization to make funds available for a cashless transaction with the automatic retail machine;

sending, to a server, the request via the second transceiver of the mobile device; in response to sending the request to the server, obtaining from the server an authorization grant of an amount of funds for use in conjunction with the cashless transaction with the automatic retail machine;

detecting, by an application executing on the mobile device, a trigger condition to perform the cashless transaction with the automatic retail machine; and

in response to detecting the trigger condition, sending to the electronic payment device the authorization grant to enable completion of the cashless transaction at the automatic retail machine.

21. (New) The non-transitory computer readable storage medium of claim 20, wherein the transmission at least includes authorization zone threshold criterion; and

after receiving the transmission, initiating a handshake process with the electronic payment device, wherein the handshake process includes:

sending, to the electronic payment device, mobile device information at least including user identification information corresponding to the user of the mobile device via the first transceiver; and

receiving, from the electronic payment device, electronic payment device information, wherein the electronic payment device information at least includes an identifier corresponding to the electronic payment device.

Claim Amendments

Claim 1 has been canceled. Claims 2-21 are new. No new matter has been added. After entry of this amendment, claims 2-21 are pending.

Concluding Remarks

In light of the above amendments, the Applicants respectfully request that the Examiner consider this application with a view towards allowance. The Examiner is invited to call the undersigned attorney at (650) 843-4000, if a telephone call could help resolve any remaining items.

Respectfully submitted,

Date: February 1, 2021

/Douglas J. Crisman/

39,951

Douglas J. Crisman

(Reg. No.)

MORGAN, LEWIS & BOCKIUS LLP

1400 Page Mill Road

Palo Alto, CA 94304

(650) 843-4000

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 16/934,392				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	75		N/A				
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	330		N/A				
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	380		N/A				
TOTAL CLAIMS (37 CFR 1.16(j))	1	minus 20 = *	x 50 =	0.00	OR					
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1	minus 3 = *	x 230 =	0.00						
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00						
			TOTAL	785		TOTAL				
* If the difference in column 1 is less than zero, enter "0" in column 2.										
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.										



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/934,392	07/21/2020	Paresh K. Patel	104402-5043-US

CONFIRMATION NO. 2603

FORMALITIES LETTER



OC000000118812718

Date Mailed: 07/30/2020

24341
Morgan, Lewis & Bockius LLP (PA)
1400 Page Mill Road
Palo Alto, CA 94304-1124

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
- The application search fee must be submitted.
- The application examination fee must be submitted.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.

The surcharge is due for any one of:

- late submission of the basic filing fee, search fee, or examination fee,
- late submission of inventor's oath or declaration,
- filing an application that does not contain at least one claim on filing, or
- submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. Small entity discount is in effect. If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- \$ 75 basic filing fee.
- \$ 80 surcharge.
- \$ 330 search fee.
- \$ 380 examination fee.
- \$(0) previous unapplied payment amount.
- \$ 865 TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
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Alexandria VA 22313-1450

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<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

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Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/jmilani/



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/934,392	07/21/2020	2876	0.00	104402-5043-US	1	1

CONFIRMATION NO. 2603

24341

Morgan, Lewis & Bockius LLP (PA)
1400 Page Mill Road
Palo Alto, CA 94304-1124

FILING RECEIPT



0000000118812717

Date Mailed: 07/30/2020

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Paresh K. Patel, Portland, OR;

Applicant(s)

PAYRANGE INC., Portland, OR;

Power of Attorney: The patent practitioners associated with Customer Number 24341

Domestic Priority data as claimed by applicant

This application is a CON of 15/406,492 01/13/2017 PAT 10719833
which is a CON of 14/335,762 07/18/2014 PAT 9547859
which is a CON of 14/214,644 03/14/2014 PAT 8856045
which claims benefit of 61/917,936 12/18/2013
and is a CIP of 29/477,025 12/18/2013 PAT D755183

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 07/29/2020

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/934,392**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

Preliminary Class

235

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

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Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

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Alexandria, VA 22313-1450

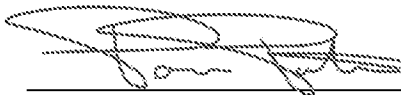
I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint the practitioners of Morgan, Lewis & Bockius LLP, Customer Number **24341** as attorneys or agents to represent the undersigned and to transact all business before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications and patents assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 C.F.R. § 3.73(c), said appointment to be to the exclusion of the inventor(s) and their attorney(s) in accordance with the provisions of 37 C.F.R. § 3.71, provided that, if any one of these attorneys ceases being affiliated with the law firm of Morgan, Lewis & Bockius LLP as partner, counsel, or employee, then the appointment of that attorney and all powers derived therefrom shall terminate on the date such attorney ceases being so affiliated.

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SIGNATURE of Assignee of Record

The undersigned whose signature and title is supplied below is authorized to act on behalf of the assignee.

Signature			
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A copy of this form, together with a statement under 37 C.F.R. § 3.73(c) (Form PTO/SB96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 C.F.R. § 3.73(c) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee and must identify the application in which this Power of Attorney is to be filed.

Electronic Acknowledgement Receipt

EFS ID:	40061114
Application Number:	16934392
International Application Number:	
Confirmation Number:	2603
Title of Invention:	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS
First Named Inventor/Applicant Name:	Paresh K. Patel
Customer Number:	24341
Filer:	Douglas James Crisman/Linda Quintana
Filer Authorized By:	Douglas James Crisman
Attorney Docket Number:	104402-5043-US
Receipt Date:	21-JUL-2020
Filing Date:	
Time Stamp:	14:14:45
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal of New Application	104402-5043-US_Transmittal.pdf	163333 f8527a9fa3969729a715c37c98d0cb47597d516a	no	1

Warnings:

Information:					
2		104402-5043-US_Specification.pdf	305852 bf907d05b8c4924ce804bedc1d4aba0e69be555c	yes	49
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	47	
	Claims		48	48	
	Abstract		49	49	
Warnings:					
Information:					
3	Drawings-only black and white line drawings	104402-5043-US_Figures.pdf	6824092 86a9533d77e4d7826c6248fa919848a6463e1a50	no	44
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
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4	Oath or Declaration filed	104402-5043-US_FullyExecutedDeclarations.pdf	72777 1607dcd321ef918f5b8da8029ac73c0fa7088128	no	1
Warnings:					
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5	Application Data Sheet	104402-5043-US_ADS.pdf	110086 94559edcf5678785cf495baaf73bc16071fbcd0b	no	7
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
6	Assignee showing of ownership per 37 CFR 3.73	104402-5043-US_373c.pdf	108227 34f0471697f356f98e127974496b1840c2f24e28	no	1
Warnings:					
Information:					

7	Power of Attorney	PAYRANGE_POA_373c.pdf	134105	no	1
			b582636fe21578c00bac318cf732886478d051a6		

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Information:

Total Files Size (in bytes):	7718472
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR § 1.53(b))</i>		Attorney Docket No. 104402-5043-US	
		First Inventor	Paresh K. Patel
		Title	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS
		Electronically filed	July 21, 2020
APPLICATION ELEMENTS <i>See MPEP Chapter 600 concerning utility patent application contents.</i>		Address to: Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450	
1. ☐ Fee Transmittal Form <i>(with duplicate for fee processing)</i> 2. ☒ Applicant claims Small Entity status, see 37 C.F.R. § 1.27 3. ☒ Specification [Total Pages 49] 4. ☒ Drawing(s) (35 USC § 113) [Total Sheets 44] 5. ☒ Oath or Declaration [Total Pages 1] a. ☐ Newly executed <i>(original or copy)</i> b. ☒ Copy from a prior application (37 CFR § 1.63(d)) 6. ☒ Application Data Sheet, see 37 C.F.R. § 1.76 7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program <i>(Appendix)</i> ☐ Landscape Table on CD 8. ☐ Nucleotide and/or Amino Acid Sequence Submission <i>(if applicable, all necessary)</i> a. ☐ Computer Readable Form (CRF) b. ☐ Specification Sequence Listing on i. ☐ CD-ROM or CD-R (2 copies); or ii. ☐ Paper c. ☐ Statement verifying identity of above copies		ACCOMPANYING APPLICATION PARTS	
		9. ☐ Assignment Papers <i>(cover sheet & document(s))</i> Name of Assignee: 10. ☒ 37 CFR § 3.73(c) Statement a. ☒ Power of Attorney 11. ☐ English Translation Document <i>(if applicable)</i> 12. ☐ Information Disclosure Statement and PTO-1449 a. ☐ Copies of citations attached 13. ☐ Preliminary Amendment 14. ☐ Return Receipt Postcard <i>(MPEP 503)</i> 15. ☐ Certified Copy of Priority Document(s) <i>(if foreign priority is claimed)</i> 16. ☐ Non-Publication Request under 35 U.S.C. § 122 (b)(2)(B)(i) 17. ☐ Other:	
Note: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 MUST be included in an Application Data Sheet (ADS). (2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).			
19. CORRESPONDENCE ADDRESS: Customer Number 24341			
Signature	/Douglas J. Crisman/	Date	July 21, 2020
Name (Print/Type)	Douglas J. Crisman	Registration No. (Attorney/Agent)	39,951

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

PRIORITY CLAIM

[0001] The present application is a continuation of U.S. Patent Application No. 15/406,492, filed January 13, 2017, which is a continuation of U.S. Patent Application No. 14/335,762, filed July 18, 2014, now U.S. Patent No. 9,547,859, issued on January 17, 2017, which is a continuation of U.S. Patent Application No. 14/214,644, filed March 14, 2014, now U.S. Patent No. 8,856,045, issued on October 7, 2014, which claims priority to U.S. Provisional Patent Application No. 61/917,936, filed December 18, 2013. U.S. Patent Application No. 14/214,644 is a continuation-in-part of U.S. Design Patent Application No. 29/477,025, filed December 18, 2013, now U.S. Patent No. D755,183, issued on May 3, 2016. The present application is based on and claims priority from these applications, the disclosures of which are hereby expressly incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] Disclosed herein are mobile-device-to-machine payment systems and, more specifically, mobile-device-to-machine payment systems over a non-persistent network connection and featuring hands-free and manual modes.

[0003] Vending machines (or “automatic retailing” machines), in the broadest sense, have been around for thousands of years. The first simple mechanical coin operated vending machines were introduced in the 1880s. Modern vending machines stock many different types of products including, but not limited to drinks (e.g. water, juice, coffee, and soda) and edible food products/items (e.g. snacks, candy, fruit, and frozen meals), as well as a wide variety of non-food items. In this fast paced world, vending machines are ubiquitous.

[0004] Vending machines are one type of “payment accepting unit” (payment accepting units are also referred to herein generically as “machines”). A payment accepting unit (or machine) is equipment that requires payment for the dispensing of products and/or services. In addition to vending machines, payment accepting units can also be other machines that require payment for the dispensing of a product and/or services including, but not limited to parking meters, toll booths, laundromat washers and dryers, arcade games,

kiosks, photo booths, toll booths, transit ticket dispensing machines, and other known or yet to be discovered payment accepting units.

[0005] In using a payment accepting unit, a user will (1) approach the payment accepting unit, (2) determine from the face of the payment accepting unit the product (or service) he desires, (3) insert payment (e.g. coins, bills, or payment cards), and (4) input his selection into the payment accepting unit using a user interface (e.g. a series of buttons, a key pad, touch screen, or other input mechanism using, for example, the column and row at which a product is located). Based on the user's inputted selection, technology within the payment accepting unit provides the desired product (or service) to the user.

[0006] As the number of people with internet-connected mobile devices proliferates, so does the variety of uses for such devices. Mobile payment is a logical extension.

[0007] There is a large development effort around bringing mobile payment to the retail sector in an effort to not only provide options to the user, but also increased convenience.

[0008] In recent years, many improvements to modern vending machines have been suggested. Many of the innovations relate to means for communicating with the vending machine. Some of these communication innovations are detailed in U.S. Patent No. 6,584,309 to Whigham (the "Whigham reference"), U.S. Patent No. 7,085,556 to Offer (the "Offer reference"), U.S. Patent No. 7,127,236 to Khan et al. (the "Khan reference"), U.S. Patent No. 7,721,958 to Belfer et al. (the "Belfer reference"), U.S. Patent No. 8,396,589 to Katzenstein Garibaldi et al. (the "Garibaldi reference"), U.S. Patent No. 8,489,140 to Weiner et al. (the "Weiner reference"), and International Publication No. WO/2008/083025 to Carlson (the "Carlson reference").

[0009] The Whigham reference is directed to a system and method for purchasing a product from an automatic vending machine by means of a consumer's cellular telephone. The consumer requests a product available from the vending machine by dialing a specified telephone number that connects the consumer's cellular telephone to a server operated by a billing agency. The server recognizes the request for the product, creates a transaction record, and communicates a vend code to the consumer. Upon receiving the vend code from the server, the consumer transmits the vend code to the vending machine. The vend code may be an RF code, an audible tone code, or a manual code. Upon receipt of the vend code from the consumer, the vending machine dispenses the requested product.

[0010] The Offer reference is directed to a vending machine that is designed to communicate with a cellular phone such that it dispenses a product when it receives information indicating that the product has been selected. The Offer reference teaches permitting the cashless utilization of a vending machines via a communications service, such as a cellular telephone. A response to a signal from the cellular telephone from

[0011] the vending machine that indicates that a connection has been established between the vending machine and the cellular phone may be a visual indication that is displayed on the cellular telephone. The vending machine outputs the cost of the product and that cost is debited from an account to pay for the product.

[0012] The Khan reference describes a point of sale MicroAdapter device that enables payment transactions to be effected through a purchaser's personal trusted device (e.g. the user selecting the micropayment application on his personal trusted device and confirming or cancelling the purchase thereon) without relying upon tokens or prepayment cards. In one embodiment, the MicroAdapter includes a transceiver configured to receive a purchase signal from the personal trusted device including order and payment information. In response, the MicroAdapter communicates via wireless telephony with a transaction authorizer to receive authorization for effectuating the purchase transaction. The MicroAdapter can effectuate micropayment transactions authorized by a Billing On Behalf of Others program administered through a wireless carrier/ISP or third party.

[0013] The Belfer reference is directed to a system wherein a vending machine has an audio code collector and a code validator that is adapted to receive audio tones from a mobile device. The audio tones include authentication codes and dispense codes to control dispensing of product from the vending machine. To start the transaction, the consumer dials a unique set of symbols and digits to route the call to a verification server. The symbols and digits may correspond to a unique vending machine identification number and product identification numbers.

[0014] The Garibaldi reference is directed to an electronic device for the sale of intangible products through vending machines that include interfaces to communicate with external peripherals through the MDB protocol, the RS232 standard, and the DEX protocol, an interface to communicate with users, a communications system that enables it to act as part of a network and communicate with a central system, and a controller, that articulates the

communication among the above-mentioned components, so as to enable a central system to perform diverse actions on a vending machine.

[0015] The Weiner reference is directed to a system and method for providing product or service with a cellular telephone. The problem identified in the Weiner reference is that mobile communication devices are long-range electronic devices designed to be used for long-range communications. Eschewing the use of near- field communication because it requires special design or modification of the mobile station (e.g. the vending machine), the Weiner reference teaches a mobile communication device identifier, consisting of: a shielding defining a coverage area, the shielding arranged to reduce radio signals originating externally of the coverage area to be less than a pre-determined signal strength; an antenna associated within the defined coverage area; a transceiver coupled to the antenna, the transceiver communicating with a mobile station inserted within the defined coverage area utilizing a signal strength greater than the pre-determined signal strength; and a service control unit responsive to the transceiver, the service control unit responsive to the communication to output a signal indicative of an authorization to provide a product or service.

[0016] The Carlson reference is directed to a system and a method for using a portable consumer device such as a mobile phone for payments and the like. One embodiment of the Carlson system is directed to a method that includes the steps of receiving a payment request message (that includes a request to pay for a product from a vending machine) from a portable consumer device operated by a consumer, sending an authorization response message back to the vending machine wherein the vending machine subsequently prompts the consumer to enter a selection if the authorization response message indicates that the consumer is authorized to make a purchase, and receiving an acknowledgement message from the vending machine that the product was purchased. The step of “sending an authorization response message back to the vending machine” is performed by a remote payment server and would require a persistent network connection.

BRIEF SUMMARY OF THE INVENTION

[0017] Disclosed herein are mobile-device-to-machine payment systems and, more specifically, mobile-device-to-machine payment systems over a non-persistent network connection and featuring hands-free and manual modes.

[0018] Described herein is a mobile-device-to-machine payment system for facilitating a cashless transaction for purchase of at least one product or service by a user from a payment accepting unit that preferably has input mechanisms. The user has a mobile device that has both short-range communication technology and long-range communication technology. The payment accepting unit is capable of dispensing at least one product or service. The system includes an adapter module and a server. The adapter module is associated with the payment accepting unit and has short-range communication technology for communicating with the short-range communication technology of the mobile device. The server has long-range communication technology for communicating with the long-range communication technology of the mobile device. The adapter module is for sending an authorization request for funds to the mobile device using short-range communication technology. The mobile device then forwards the authorization request for funds to the server using long-range communication technology. The server is for sending an authorization grant for funds to the mobile device using long-range communication technology. The mobile device then forwards the authorization grant for funds to the adapter module using short-range communication technology. The payment accepting unit dispenses the at least one product or service in response to receiving user input to the payment accepting unit input mechanism if the adapter module has received the authorization grant.

[0019] The adapter module may have security technology and the server may have security technology. The authorization request may be secured by the adapter module security technology to create a secured authorization request. The authorization grant may be secured by the server security technology to create a secured authorization grant. The secured authorization request and the secured authorization grant are preferably undecipherable to the mobile device.

[0020] The adapter module and the server may share a unique private key. The adapter module may have encryption/decryption technology and the server may have encryption/decryption technology. The authorization request may be encrypted by the adapter module encryption/decryption technology using the unique private key to create an encrypted authorization request. The encrypted authorization request may be decrypted by the server encryption/decryption technology using the unique private key. The authorization grant may be encrypted by the server encryption/decryption technology using the unique private key to create an encrypted authorization grant. The encrypted authorization grant may be decrypted by the adapter module encryption/decryption technology using the unique

private key. The encrypted authorization request and the encrypted authorization grant are preferably undecipherable to the mobile device.

[0021] The adapter module is preferably surrounded by two zones, a payment zone and an authorization zone, wherein the payment zone is within the authorization zone. The adapter module sends the authorization request when the mobile device is within the authorization zone. The mobile device forwards the authorization grant for funds to the adapter module when the mobile device is within the payment zone. A third zone possible zone is a communication zone, the authorization zone being within the communication zone. The mobile device preferably receives advertising broadcast signals from the adapter module within the communication zone.

[0022] The system may have a hands-free mode in which the payment accepting unit dispenses the at least one product or service without the user interacting with the mobile device. A display of the payment accepting unit may be used for displaying funds available based on information from the authorization grant. The input mechanisms of the payment accepting unit may be used for receiving user selection input when the user interacts with the input mechanisms to select the at least one product or service to be dispensed.

[0023] The adapter module may be an in-line dongle for in-line insertion within a multi-drop bus of the payment accepting unit. Further, the payment accepting unit may have a multi-drop bus to a payment receiving mechanism. The multi-drop bus may have a male adapter and a female adapter. The adapter module may have a male adapter and a female adapter. The adapter module is preferably insertable in serial with the multi-drop bus by connecting the male adapter of the adapter module to the female adapter of the multi-drop bus and by connecting the female adapter of the adapter module to the male adapter of the multi-drop bus.

[0024] Also described herein is a method for using a mobile-device-to-machine payment system for facilitating a cashless transaction for purchase of at least one product or service by a user from a payment accepting unit may have input mechanisms. The user may have a mobile device having both short-range communication technology and long-range communication technology. The payment accepting unit is preferably capable of dispensing at least one product or service. The method includes the steps of: (a) sending an authorization request for funds to the mobile device using short-range communication technology of an adapter module associated with the payment accepting unit; (b) receiving

the authorization request for funds from the short-range communication technology of the adapter module at the short-range communication technology of the mobile device; (c) forwarding the authorization request for funds to a server using the long-range communication technology of the mobile device; (d) receiving the authorization request for funds from the long-range communication technology of the mobile device at long-range communication technology of the server; (e) sending an authorization grant for funds to the mobile device using the long-range communication technology of the server; (f) receiving the authorization grant for funds from long-range communication technology of the server at the long-range communication technology of the mobile device; (g) forwarding the authorization grant for funds to the adapter module using the short-range communication technology of the mobile device; and (h) receiving the authorization grant for funds from the short-range communication technology of the mobile device at short-range communication technology of the adapter module. At least one product or service may then be dispensed from the payment accepting unit in response to receiving user input to the payment accepting unit input mechanism if the adapter module has received the authorization grant.

[0025] The method may include the steps of securing the authorization request using security technology associated with the adapter module to create a secured authorization request, securing the authorization grant using security technology associated with the server to create a secured authorization grant, and the secured authorization request and the secured authorization grant are preferably undecipherable to the mobile device.

[0026] The method may include the steps of (a) sharing a unique private key between the adapter module and the server, (b) encrypting using the unique private key the authorization request using encryption/decryption technology associated with the adapter module to create an encrypted authorization request, (c) decrypting using the unique private key the encrypted authorization request using encryption/decryption technology associated with the server, (d) encrypting using the unique private key the authorization grant using the encryption/decryption technology associated with the server to create an encrypted authorization grant, (e) decrypting using the unique private key the encrypted authorization grant using encryption/decryption technology associated with the adapter module, and (e) the encrypted authorization request and the encrypted authorization grant are preferably undecipherable to the mobile device.

[0027] The method may include the steps of (a) surrounding the adapter module with two zones, a payment zone and an authorization zone, wherein the payment zone is within the

authorization zone, (b) the adapter module sending the authorization request when the mobile device is within the authorization zone; and (c) the mobile device forwarding the authorization grant for funds to the adapter module when the mobile device is within the payment zone. The adapter module may also include a third zone, a communication zone, wherein the authorization zone is within the communication zone. The mobile device receives advertising broadcast signals from the adapter module within the communication zone.

[0028] The method may have a hands-free mode in which the payment accepting unit dispenses the at least one product or service without the user interacting with the mobile device. The method may further include the steps of (a) displaying funds available on a display of the payment accepting unit, the funds available may be based on information from the authorization grant; and (b) receiving user selection input when the user interacts with input mechanisms of the payment accepting unit to select the at least one product or service to be dispensed.

[0029] The method may include the step of inserting the adapter module as an in-line dongle for in-line insertion within a multi-drop bus of the payment accepting unit. The method may include the step of inserting the adapter module in serial with the multi-drop bus by connecting a male adapter of the adapter module to a female adapter of the multi-drop bus and by connecting a female adapter of the adapter module to a male adapter of the multi-drop bus.

[0030] The subject matter described herein is particularly pointed out and distinctly claimed in the concluding portion of this specification. Objectives, features, combinations, and advantages described and implied herein will be more readily understood upon consideration of the following detailed description of the invention, taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0031] FIG. 1 is a schematic diagram that shows three zones: a first “communication zone” (e.g. “Bluetooth range”), a second “authorization zone,” and a third “payment zone.” The payment zone (that can’t be zero) is smaller than or equal to (overlapping completely) the authorization zone.

[0032] FIG. 2 is a schematic diagram that shows the three zone of FIG. 1 with multiple users therein, the mobile-device-to-machine payment systems providing for managing and resolving multiple users.

[0033] FIG. 3 is a table that illustrates the hands-free credit or alert user principle.

[0034] FIG. 4 is a flow chart showing the logging RSSI at User Input.

[0035] FIG. 5 is a block schematic that shows elements of the system including, but not limited to, the adapter module, the machine, the mobile device, and exemplary servers, as well as communications therebetween.

[0036] FIG. 6 is a block schematic that shows there are three areas of encryption used (each is bi-directional) between the adapter module, the machine, the mobile device, and/or exemplary servers.

[0037] FIG. 7 is a block diagram that communications, messaging, vending sequence, and purchase flow between the adapter module, the mobile device, and a system management server.

[0038] FIG. 8A is a timing schematic diagram that shows additional elements and features of the system including, but not limited to, communications medium, messaging, vending sequence, and purchase flow, when the user enters the communication zone (Bluetooth Range).

[0039] FIG. 8B is a timing schematic diagram that shows additional elements and features of the system including, but not limited to, communications medium, messaging, vending sequence, and purchase flow, when the user enters the Authorization Zone.

[0040] FIG. 8C is a timing schematic diagram that shows additional elements and features of the system including, but not limited to, communications medium, messaging, vending sequence, and purchase flow, when the user enters the Payment Zone and, in particular, detailing the hands-free mode alternative and the swipe mode alternative.

[0041] FIG. 8D is a timing schematic diagram that shows additional elements and features of the system including, but not limited to, communications medium, messaging, vending sequence, and purchase flow, in a vending transaction including a loop for multiple transactions.

[0042] FIG. 8E is a timing schematic diagram that shows additional elements and features of the system including, but not limited to, communications medium, messaging, vending sequence, and purchase flow, in the Login mode.

[0043] FIG. 8F is a timing schematic diagram that shows additional elements and features of the system including, but not limited to, communications medium, messaging, vending sequence, and purchase flow, during Module bootup.

[0044] FIG. 8G is a timing schematic diagram that shows additional elements and features of the system including, but not limited to, communications medium, messaging, vending sequence, and purchase flow, during Account Check/Update.

[0045] FIGS. 9A - 9E are flow charts that show exemplary steps and features of the system including, but not limited to, communications, messaging, vending sequence, and purchase flow.

[0046] FIGS. 10A - 10D show an exemplary mobile device with a graphical representation of an exemplary mobile application shown thereon, the mobile application being used as part of the mobile-device-to-machine payment systems.

[0047] FIG. 11 is a perspective view of the exemplary first preferred in-line dongle adapter module.

[0048] FIG. 12 is a front plan view of the in-line dongle adapter module of FIG. 11.

[0049] FIG. 13 is a back plan view of the in-line dongle adapter module of FIG. 11.

[0050] FIG. 14 is a side view of the in-line dongle adapter module of FIG. 11 in accordance with some implementations.

[0051] FIG. 15 is a first end view of a connector receptacle of the in-line dongle adapter module of FIG. 11.

[0052] FIG. 16 is a second end view of a connector receptacle of the in-line dongle adapter module of FIG. 11.

[0053] FIG. 17 is a perspective view taken from the first end of the in-line dongle adapter module of FIG. 11, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for environmental purposes.

[0054] FIG. 18 is a perspective view taken from the second end of the in-line dongle adapter module of FIG. 11, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for environmental purposes.

[0055] FIG. 19 is a perspective view of the in-line dongle adapter module of FIG. 11 within a vending machine.

[0056] FIG. 20 is a perspective view of the exemplary second preferred in-line dongle adapter module.

[0057] FIG. 21 is a front plan view of the in-line dongle adapter module of FIG. 20.

[0058] FIG. 22 is a back plan view of the in-line dongle adapter module of FIG. 20.

[0059] FIG. 23 is a first side view of the in-line dongle adapter module of FIG. 20, the second side being a mirror image of that shown.

[0060] FIG. 24 is a first end view of a connector receptacle of the in-line dongle adapter module of FIG. 20.

[0061] FIG. 25 is a second end view of a connector receptacle of the in-line dongle adapter module of FIG. 20.

[0062] FIG. 26 is a perspective view taken from the first end of the in-line dongle adapter module of FIG. 20, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for environmental purposes.

[0063] FIG. 27 is a perspective view taken from the second end of the in-line dongle adapter module of FIG. 20, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for environmental purposes.

[0064] FIG. 28 is a perspective view of the in-line dongle adapter module of FIG. 20 within a vending machine.

[0065] FIG. 29 is a perspective view of the exemplary third preferred in-line dongle adapter module with a gap indicating the in-line dongle adapter module can be of any length.

[0066] FIG. 30 is a front plan view of the in-line dongle adapter module of FIG. 29.

[0067] FIG. 31 is a back plan view of the in-line dongle adapter module of FIG. 29.

[0068] FIG. 32 is a first side view of the in-line dongle adapter module of FIG. 29, the second side being a mirror image of that shown.

[0069] FIG. 33 is a first end view of a connector receptacle of the in-line dongle adapter module of FIG. 29.

[0070] FIG. 34 is a second end view of a connector receptacle of the in-line dongle adapter module of FIG. 29.

[0071] FIG. 35 is a perspective view taken from the first end of the in-line dongle adapter module of FIG. 29, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for environmental purposes.

[0072] FIG. 36 is a perspective view taken from the second end of the in-line dongle adapter module of FIG. 29, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for environmental purposes.

[0073] FIG. 37 is a perspective view of the in-line dongle adapter module of FIG. 29 within a vending machine.

[0074] FIG. 38 is a perspective view of the exemplary fourth preferred in-line dongle adapter module with two vertical gaps indicating the in-line dongle adapter module can be of any width.

[0075] FIG. 39 is a front plan view of the in-line dongle adapter module of FIG. 38.

[0076] FIG. 40 is a back plan view of the in-line dongle adapter module of FIG. 38.

[0077] FIG. 41 is a first side view of the in-line dongle adapter module of FIG. 38, the second side being a mirror image of that shown.

[0078] FIG. 42 is a first end view of a connector receptacle of the in-line dongle adapter module of FIG. 38.

[0079] FIG. 43 is a second end view of a connector receptacle of the in-line dongle adapter module of FIG 38.

[0080] FIG. 44 is a perspective view taken from the first end of the in-line dongle adapter module of FIG. 38, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for environmental purposes.

[0081] FIG. 45 is a perspective view taken from the second end of the in-line dongle adapter module of FIG. 38, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for environmental purposes.

[0082] FIG. 46 is a perspective view of the in-line dongle adapter module of FIG. 38 within a vending machine.

[0083] FIG. 47 is a perspective view of the exemplary fifth preferred in-line dongle adapter module and, specifically, the longitudinal center portion thereof, the dashed line depiction of the sides indicating the sides of the in-line dongle adapter module can be of any shape or curvature.

[0084] FIG. 48 is a front plan view of the in-line dongle adapter module of FIG. 47.

[0085] FIG. 49 is a back plan view of the in-line dongle adapter module of FIG. 47.

[0086] FIG. 50 is a side view of the in-line dongle adapter module of FIG. 47 in accordance with some implementations.

[0087] FIG. 51 is a first end view of a connector receptacle of the in-line dongle adapter module of FIG. 47.

[0088] FIG. 52 is a second end view of a connector receptacle of the in-line dongle adapter module of FIG. 47.

[0089] FIG. 53 is a perspective view taken from the first end of the in-line dongle adapter module of FIG. 47, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for environmental purposes.

[0090] FIG. 54 is a perspective view taken from the second end of the in-line dongle adapter module of FIG. 47, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for environmental purposes.

[0091] FIG. 55 is a perspective view of the in-line dongle adapter module of FIG. 47 within a vending machine.

[0092] FIG. 56 is a block diagram of an exemplary adapter module.

[0093] FIG. 57 is a block diagram of an exemplary mobile device.

[0094] FIG. 58 is a block diagram of an exemplary server.

DETAILED DESCRIPTION OF THE INVENTION

[0095] Disclosed herein are mobile-device-to-machine payment systems and, more specifically, mobile-device-to-machine payment systems over a non-persistent network connection. The mobile-device-to-machine payment systems disclosed herein focus on the

unattended retail space (e.g. a payment accepting unit 120 or machine 120). More specifically, mobile-device-to-machine payment systems disclosed herein allow a user (having a mobile device 150 with a mobile application 140 thereon) to make a cashless purchase from a payment accepting unit 120 (having an adapter module 100 associated therewith).

[0096] The mobile-device-to-machine payment systems described herein can be implemented with one or more of the following features: easy installation feature, a non-persistent network connection feature; a manual (swipe to pay) mode feature; a hands-free mode feature; and a multiple vending transactions (multi-vend) feature.

[0097] Easy Installation: Installation is very easy, requires no tools, requires no configuration, and takes as little as 30 seconds. This is accomplished by using an adapter module 100 such as an in-line dongle (a hardware device with software thereon) design for in-line insertion within a multi-drop bus (MDB) of a payment accepting unit (e.g. a vending machine). Installation is as simple as “powering down” (turning off) the machine 120, identifying the “wire” that connects with a payment receiving mechanism (e.g. the coin mechanism), disconnecting the wire (so that there are two loose ends, such as a male connection end or adapter of an MDB and a female connection end or adapter of an MDB), plugging (inserting) the adapter module 100 in serial (“in-line”) with the wire (for example, connecting the MDB female adapter to a male adapter of the adapter module 100 and connecting the MDB male adapter to a female adapter of the adapter module 100), tucking the wire and the installed adapter module 100 back into position, and “powering up” (turning on) the machine 120. Most vending machines made since 1995 have this industry standard MDB technology that would allow this easy 30-second installation. On machines without MDB technology, the adapter module 100 can be configured or designed to work with other serial protocols or activate a switch. In essence the adapter module 100 simulates establishing payment on payment accepting unit 120 in much the same manner as other alternative forms of payment (e.g. cash).

[0098] Non-persistent Network Connection: Although payment accepting units (or “machines”) that accept only cash (e.g. paper currency and coins) may not require a connection (persistent or non-persistent) to a network, traditional payment accepting units that accept cashless payments (e.g. credit cards, debit cards, and alternative mobile device payment methods using, for example, smart phones) require a persistent connection to a network (wired or wireless) to facilitate the cashless payments. In other words, without a

persistent (ongoing or accessible on demand) network connection, traditional payment accepting units cannot accept cashless payments. Most traditional payment accepting units that accept cashless payments include the technology to accomplish this persistent network connection that allows them to connect to a remote server. If the network connection to a traditional machine is temporarily interrupted, cashless payments will be temporarily unavailable. If the machine is located in a location where no signal is available, cashless payments will not be possible. The Whigham reference, the Offer reference, and the Belfer reference disclose alternative payment accepting units that accept cashless payments by using the user's cellular phone to allow the user to manually input coding to a remote server and, thereby act as an on-demand bridge network connection. These references, however, require significant user interaction with the cellular telephone to effectuate the transaction. In addition to using a mobile device 150 as an intermediary between the payment accepting units 120 and the server 130, mobile-device-to-machine payment systems described herein minimize (manual mode) or eliminate (hands-free mode) user interaction with the mobile device 150. Further, some mobile-device-to-machine payment systems described herein facilitate the acceptance of cashless payments without requiring any network connection near the payment accepting unit 120. Mobile-device-to-machine payment systems described herein that are located in a remote location where no signal is available, therefore, can accept cashless payments.

[0099] Manual (Swipe to Pay) Mode: Using a “swipe to pay” feature (or just “swipe”) refers to a user's action implemented on his mobile device 150 in which he quickly brushes his finger (or other pre-determined interaction) on the mobile device's touch screen 152 (or other input device associated with the mobile device 150). From the user's perspective, when the user is within range, a pre-installed mobile application 140 automatically connects to the payment accepting unit 120 (e.g. a vending machine). The mobile application 140 might display (on the touch screen 152) a prepaid balance that the user “swipes” to transfer payment to the payment accepting unit 120. The user could observe the transferred funds on the touch screen 152 of the mobile device 150 and/or on the display 122, 124 of the payment accepting unit 120. The transaction is completed just as if cash was inserted in the machine 120 with the user inputting his selection on the payment accepting unit 120 and the payment accepting unit 120 dispensing the product or service. After the selection is made, the change is returned to the mobile device 150 and this may be shown on the touch screen 152 of the mobile device 150.

[00100] Hands-Free Mode: A “hands-free pay” feature (or just “hands-free”) would most likely be used with “favorite” payment accepting units 120 (e.g. a vending machine at work or school). From the user’s perspective, he would approach the favorite payment accepting unit 120 and notice that the display 122, 124 of the payment accepting unit 120 showed funds available, he would select the product or service using the payment accepting unit’s input mechanisms (e.g. buttons 126 or a touch screen display 124 shown in FIG. 19), and he would retrieve his dispensed services or products. It would be that simple. More specifically, when the user is within range, a pre-installed mobile application 140 automatically connects to the payment accepting unit 120 (e.g. a vending machine). The user may leave the mobile device 150 in a pocket, purse, briefcase, backpack, or other carrier. As the user approaches the payment accepting unit 120 and is in approximately “arms-length” distance (e.g. 3 to 5 feet), the user could observe the transferred funds on the display 122, 124 of the payment accepting unit 120. The transaction is completed just as if cash was inserted in the machine 120 with the user inputting his selection on the payment accepting unit 120 and the payment accepting unit 120 dispensing the product or service. After the selection is made, the change is returned to the mobile device 150. FIG. 3 details when the hands-free mode would be available.

[00101] Multiple Vending Transactions (Multi-Vend): Both the “swipe to pay” feature and the “hands-free pay” feature could be used multiple times in sequence (implemented, for example, as a loop) so that a user may make multiple purchases. After making his first selection and receiving his product (or service), the user would observe that additional funds were available on the display 122, 124 on the payment accepting unit 120. He could make another selection (or multiple selections) and receive additional product(s) (or service(s)). More specifically, the display 122, 124 may reset as if the transaction is complete, but then, because the user is still standing in range, the mobile application 140 would send another credit to the payment accepting unit 120, allowing for a second purchase. When the walks away, the system clears (e.g. returns unused funds to the mobile application 140 on the mobile device 150).

[00102] The features described above, alone or in combination with other features described herein will revolutionize the hundred billion dollar automated retail industry. The exemplary hardware is very low cost and there are no reoccurring fees because no cellular connection is required on the machine 120. Using the mobile-device-to-machine payment

systems described herein, operators can increase frequency of visits and items sold with each visit.

[00103] Mobile-device-to-machine payment systems described herein may be implemented as an apparatus and/or method for enabling payments to a machine 120 via a mobile device 150. Exemplary mobile-device-to-machine payment systems may be better understood with reference to the drawings, but the shown mobile-device-to-machine payment systems are not intended to be of a limiting nature.

Definitions

[00104] Before describing the mobile-device-to-machine payment systems and the figures, some of the terminology should be clarified. Please note that the terms and phrases may have additional definitions and/or examples throughout the specification. Where otherwise not specifically defined, words, phrases, and acronyms are given their ordinary meaning in the art. The following paragraphs provide some of the definitions for terms and phrases used herein.

- **Adapter Module 100:** As shown in FIGS. 1 and 2, the adapter module 100 is a physical device that is installed in a machine 120 (a payment accepting unit 120). The shown exemplary adapter module 100 is an in-line dongle (a hardware device with software thereon) device that may be inserted in-line within a multi-drop bus (MDB) of a machine 120. The adapter module 100 bridges the communication between the machine 120 and a mobile device 150. Although described as a unique component, it should be noted that the adapter module 100 could be implemented as a plurality of devices or integrated into other devices (e.g. components of a machine 120). In its unique component form, the adapter module 100 can be easily inserted into a machine 120 so that the machine 120 is able to perform new features with the assistance of the adapter module 100. FIG. 56 shows exemplary components associated with the adapter module 100. The shown example may be divided into multiple distinct components that are associated with each other or the example may be incorporated into or drawn from other technology (e.g. a computer or a payment accepting unit) as long as the components are associated with each other.

- Mobile Device 150 and Application 140 (also referred to as a “mobile application,” “mobile app,” or “app”): In general, a mobile device 150 may be a user’s personal mobile device 150. The mobile device 150 (with a mobile application 140 thereon) acts as a communication bridge between the adapter module 100 (associated with a payment accepting unit 120) and the server 130. The mobile device 150 and application 140, however, are not “trusted” in that the communications (transmissions) it passes are encrypted. Encrypted (secured) communications are undecipherable (unencryptable, unreadable, and/or unuseable) by the mobile device 150. This keeps the passed communications secured and safe from hacking. Exemplary mobile devices include, but are not limited to smart phones, tablet or laptop computers, or personal digital assistants (PDAs), smart cards, or other technology (e.g. a hardware-software combination) known or yet to be discovered that has structure and/or capabilities similar to the mobile devices described herein. The mobile device 150 preferably has an application 140 (app 140) running on it. The term “app” is used broadly to include any software program(s) capable of implementing the features described herein. FIGS. 10A-10D show exemplary mobile devices 150 with associated apps 140 associated therewith. It should be noted that the phrase “mobile device” can be assumed to include the relevant app unless specifically stated otherwise. Similarly, it should be noted that an “app” can be assumed to be running on an associated mobile device unless specifically stated otherwise. FIG. 57 shows exemplary components associated with the mobile device 150. The shown example may be divided into multiple distinct components that are associated with each other or the example may be incorporated into or drawn from other technology (e.g. the cell phone itself) as long as the components are associated with each other.
- Payment Accepting Unit 120 (or Machine 120): A payment accepting unit 120 (or machine 120) is equipment that requires payment for the dispensing of an product and/or service. Payment accepting units 120 may be vending machines, parking meters, toll booths, laundromat washers and dryers, arcade games, kiosks, photo booths, toll booths, transit ticket dispensing machines, and other known or yet to be discovered payment accepting units 120. Some

payment accepting units 120 can accept cashless payments (payments other than cash (paper currency and coins)) by accepting payment from, for example, credit cards, debit cards, and mobile devices.

- Network Connections: For purposes of this discussion, a persistent network connection is a wired or wireless communications connection that is ongoing (e.g. a dedicated connection, a dedicated online connection, and/or a hardwired connection) or accessible on demand (e.g. the ability for the machine to make a temporary connection to a server or the ability for the user to contact a server from his mobile device). Typically the persistent network connection has been conducted over “long-range communication technology” (e.g. hardwired, telephone network technology, cellular technology, WiFi technology, wide area network (WAN), local area network (LAN), or any wired or wireless communication technology over the internet that is known or yet to be discovered). Traditionally, machines that accept payment other than cash require a persistent (ongoing or accessible on demand) connection to a network to facilitate payment. This is true for machines that accept, for example, credit cards and debit cards. The payment accepting units 120 described herein do not require a traditional persistent network connection. The user’s mobile device 150 acts as a communication bridge between the adapter module 100 and the server 130. Communications between user mobile devices 150 and the servers (e.g. a system management server 130 and/or a funding source server 160) take place using long-range communication technology. Communications between user mobile devices 150 and the adapter module 100 of the payment accepting unit 120 take place using “short-range communication technology” (e.g. Bluetooth (e.g. Bluetooth 4.0, Bluetooth Smart, Bluetooth LE (Low Energy), near-field communication, Ultra Wideband (UWB), RFID, infrared wireless, induction wireless, or any wired or wireless technology that could be used to communicate a small distance (e.g. approximately a hundred feet or closer) that is known or yet to be discovered). Neither the adapter module 100 nor the payment accepting unit 120, therefore require a traditional persistent long-range wireless network connection. The exemplary communications technology shown in the figures may be replaced with alternative like communications technology and,

therefore, specific shown communications technologies are not meant to be limiting. For example WiFi technology could be replaced with another long-range communication technology.

- **Server:** A server is the host processing server that may be operated by the company running the system. For each user, the server 130 preferably maintains at least one “virtual wallet” having at least one “balance” (which can be \$0) of designated funds for which the server 130 keeps an accounting. The balance may represent, for example, “cash” or it may be a “promotional value” that represents funds that may be spent under certain circumstances. If these funds begin to be depleted, the user may be notified (e.g. via the application 140 on the mobile device 150) that additional funds need to be designated and/or transferred. Alternatively, funds from other sources (e.g. the funding source server 160) may be automatically transferred to restore a predetermined balance. The balance may also be increased based on a promotion (e.g. points earned or coupons). As shown in FIG. 58, the server includes appropriate processors 950, memory 960 (which would keep an accounting of the user’s balance in a manner similar to a gift card), and communication systems 970. As shown, the communications unit 970 of the server 130 includes long-range communication technology (e.g. cellular technology and WiFi mechanisms). The server 130 also includes a security unit 955 for encrypting and decrypting messages. The server 130 receives an AuthRequest from the adapter module 100 (via a mobile device 150) and, if funds are available, returns the AuthGrant for funds. FIG. 58 shows exemplary components associated with the server 130. The shown example may be divided into multiple distinct components that are associated with each other or the example may be incorporated into or drawn from other technology (e.g. a computer or a main frame) as long as the components are associated with each other.
- **Advertise Presence:** Each adapter module 100 advertises its presence by broadcasting signals (advertising broadcast signals) to mobile devices in the zones 102, 104, 016. Each adapter module 100 can listen to other adapter modules’ advertisements

- Received Signal Strength Indicator (RSSI): The adapter module 100 may have a self-calibrating signal strength to determine zone thresholds (e.g. a payment zone threshold). At the time the user selects an item (product or service) from the payment accepting unit 120, the Received Signal Strength Indicator (RSSI) is logged. At this moment, it is presumed the user is within “arms-length” (which may be a predetermined length approximating the distance of a user standing in front of a machine for the purpose of making a purchase) from the payment accepting unit 120. Mathematical computation (In-Range Heuristics) is conducted to derive the optimal RSSI threshold at which point payment should be triggered by an application 140 on a mobile device 150. The threshold may be payment accepting unit specific and can vary over a period of time. This optimal zone threshold is preferably reported to the mobile device 150 during an initial handshake.
- In-Range Heuristics: Mathematical computation that determines the RSSI threshold to determine when a user is in the authorization zone 104 and/or payment zone 102. This computation can take into consideration numerous historical data points as well as transaction specific information such as which mobile device 150 is being used, payment accepting unit type, among other factors. Preferably the RSSI is logged while the user is making his selection (this is the one time in the entire process that the user definitely will be “in range” (e.g. they will be arm’s length from the machine 120 because they are physically interacting with the machine 120)). The type of user mobile device 150, accelerometer data (e.g. is the user moving or stationary), and/or other information may also be logged while the user is making his selection. The adapter module 100 can give a reference RSSI for the payment zone 102 for the machine 120, and the application 140 can make a +/- adjustment based on the specific mobile device 150 on which it is installed. Over a period of time, the system continues to improve itself based on additional data points.
- Authorization Request (AuthRequest): When a user enters the authorization zone 104, the mobile device 150 notifies the adapter module 100 and the adapter module 100 sends the secured authorization request (e.g. the encrypted authorization request) as a “message” (also referred to as a communication or transmissions) to the server 130 via the mobile device 150. Encryption may

be performed by a security unit 755 (security technology that may be associated with the processing unit 750 and/or the memory 760). Significantly, the AuthRequest is a request for authorization of funds, not a request for authorization of a transaction. The purpose of the funds is irrelevant to the server 30.

- Authorization Grant Token (AuthGrant): This is a “message” (also referred to as a communication or transmissions) encrypted by the security unit 955 (security technology) of the server 130 with the unique private key for the adapter module 100. The secured authorization grant (e.g. the encrypted authorization grant) is passed from the server 130 (via the mobile device 150) to the adapter module 100 in the form of a message. The mobile device 150, however, is not able to decrypt and read the message. The authorization grant is in response to the authorization request. The amount of the funds granted by the AuthGrant may be determined by factors including, but not limited to, the amount of funds available (or, if funds are not available, a mini-loan could be granted), a pre-authorized amount (e.g. set by the server, set by the user during set-up, set by the funding source, or a standard amount), limited by time (e.g. only a certain amount per hour, or a predetermined amount at specific times of the day), limited to the maximum amount of an item on the machine (or enough for two or three items in the machine), or one or more of these and other factors. Significantly, the AuthGrant makes the funds available, but does not authorize a transaction. The AuthGrant may have an associated expiration period in that it may expire if it is not used in a predetermined time period. The length of time before the AuthGrant expires may be determined by factors including, but not limited to, the trustworthiness of the user (e.g. the user has a long history with the system or some known provider (e.g. credit card provider, bank, or credit union), the user has a good credit rating, or the user has a large wallet balance), a pre-authorized time period (e.g. set by the server, set by the user during set-up, set by the funding source, or a standard time period), limited by time (e.g. predetermined time periods at specific times of the day such as longer times during breakfast, lunch, and dinner), limited by the machine or the products or services sold in the machine, limited by the number of other users near the machine (e.g. if it is

a crowded machine, the AuthGrant may expire faster), or one or more of these and other factors. The AuthGrant remains valid until it expires or some other event occurs to end its validity (e.g. the user cancels it). This means that under normal circumstances the mobile device 150 will hold the AuthGrant authorizing use of funds for a pre-determined time period that will allow the user sufficient time to make a purchase. The authorized amount may be considered to be the “wallet balance” that is held in a virtual “wallet.”

- Synchronization: Time may be synchronized to the adapter module 100 from the server 130. The server 130 sends time information with encrypted messages and the adapter module 100 uses the time encoded in the messages for synchronization.
- The mobile-device-to-machine payment systems and components thereof may have associated hardware, software, and/or firmware (a variation, subset, or hybrid of hardware and/or software). The term “hardware” includes at least one “processing unit,” “processor,” “computer,” “programmable apparatus,” and/or other known or yet to be discovered technology capable of executing instructions or steps (shown as processing unit 750 in FIG. 56, processing unit 850 in FIG. 57, and processing unit 950 in FIG. 58). The term “software” includes at least one “program,” “subprogram,” “series of instructions,” or other known or yet to be discovered hardware instructions or hardware-readable program code. Software may be loaded onto hardware (or firmware) to produce a “machine,” such that the software executes on the hardware to create structures for implementing the functions described herein. Further, the software may be loaded onto the hardware (or firmware) so as to direct the mobile-device-to-machine payment systems (and components thereof) to function in a particular manner described herein or to perform a series of operational steps as described herein. “Hardware” such as the adapter module 100, mobile device 150, and payment accepting unit 120 may have software (e.g. programs and apps) loaded thereon. The phrase “loaded onto the hardware” also includes being loaded into memory (shown as memory 760 in FIG. 56, memory 860 in FIG. 57, and memory 960 in FIG. 58) associated with or accessible by the hardware. The term “memory” is defined to include any type of hardware (or other technology) -readable media (also referred to as

computer-readable storage medium) including, but not limited to, attached storage media (e.g. hard disk drives, network disk drives, servers), internal storage media (e.g. RAM, ROM, EPROM, FLASH-EPROM, or any other memory chip or cartridge), removable storage media (e.g. CDs, DVDs, flash drives, memory cards, floppy disks, flexible disks), firmware, and/or other known or yet to be discovered storage media. Depending on its purpose, the memory may be transitory and/or non-transitory. Appropriate “messages,” “communications,” “signals,” and/or “transmissions” (that includes various types of information and/or instructions including, but not limited to, data, commands, bits, symbols, voltages, currents, electromagnetic waves, magnetic fields or particles, optical fields or particles, and/or any combination thereof) over appropriate “communication paths,” “transmission paths,” and other means for signal transmission including any type of connection between two elements on the system (the system including, for example, the adapter module 100, mobile device 150, payment accepting unit 120, hardware systems and subsystems, and memory) would be used as appropriate to facilitate controls and communications.

- It should be noted that the terms “programs” and “subprograms” are defined as a series of instructions that may be implemented as software (i.e. computer program instructions or computer-readable program code) that may be loaded onto a computer to produce a “machine,” such that the instructions that execute on the computer create structures for implementing the functions described herein or shown in the figures. Further, these programs and subprograms may be loaded onto a computer so that they can direct the computer to function in a particular manner, such that the instructions produce an article of manufacture including instruction structures that implement the function specified in the flow chart block or blocks. The programs and subprograms may also be loaded onto a computer to cause a series of operational steps to be performed on or by the computer to produce a computer implemented process such that the instructions that execute on the computer provide steps for implementing the functions specified in the flow chart block or blocks. The phrase “loaded onto a computer” also includes being loaded into the memory of the computer or a memory associated with or

accessible by the computer. Separate, albeit interacting, programs and subprograms may be associated with the adapter modules 100, the server 130, and the mobile device 150 (including the mobile application 140) and these programs and subprograms may be divided into smaller subprograms to perform specific functions.

- The terms “messages,” “communications,” “signals,” and/or “transmissions” include various types of information and/or instructions including, but not limited to, data, commands, bits, symbols, voltages, currents, electromagnetic waves, magnetic fields or particles, optical fields or particles, and/or any combination thereof. Appropriate technology may be used to implement the “communications,” “signals,” and/or “transmissions” including, for example, transmitters, receivers, and transceivers. “Communications,” “signals,” and/or “transmissions” described herein would use appropriate technology for their intended purpose. For example, hard-wired communications (e.g. wired serial communications) would use technology appropriate for hard-wired communications, short-range communications (e.g. Bluetooth) would use technology appropriate for close communications, and long-range communications (e.g. WiFi or Cellular) would use technology appropriate for remote communications over a distance. Appropriate security (e.g. SSL or TLS) for each type of communication is included herein. Security units 755 and 955 include technology for securing messages. The security technology may be, for example, encryption/decryption technology (e.g. software or hardware). Although encryption/decryption is discussed primarily as being performed using a unique private key, alternative strategies include, but are not limited to encryption/decryption performed using public/private keys, or other encryption/decryption strategies known or yet to be discovered. Appropriate input mechanisms and/or output mechanisms, even if not specifically described, are considered to be part of the technology described herein. The exemplary communications unit 770 (shown in FIG. 56) of the adapter module 100 is shown as including appropriate input and output mechanisms 772, 774 that may be implemented in association (e.g. directly or indirectly in functional communication) with male and female adapters 720, 730 of the adapter module 100. The exemplary communications unit 870

(shown in FIG. 57) of the mobile device 150 includes mechanisms for both long-range communications (shown as Cellular and/or WiFi mechanisms 872) for communicating with the server 130 and short-range communications (shown as Bluetooth mechanisms 876) for communicating with the adapter module 100.

- When used in relation to “communications,” “signals,” and/or “transmissions,” the terms “provide” and “providing” (and variations thereof) are meant to include standard means of provision including “transmit” and “transmitting,” but can also be used for non-traditional provisions as long as the “communications,” “signals,” and/or “transmissions” are “received” (that can also mean obtained). The terms “transmit” and “transmitting” (and variations thereof) are meant to include standard means of transmission, but can also be used for non-traditional transmissions as long as the “communications,” “signals,” and/or “transmissions” are “sent.” The terms “receive” and “receiving” (and variations thereof) are meant to include standard means of reception, but can also be used for non-traditional methods of obtaining as long as the “communications,” “signals,” and/or “transmissions” are “obtained.”
- The term “associated” is defined to mean integral or original, retrofitted, attached, connected (including functionally connected), positioned near, and/or accessible by. For example, if the user interface (e.g. a traditional display 122 (FIG. 19), a touch screen display 124 (FIG. 19), a key pad 126 (FIG. 19), buttons 126 (FIG. 19, shown as part of the key pad 126), a keyboard (not shown), and/or other input or output mechanism) is associated with a payment accepting unit 120, the user interface may be original to the payment accepting unit 120, retrofitted into the payment accepting unit 120, attached to the payment accepting unit 120, and/or a nearby the payment accepting unit 120. Similarly, adapter modules 100 may be associated with payment accepting units 120 in that the adapter modules 100 may be original to the payment accepting unit 120, retrofitted into the payment accepting unit 120, attached to the payment accepting unit 120, and/or a nearby the payment accepting unit 120.

- It should be noted that relative terms are meant to help in the understanding of the technology and are not meant to limit the scope of the invention. Similarly, unless specifically stated otherwise, the terms used for labels (e.g. “first,” “second,” and “third”) are meant solely for purposes of designation and not for order or limitation. The term “short” in the phrase “short-range” (in addition to having technology specific meanings) is relative to the term “long” in the phrase “long-range.”
- The terms “may,” “might,” “can,” and “could” are used to indicate alternatives and optional features and only should be construed as a limitation if specifically included in the claims.
- It should be noted that, unless otherwise specified, the term “or” is used in its nonexclusive form (e.g. “A or B” includes A, B, A and B, or any combination thereof, but it would not have to include all of these possibilities). It should be noted that, unless otherwise specified, “and/or” is used similarly (e.g. “A and/or B” includes A, B, A and B, or any combination thereof, but it would not have to include all of these possibilities). It should be noted that, unless otherwise specified, the terms “includes” and “has” mean “comprises” (e.g. a device that includes, has, or comprises A and B contains A and B, but optionally may contain C or additional components other than A and B). It should be noted that, unless otherwise specified, the singular forms “a,” “an,” and “the” refer to one or more than one, unless the context clearly dictates otherwise.

System Overview

[00105] FIGS. 5, 6, and 7 together show exemplary major components of the mobile-device-to-machine payment system and the interactions therebetween.

[00106] As shown, the adapter module 100 functionally connected bi-directionally to the payment accepting unit 120 via a wired serial connection such that no security is necessary. The adapter module 100 is also functionally connected bi-directionally to the mobile device 150 (and its installed mobile application 140) via short-range communication technology (e.g. a Bluetooth connection). Because the mobile device 150 is not a “trusted” link (e.g. it could be hacked by a user), only secured communications (transmissions) are passed between the adapter module 100 and the mobile device 150. This keeps the passed

communications secured and safe from hacking. The mobile device 150 (and its installed mobile application 140) is also functionally connected bi-directionally to a system management server 130 and/or a funding source server 160 via long-range communication technology (e.g. WiFi or Cellular connection) that preferably has appropriate security (e.g. SSL security). Security between the mobile device 150 and the system management server 130 has the advantage of protecting communications from the mobile device 150 to the system management server 130 that may include sensitive data and may not be encrypted. The system management server 130 and the funding source server 160 may be connected via a wired Internet connection with SSL security. The system management server 130 may be connected via a wired Internet connection with SSL security to an operators' server 170. Although not necessary to implement a purchase transaction, for other purposes (e.g. inventory), the operators' server 170 may be connected to the payment accepting unit 120 using a handheld computer sync or a cellular connection.

[00107] Also, a unique private key may be used to securely transmit encrypted messages between the adapter module 100 and the system management server 130 (although the encrypted transmissions would most likely be routed through the mobile device 150). The server 130 stores a private key for each adapter module 100, and this key is only known to the adapter module 100 and the server 130. No intermediary is privy to this key (especially not the mobile device 150). When the adapter module 100 and server 130 communicate messages (e.g. AuthRequest and AuthGrant), the security unit 755 of the adapter module 100 encrypts the message with its private key and passes the message to the mobile device 150. The mobile device 150 (which preferably cannot decrypt the message) passes the encrypted message to the server 130. The server 130 is able to decrypt the message using the security unit 955 of the adapter module 100 and the unique private key. The security unit 955 of the server 130 uses this same unique private key to encrypt messages to the adapter module 100 and sends the message to the mobile device 150 to relay to the adapter module 100 that is able to decrypt the message using the security unit 755 of the adapter module 100 and the unique private key.

[00108] FIG. 7 shows specific exemplary communications and messaging with an exemplary vending sequence (the numbers to the left of the communications and messaging) between the adapter module 100, the mobile device 150, and the system management server 130. These communications are discussed in more detail in the discussion pertaining to the timing schematics (FIGS. 8A-8G) and the flow charts (FIGS. 9A-9E).

[00109] It should be noted that FIGS. 5, 6, and 7 are meant to be exemplary and to help in the understanding of the mobile-device-to-machine payment system. For example, the shown long-range communications technology may be replaced with alternative long-range communications technology known or yet to be discovered, the shown short-range communication technology may be replaced with alternative short-range communication technology known or yet to be discovered, and the shown security may be replaced with alternative security known or yet to be discovered. The shown connections are meant to be exemplary in that, for example, there may be intermediaries that are not shown. The shown components have been simplified in that, for example, only one mobile device 150 (or machine 120, adapter module 100, or server 130) is shown where many may be included. Finally, the order of the steps may be changed and some steps may be eliminated.

Adapter Module

[00110] FIGS. 11-55 show exemplary adapter modules 100a-100e (referred to generally as adapter modules 100). These are relatively low cost hardware that are pre-configured to work with industry standard a multi-drop bus (MDB). On machines without MDB technology, the adapter module 100 can be configured or designed to work with other serial protocols or activate a switch. In essence the adapter module 100 simulates establishing payment on payment accepting unit 120 in much the same manner as other alternative forms of payment (e.g. cash).

[00111] The shown exemplary adapter modules 100 are preferably designed to be used as an in-line dongle for in-line insertion within, for example, a MDB of a machine 120. The wire used in MDB technology uses male and female connection ends or adapters to allow the attachment of peripherals. In the case of a vending machine, the wire with the connection ends or adapters would be present to allow the attachment of a payment receiving mechanism (e.g. a coin mechanism). The MDB male and female adapters 700, 710 may be separated (as shown in FIGS. 17, 18, 26, 27, 35, 36, 44, 45, 53, and 54). The adapter modules 100 have male and female adapters 720, 730. The adapter module may be plugged (inserted) in serial (“in-line”) with the wire. For example, the MDB female adapter 710 may be connected to the male adapter 720 of the adapter module 100 and the MDB male adapter 700 may be connected to the female adapter 730 of the adapter module 100. The resulting in-line configuration is shown in FIGS. 19, 28, 37, 46, and 55. It should be noted that the adapter modules 100 are designed to allow pass-through communications so that if the mobile-device-to-machine payment systems is not enabled (e.g. for a particular purchase or simply

turned off) the MDB functions as though the adapter module 100 is not there and the machine 120 can function normally.

Hands-Free

[00112] Summarily, if it is available, a hands-free mode, from the user's perspective, would allow the user to approach a favorite payment accepting unit 120 and notice that the display (e.g. the displays 122 or 124 shown in FIG. 19) associated with the payment accepting unit 120 shows funds available (e.g. the wallet balance), he would select the product or service using input mechanisms (e.g. buttons 126 or a touch screen display 124 shown in FIG. 19) associated with the payment accepting unit 120, and he would retrieve his dispensed services or products.

[00113] During an initial handshake with the mobile device 150 (when the user is within range), the adapter module 100 reports to the mobile device 150 whether or not hands-free mode is available. If it is available, the installed mobile application 140 automatically connects to the payment accepting unit 120 without the user having to interact with the mobile device 150. The user observes that funds are available on the display 122, 124 of the payment accepting unit 120 and completes the purchase transaction as if cash was inserted in the machine 120 by inputting his selection on the payment accepting unit 120. The payment accepting unit 120 dispenses the product or service. After the selection is made, the change is returned to the mobile device 150.

[00114] Whether hands-free payment is available is determined by factors including, but not limited to whether if other mobile devices 150 are in range, if other adapter modules 100 are in range, if there are any alerts, if the payment trigger threshold is having wide variances and so deemed unstable, or if the payment accepting unit operator (e.g. a vending machine operator) has opted to disable hands-free mode for the payment accepting unit 120. In the latter instance, operators can disable via a maintenance mobile device 150, as well as through the operators' server 170 and/or the system management server 130.

[00115] FIG. 3 is a table that showing exemplary considerations, conditions, or factors that may be used to determine whether the hands-free pay feature is available. Starting at the "Favorite?" column, this indicates whether the payment accepting unit 120 is a favorite machine. Preferably the hands-free pay feature is only available for use with "favorite" payment accepting units 120 (e.g. a vending machine at work or school). The "Alert" column has to do with whether there is some reason (e.g. there are too many users in range) that the

hands-free pay feature should not work and, if there is such a reason, the user will be notified (alerted) and may be able to use the manual mode to resolve the alert and/or complete the transaction. FIG. 3 shows situations in which a user is or is not able to make hands-free purchases from a machine 120 using a mobile application 140 on his mobile device 150. It should be noted that the shown interface is meant to be exemplary. For example, some of the features could be automated or pre-selected. (It should be noted that the left hand column, the “Tab” column, relates to whether the selected tab on the mobile application 140 is “all” or “favorite.” FIGS. 10A-10D all show these tabs. Unlike the other columns in FIG. 3, this column has more to do with the functionality and view of the application 140 than specifically with the hands-free feature. The tabs would allow a user to select whether he wanted to be alerted when he was in range of all payment accepting units 120 or just “favorite” payment accepting units 120 and the application 140 would show the appropriate view.)

[00116] **Balance Display:** An optional feature of the mobile-device-to-machine payment system that is particularly helpful in the hands-free mode (although it may be available in the manual mode and/or in a multiple-vend scenarios) is when the user’s mobile device 150 sends “credit” to the payment accepting unit 120 (either via hands-free payment or through a manual swipe), the wallet balance is sent to the payment accepting unit 120 that is then displayed to the user on a display 122, 124 of the machine 120. This is particularly beneficial during hands-free mode when the user does not retrieve the mobile device 150 and, therefore, may not know the balance. Also, in a multiple-vend scenario the user would not have to calculate a remaining balance.

[00117] An exemplary hands-free and multiple-vend scenario with a balance display might be as follows: The user has \$5.00 in his virtual wallet as that is the amount that has been authorized (the AuthGrant being stored on the mobile device 150). He walks up to the payment accepting unit 120 and \$5.00 is displayed on the display 122, 124 of the payment accepting unit 120 since hands-free mode was enabled and credit was sent (e.g. via short-range communication technology) to the payment accepting unit 120. The user makes a selection of \$1.50 by interacting (e.g. pressing buttons) with the machine 120. The item (product or service) is dispensed and the “change” is “returned” (e.g. via short-range communication technology) to the virtual wallet. But since user is still standing in the payment zone 102, the remaining wallet balance of \$3.50 is sent to the payment accepting unit 120 and displayed so that the user can now see he has a \$3.50 balance. (It should be

noted that the authorized funds may remain on the machine 120 and not be transferred back to the mobile device 150 between transactions.) The user decides to purchase a \$1.50 item, and the transaction is completed as usual (e.g. by interacting with the machine 120). Now the user is still standing in the payment zone 102 and he sees the wallet balance of \$2.00 on the display 122, 124 of the payment accepting unit 120. Deciding he does not wish to purchase anything else, the user walks away. As he walks out of the payment zone 102, the credit is cleared from the machine 120. But he is left with the knowledge that his wallet balance is \$2.00 even though he never touched the mobile device 150. Communications between the payment accepting unit 120 and the adapter module 100 (via the mobile device 150) handle the accounting incidental to the transaction. The remaining balance (\$2.00) is technically stored on the server 130, and may be reflected on the application 140 on the mobile device 150.

Multiple Distinct Zones

[00118] As shown in FIGS. 1 and 2, the functions performed by the adapter module 100 can be divided into distinct zones: a first “communication zone” (e.g. “Bluetooth range” 106), a second “authorization zone” 104, and a third “payment zone” 102. The payment zone 102 (that can not be zero) is smaller than or equal to (overlapping completely) the authorization zone 104. (Put another way, the payment zone 102 is within or coextensive with the authorization zone 104.) The payment zone 102 is a subset of the authorization zone 104 with a ratio of the payment zone 102 to the authorization zone 104 ranging from 0.01:1 to 1:1. It is not necessarily a fixed ratio and can vary between different payment accepting units 120, different mobile devices 150, different users, and over time. While the zones 102, 104, 106 are depicted as having a uniform shape, the zones may not necessarily be uniform (or constant over time) in that the shape can vary. For example, the shape of the Bluetooth range 106 may vary depending on environmental conditions such as obstacles in the room and payment accepting unit 120 door/wall materials.

[00119] Bluetooth Range 106: The outermost range is the Bluetooth range 106. This is the area in which the adapter module 100 is able to broadcast its presence. In most situations, the Bluetooth range 106 is a passive range in that no actual data is exchanged between the mobile device 150 and the adapter module 100. While in the Bluetooth range 106, the mobile device 150 monitors the RSSI (Received Signal Strength Indicator).

[00120] Authorization Zone 104: The middle region is the authorization zone 104. This is a computed area based on the RSSI. As mentioned, the mobile device 150 monitors the RSSI while it is in the Bluetooth range 106. When the RSSI reaches a certain predetermined threshold based on In-Range Heuristics, the mobile device 150 can be considered to be in the authorization zone 104. In the authorization zone 104 the mobile device 150 establishes a connection to the adapter module 100 (e.g. a Bluetooth connection (FIG. 5) with SSL protection (FIG. 6)) and informs the adapter module 100 of its presence. After a successful handshake with the adapter module 100, the mobile device 150 registers the adapter module 100 and the adapter module 100 requests an authorization to the server 130 via the mobile devices' network connection (e.g. a WiFi or cellular connection (FIG. 5) with SSL protection (FIG. 6)). It is important to note the mobile device 150 and the adapter module 100 have a non-exclusive relationship at this point. The adapter module 100 may collect registrations for all mobile devices 150 that are within the authorization zone 104.

[00121] An authorization occurs in preparation for when the user enters the payment zone 102. An authorization expires in a set period of time (for example, five minutes), so if the mobile device 150 is still in the authorization zone 104 at the time of expiration, the adapter module 100 submits for and receives another authorization. This will continue for a set number of times (for example, the limit may be three times to limit cases of numerous authorizations for a mobile device that may remain in the authorization zone 104 for an extended period of time without completing a transaction). Should authorization fail (for instance if the limit had been reached) prior to the user entering the payment zone 102, the adapter module 100 will request authorization when the mobile device 150 enters the payment zone 102 (which adds a few seconds to the experience).

[00122] Payment Zone 102: As a user enters the payment zone 102, the mobile device 150 establishes exclusive control of the adapter module 100. Once established, any other user in the payment zone 102 is put into a "waiting" status.

[00123] In the payment zone 102, the payment can be triggered automatically if the system has and is in hands-free mode. In such instances, the mobile device 150 is running the app 140 in background mode and will send credit to the payment accepting unit 120 without any explicit user interaction. The user completes the transaction on the payment accepting unit 120 in much the same manner as if cash had been inserted into the payment accepting unit 120 to establish credit. After the user completes the transaction (that may include one or more purchases), details of the transaction are preferably returned to the

mobile device 150 and server 130 in separate messages. The message to the server 130 is preferably encrypted with the adapter module's 100 private key (FIG. 6) to ensure data integrity. As shown in FIG. 7, the "private key" coded message (Encrypted VendDetails) is preferably sent via the mobile device 150. The message to the mobile device 150 may be sent solely for the purpose of closing the transaction. The transaction history and balance are updated server-side via the encrypted message sent to the server 130.

[00124] The other mode of operation is manual mode. In manual mode, the user launches the mobile device 150 and is able to swipe to send payment to the payment accepting unit 120. The user can also swipe back to cancel the payment. Like in hands-free mode, the purchase transaction is completed on the payment accepting unit 120 in the same manner as if cash were inserted into the payment accepting unit 120. The mobile device 150 is only used to send payment. Selection is made directly on the payment accepting unit 120.

[00125] Self-Calibrating Zone Threshold: A key, but optional feature, of the system is a self-calibrating payment zone RSSI threshold. Because RSSI can vary machine to machine, environment to environment, and device to device, having a fixed threshold at which payment is triggered can be problematic. The approach suggested herein is the creation of a self-calibrating threshold. When the user is interacting with the payment accepting unit 120 (such as when he makes his selection on the payment accepting unit 120), the payment accepting unit 120 notifies the adapter module 100 and the adapter module 100 logs the conditions such as RSSI, type of user mobile device 150, accelerometer data, and other information. It is at this point that it can be ascertained safely that the user is within arms-length from the payment accepting unit 120 (by necessity the user is arms-length because he is making some physical interaction with the payment accepting unit 120). This is the only point in the entire transaction in which it can be certain that the user is within arms-length from the payment accepting unit 120.

[00126] FIG. 4 shows a simplified set of exemplary steps involved when users enter the payment zone 102. Specifically, FIG. 4 shows that credit is established 200 (this may have been done in the authorization zone 104, but if not it would be handled in the payment zone 102), that the user makes a selection using the machine 202, that the machine notifies the adapter module of the selection 204, that the adapter module (optionally) logs the RSSI 206, and that the purchase process(es) continues 208. Using the historically logged RSSI data, the adapter module 100 calculates one of several "average" RSSI using various mathematical models. This "average" could be a traditional average, a moving average, a

weighted average, a median, or other similar summary function. The adapter module 100 could pre-process the historical data before running the function, such as to eliminate top and bottom data points, suspect data points, etc.

[00127] Optionally, during the handshake between the mobile device 150 and the adapter module 100, the information transmitted to the adapter module 100 may include, for example, the model of the mobile device 150. Using the received information pertaining to the mobile device models, the adapter module 100 can create multiple payment thresholds, one for each mobile device model. This allows for variances that may be inherent in different types of Bluetooth radios. An alternative to this method is for the adapter module 100 to broadcast a baseline payment zone threshold, and the mobile device 150 can use an offset from this baseline based on its specific model type. The payment zone thresholds (or baseline offsets) can be unique to specific types of mobile devices (e.g. by manufacturer, operating system, or component parts), models of mobile devices, or individual mobile devices (unique to each user).

[00128] In a typical scenario in which the payment zone threshold has been calibrated, the adapter module 100 advertises its presence along with the threshold at which it considers any mobile device 150 to be in the authorization zone 104. This is a one-way communication from adapter module 100 to mobile device 150. Once the mobile device 150 enters the authorization zone 104, there is a handshake that is established between the adapter module 100 and the mobile device 150. During this handshake, the mobile device 150 can share its model information with the adapter module 100, and the adapter module 100 can return the payment zone 102 threshold for that specific model.

[00129] Optionally, in addition to calibrating the payment zone threshold, the adapter module 100 can apply the self-calibrating model to the authorization zone 104 to calibrate the authorization zone threshold. As with the payment zone thresholds, the authorization zone thresholds can be unique to specific types of mobile devices, models of mobile devices, or individual mobile devices. In this scenario, the adapter module 100 would broadcast multiple thresholds by device type and the mobile device 150 would determine which threshold to apply (or alternatively broadcast a baseline and the mobile device 150 uses an offset based on its device model). Even in this scenario, the authorization zone 104 is a one-way communication.

[00130] Optionally, along with the threshold that is calculated (in the payment and/or the authorization zone(s)), a safety margin can be added to minimize scenarios in which a user is within range, but the mobile-device-to-machine payment systems do not recognize it because the threshold may not have been reached. For example, if the calculated RSSI for an iPhone 5 on machine 4567 is -68db, the mobile-device-to-machine payment systems may add a safety margin of -5db, and establish the threshold at -73db. So when a user's phone is communicating with the adapter module 100 at an RSSI of -73db or better, the mobile-device-to-machine payment systems will allow the mobile device 150 to credit the payment accepting unit 120. The safety margin can be set on the server 130 and downloaded to the adapter module 100, or set on the mobile device 150, or set on the adapter module 100 itself.

[00131] Optionally, in the payment zone threshold, the mobile device 150 can use other data to determine when to cancel the exclusive control of the payment accepting unit 120, to identify when the user is moving out of the payment zone 102. External data could include accelerometer data from the mobile device 150. Using that data, the mobile device 150 can determine whether the user is standing relatively still in front of the payment accepting unit 120, or if the user is in motion – effectively walking away from the payment accepting unit 120.

Signal Unavailability Adaptation

[00132] The mobile-device-to-machine payment systems described herein use a mobile device's 150 short-range communication technology (shown as Bluetooth mechanisms 876 in FIG. 57) and a mobile device's 150 long-range communications technology (shown as Cellular and/or WiFi mechanisms 872 in FIG. 57). The short-range communication technology 876 communicates with the adapter module's 100 short-range communication technology (shown as Bluetooth mechanisms 776 in FIG. 56). The long-range communications technology 872 communicates with the server's 130 communication technology (not shown). The mobile device 150 (with a mobile application 140 thereon) acts as a communication bridge between the adapter module 100 (associated with a payment accepting unit 120) and the server 130. This process is described herein and works properly if there is cellular or WiFi coverage within the payment zone 102.

[00133] One option if there is no cellular or WiFi coverage within the payment zone 102 is to determine whether there is cellular or WiFi coverage within the authorization zone 104 or the Bluetooth range 106. If there is, then the sizes of the zones 102, 104, 106 could be

adapted and the timing could be adapted. For example, if the mobile devices 150 detected problems with the cellular or WiFi coverage within the payment zone 102, the user could carry his mobile device 150 into the other zones (or the mobile device 150 could use short-range communication technology to communicate with other mobile devices 150 within the authorization zone 104 or the Bluetooth range 106) to determine whether the zones have cellular or WiFi coverage. If they do have coverage, communication between the mobile device 150 and the server 130 can be advanced (conducted earlier when the mobile device 150 is further from the machine 120) or delayed (conducted later when the mobile device 150 is further from the machine 120). This can be thought of as changing the size or shapes of the zones 102, 104, 106. The timing would also have to be adjusted so that the authorization of funds (AuthGrant) does not expire before the user has a chance to make a purchase. It also means that balance updates to the server 130 may happen after the user has moved away from the machine 120 and has cellular or WiFi coverage again.

[00134] Another option if there is no cellular or WiFi coverage within any of the zones 102, 104, 106 is for the user to obtain authorization while outside of the zones in a place with cellular or WiFi coverage. This may occur, for example, if a user knows that he will be going to a place with a payment accepting unit 120 equipped with an adapter module 100 (perhaps to a favorite payment accepting unit 120) that does not have (or rarely has) cellular or WiFi coverage. A user may also use the mobile application 140 to query payment accepting units 120 in a given range (e.g. within 50 miles) or at a given location (e.g. at a campground or in a particular remote city) to determine whether there is cellular or WiFi coverage within the zones 102, 104, 106. The user can then obtain pre-authorization from the server 130 using the mobile application 140. Again, the timing would also have to be adjusted so that the authorization of funds (AuthGrant) does not expire before the user has a chance to make a purchase. It also means that balance updates to the server 130 may happen after the user has moved away from the machine 120 and has cellular or WiFi coverage again. A mobile-device-to-machine payment system having the ability to implement this option would be able to accept cashless payments without requiring any network connection near the payment accepting unit 120. Mobile-device-to-machine payment systems described herein that are located in a remote location where no signal is available, therefore, can accept cashless payments.

[00135] As an example of a situation in which there might be no cellular or WiFi coverage within any of the zones 102, 104, 106 of a particular payment accepting unit 120,

the user (a teenager) may be traveling to a remote location to attend summer camp where there is no cellular or WiFi coverage. The camp may have several payment accepting units 120 (e.g. a machine that creates a dedicated “hot spot” that requires payment for use, vending machines, or machines for renting equipment (e.g. bikes, kayaks, or basket balls)). The camp facility might notify parents that the mobile-device-to-machine payment system is available. The parents, while at home, could obtain authorization for a particular amount (that could be doled out a certain amount per day or limited to type of machine or location) to be authorized and “loaded” into the user’s mobile device 150 and specify that the authorization will not expire for a certain period or until a certain date. Thereafter, while at camp, the user could use the mobile application 140 on his mobile device 150 in a manner similar to those discussed elsewhere herein. Short-range communications may be used for communications between the adapter modules 100 (associated with the machines 120) and users’ mobile devices 150.

[00136] One subtle but powerful component of the systems described herein is that they require internet network connection only in the authorization zone 104 and only for the time period required to send the AuthRequest and receive the AuthGrant. Once a valid AuthGrant is received by the mobile device 150, an internet network connection is not required by either the mobile device 150 or the adapter module 100 in the payment zone 102 as long as the AuthGrant is valid (unexpired). This mechanism allows the system to seamlessly handle authenticated transactions in (temporary) offline mode, with the deferred acknowledgement and transaction messages performing the bookkeeping and cleanup when network connection is regained. The alternatives described above provide a unique way to artificially extend the authorization zone to include any location where the mobile device 150 can communicate with the server 130.

Multiple User Resolution

[00137] As shown in FIG. 2, in likely practical scenarios, there will be multiple users in the zones 102, 104, 106. As shown, users 1, 2, and 3 are in the payment zone 102 near the machine 120, users 5 and 6 are shown as positioned between the authorization zone 104 and the Bluetooth range 106, users 4 and 7 are in the Bluetooth range 106, user 10 is positioned on the edge of the Bluetooth range 106, and users 8 and 9 are positioned outside of Bluetooth range 106. The mobile-device-to-machine payment systems provide for managing, and resolving issues pertaining to multiple users.

[00138] Users 4 and 7 are within the Bluetooth range 106 and user 10 is either entering or leaving the Bluetooth range 106. Within the Bluetooth range 106 the users' mobile devices 150 are able to see the adapter module's 100 advertisement. In this zone, the mobile device 150 preferably does not initiate a connection. The adapter module 100 is preferably unaware of the users in the Bluetooth range 106. All the adapter module 100 is doing is advertising its presence to any multitude of users that may be in Bluetooth range 106.

[00139] The adapter module 100 begins to log users as the users (and their respective mobile devices 150) enter the authorization zone 104 (shown in FIG. 2 as users 5 and 6). At this point, there is a non-exclusive connection initiated by the mobile device 150 to the adapter module 100. It does a handshake (e.g. to exchange information needed to obtain authorization and, optionally, to log information needed for a self-calibrating authorization zone threshold) and the mobile device 150 contacts the server 130 for an authorization (e.g. sending an AuthRequest and receiving an AuthGrant). The adapter module 100 registers all mobile devices 150 that have requested and received AuthGrants. The adapter module 100 continues communicating with any other mobile device 150 that enters the authorization zone 104. After initial contact, the adapter module 100 may provide the mobile device 150 with a deferral delay of when to check back in with the adapter module 100 allowing opportunity for other mobile devices 150 to communicate with the adapter module 100.

[00140] If there is only one user in the payment zone 102, a purchase transaction may be performed. If there are multiple users in the payment zone 102, the mobile-device-to-machine payment system must handle the situation.

[00141] One optional exemplary solution for handling the situation of the multiple users in the payment zone 102 is queuing users in the payment zone 102. Once any mobile device 150 enters the payment zone 102, it establishes exclusivity to a particular mobile device 150 (first come first serve). Technically, however, the adapter module 100 is not establishing an exclusive connection to the mobile device 150. The adapter module 100 can still perform a round-robin poll and communicate with and advertise to other mobile devices 150. Instead, the adapter module 100 establishes a queue prioritized by RSSI and time (e.g. who was first and whether the authorization has expired) and it notifies (e.g. alerts) other mobile devices 150 to wait. The earliest valid (unexpired) authorization takes precedence when there is any tie in the RSSI. Otherwise, for example, the strongest average RSSI takes priority. Preferably the queue is not a static measure of the RSSI but an averaged measure over the period of time in the queue. This compensates for a scenario in which a user may be

walking around in the queue and then shows up at the payment accepting unit 120 just as the previous user is finishing. If another user was also in the payment zone 102 and stood there the entire time, but may have newer authorization, he could win out.

[00142] Anytime that the adapter module 100 cannot determine exactly which user is in the payment zone 102 in front of the payment accepting unit 120, the adapter module 100 will disable hands-free payment. The mobile device 150 will send an alert to the user and he can use swipe to pay (manual mode). All users in payment zone 102 will show “Connected” and the first to swipe payment to the payment accepting unit 120 then locks out other users.

Multiple Module Resolution

[00143] In the scenario where there are multiple modules present, determining which payment accepting unit 120 a user is in front of can be a challenge. The mobile-device-to-machine payment systems described herein allow for adapter modules 100 to communicate to other adapter modules 100 in range via Bluetooth. Each user receives authorization grants for specific payment accepting units 120. This means if there are multiple adapter modules 100 within the same authorization zone 104, there will be multiple authorization grants for the user. When the user enters the payment zone 102, it can be difficult to differentiate which payment accepting unit 120 the user is in front of if the payment zones 102 overlap.

[00144] To solve this problem, when the user enters the payment zone 102, the adapter modules 100 communicate with each other to determine the RSSI for the particular user (based on the signal from his mobile device 150) to triangulate which adapter module 100 (and the associated payment accepting unit 120) is closer to the user. Optionally, the inter-module communications can restrict the user to establishing an exclusive connection with only one payment accepting unit 120.

[00145] Optionally, when the user connects to a payment accepting unit 120, the mobile device 150 can send a communication to the payment accepting unit 120 for momentary display to the user on the display 122, 124 of the payment accepting unit 120. For example, the mobile device 150 can send a communication (e.g. “connected” or “Fred’s Mobile Device Connected”) to the payment accepting unit’s display 122, 124 for a predetermined period of time (e.g. 1-3 seconds) so when the user is in payment zone 102, it is clear which payment accepting unit 120 the user is connected to prior to making a purchase (either in hands-free or manual mode).

[00146] In addition, when the user is in manual mode, the mobile device 150 can display (e.g. on the touch screen 152 as shown in FIGS. 10A-10D) a visual indication of the payment accepting unit 120 (e.g. a picture and/or a payment accepting unit ID of the payment accepting unit 120) for visual confirmation. If the user is in manual mode, the user can manually change the payment accepting unit 120.

Descriptive Scenario

[00147] FIG. 7, FIGS. 8A-8G, and 9A-E (as well as other figures) can be used to understand a detailed exemplary scenario of the mobile-device-to-machine payment systems described herein. An exemplary flow of communications and steps are loosely described below with reference to these (and other figures). It should be noted that alternative scenarios could include, for example, a modified order of the steps performed.

[00148] Prior to vending transactions, a user downloads a mobile app 140 onto his mobile device 150, creates an account, and configures a funding source via, for example, a funding source server 160. A funding source may be, for example, a debit card, a credit card, campus cards, rewards points, bank accounts, payment services (e.g. PayPal®) or other payment option or combination of payment options known or yet to be discovered. The funding sources may be traditional and/or nontraditional payment sources that are integrated into the ecosystem described herein and then used indirectly as a source of funds. Funds from the funding source are preferably held on the server 130 such that when an AuthRequest is received by the server 130, the server 130 can send an AuthGrant authorizing funds for a purchase.

[00149] The user can specify one or more “favorite” adapter module(s) 100 (that has a one-to-one relationship to the payment accepting unit 120) that he may visit regularly, such as a vending machine at school or work. Favorite adapter modules 100 appear on a pre-filtered list and allow for additional rich features such as hands-free payment.

[00150] The payment accepting unit 120 may be equipped with an adapter module 100 that is constantly advertising its availability via Bluetooth (or other “signals,” “communications,” and/or “transmissions”). This ongoing advertising and scanning for adapter modules is shown in FIG. 8A. As shown, the mobile device 150 is continuously scanning for any adapter module 100 within Bluetooth (or other “signal,” “communication,” and/or “transmission”) range. When the user is within range of that adapter module 100, the

mobile device 150 tracks and monitors the signal strength until a predetermined “authorization zone” threshold is achieved.

[00151] FIGS. 8B and 9A generally show that when the authorization zone threshold is reached, the mobile device 150 enters the authorization zone (block 302) and registers the adapter module 100. The mobile device 150 connects to the server 130 (block 304). The app 140 on the mobile device 150 creates a request for authorization (AuthRequest) and passes the AuthRequest to the server 130 using appropriate communication technology (e.g. cellular or WiFi) (block 306). The server 130 responds with an authorization grant (AuthGrant) encrypted with the specific adapter module’s private key (block 306). This authorization token may minimally include the User ID, Apparatus ID (for the adapter module 100), authorization amount, and expiration time. The mobile device 150 receives the AuthGrant from the server 130, and retains it until the mobile device 150 is ready to issue payment to an adapter module 100. The mobile device 150 collects all pending AuthGrants that may be one or more depending on how many adapter modules 100 are in-range. Unused AuthGrants that expire are purged from the mobile device 150 and the server 130. It is important to note that the mobile device 150 is unable to read the AuthGrant because it is encrypted with the adapter module’s unique private key that is only known to server 130 and adapter module 100. This provides a preferred key element of security in the system as the adapter module 100 only trusts AuthGrants that are issued by the server, and the AuthGrants cannot be read or modified by the mobile device 150 or any other party in between the server and the adapter module 100. Additional mobile devices 150 may enter the authorization zone 104 (block 308).

[00152] As the user approaches a specific adapter module 100, the user enters the payment zone 102 and an event threshold is triggered based on heuristics performed by the mobile device 150. Blocks 310 and 312 show the loop steps of waiting for a mobile device 150 from the authorization zone 104 to enter the payment zone 102. If the user leaves the authorization zone 104 without entering the payment zone 102, the adapter module 100 returns to advertising its presence (block 300).

[00153] FIGS. 8C and 9B generally show the user entering the payment zone. The mobile device 150 verifies that it has an unexpired and valid AuthGrant. If the AuthGrant is not good, it may be requested again, repeating the Auth Request process (block 315). If the AuthGrant is good, the mobile device 150 sends the valid AuthGrant (including the wallet balance (block 322)) to the adapter module 100 to initiate a transaction. The mobile device

150 may issue the AuthGrant automatically without specific user interaction if the hands-free mode is supported (and the device is a favorite (block 318), there is only one device in the payment zone 102 (block 318), and (optionally) there is only one user in the authorization zone 104 (block 320). If any of these factors are not present, the mobile device 150 will prompt and/or wait for the user to begin the transaction manually (block 324).

[00154] FIGS. 8D, 9C, and 9D generally show the transaction process. As shown in FIG. 9C, the adapter module 100 runs through a series of questions to determine if there are any issues that would prevent vending including: has the user canceled in-app? (block 326), has the user walked away? (block 328), is the coin return pressed? (block 330), has more than a predetermined period of time elapsed? (block 332). If the answer to any of these questions is “yes,” the transaction does not proceed. If the answers to all of these questions is “no,” the user makes a selection (block 334) on the payment accepting unit 120 in the same or similar manner as compared to if cash or credit were presented to the payment accepting unit 120. If the machine 120 is able to vend (block 336), it attempts to release the product. If the vend fails (block 338) it is reported by the machine (block 340) and a credit is returned to the virtual wallet (block 342). If the vend is successful (block 338) it is reported by the machine (block 344). Put another way, after the transaction is complete, the adapter module 100 returns to the mobile device 150 the details of the transaction as well as an encrypted packet containing the vend details to be sent to the server 130 via the mobile device 150. Optionally, the adapter module 100 can pass additional information not directly related to the transaction such as payment accepting unit health, sales data, error codes, etc.

[00155] FIGS. 8D and 9E generally show the multi-vend function. If the machine has enabled multi-vend capabilities (block 350) and the multi-vend limit has not been reached, the process returns to the question of whether the user is in the payment zone (block 310 of FIG. 9A). If the machine does not have enabled multi-vend capabilities (block 350) or the multi-vend limit has been reached, the wallet is decremented by the vend amount(s) and “change” is returned to the virtual wallet (block 354) and the process ends (block 356).

[00156] FIG. 8E is a timing schematic showing an exemplary Login process. FIG. 8F is a timing schematic showing an exemplary bootup process. FIG. 8G is a timing schematic showing an exemplary Account Check/Update process.

[00157] Several of the figures are flow charts (e.g. FIGS. 9A-9E) illustrating methods and systems. It will be understood that each block of these flow charts, components of all or

some of the blocks of these flow charts, and/or combinations of blocks in these flow charts, may be implemented by software (e.g. coding, software, computer program instructions, software programs, subprograms, or other series of computer-executable or processor-executable instructions), by hardware (e.g. processors, memory), by firmware, and/or a combination of these forms. As an example, in the case of software, computer program instructions (computer-readable program code) may be loaded onto a computer to produce a machine, such that the instructions that execute on the computer create structures for implementing the functions specified in the flow chart block or blocks. These computer program instructions may also be stored in a memory that can direct a computer to function in a particular manner, such that the instructions stored in the memory produce an article of manufacture including instruction structures that implement the function specified in the flow chart block or blocks. The computer program instructions may also be loaded onto a computer to cause a series of operational steps to be performed on or by the computer to produce a computer implemented process such that the instructions that execute on the computer provide steps for implementing the functions specified in the flow chart block or blocks. Accordingly, blocks of the flow charts support combinations of steps, structures, and/or modules for performing the specified functions. It will also be understood that each block of the flow charts, and combinations of blocks in the flow charts, may be divided and/or joined with other blocks of the flow charts without affecting the scope of the invention. This may result, for example, in computer-readable program code being stored in whole on a single memory, or various components of computer-readable program code being stored on more than one memory.

Distinction From Known Systems

[00158] Many of the known systems and methods require that the payment accepting unit be persistently (continuously) connected to and/or connectable on demand to some sort of remote server in order to function. As an example, the Carlson reference describes a system and a method for using a portable consumer device. Described embodiments include a consumer using the portable consumer device to dial a number to purchase an item (product or service) in a vending machine, to send an SMS to purchase an item in a vending machine, or to use a mobile wallet to purchase an item in a vending machine. It is mentioned in one embodiment that the consumer may launch an application in the portable consumer device or, alternatively, the portable consumer device may automatically detect the vending machine and prompt the consumer to enter information associated with the vending machine. It

should be noted, however, that even when there is automatic detection, the user is prompted to enter information (e.g. a machine alias, payment information, or a PIN) and it can be inferred that this is entered on the portable consumer device. Once connected to a payment processing network, the authorization process begins using a payment processing network and/or payment server. Significantly, all of the embodiments described in the Carlson reference specify that the payment server sends an authorization response message to the vending machine. This means that, unlike the mobile-device-to-machine payment systems described herein, a persistent network connection is required for the Carlson system to function. Other references that disclose systems that require a persistent network connection include the Khan reference (the MicroAdapter having the persistent connection), the Garibaldi reference, and the Weiner reference.

[00159] Many of the known systems and methods require the user to significantly interact with their mobile devices. As an example, the Whigham reference is directed to a system that eliminates the need for currency for a vending machine and also eliminates the need for a dedicated online connection between the vending machine and the issuer of a credit card or a debit card. Instead the Whigham system and method allows a consumer to purchase a product from an automatic vending machine by using the consumer's cellular telephone, personal digital assistant (PDA), or similar wireless communication device as a link between the provider of the products in the vending machine and the vending machine. The Whigham reference, however, sets forth a system and method requires significant interaction between the consumer and his telephone including dialing a telephone number to a server (that, in turn, provides a vend code to the consumer), requesting a specific product (e.g. by dialing additional digits, although this step is optional if a unique number was dialed for a specific product), and transmitting a vend code to the vending machine. (Other references that disclose systems that require user interaction with the phone include the Offer reference, the Khan reference, the Belfer reference, and the Carlson reference.) In addition to other differences, some of the mobile-device-to-machine payment systems described herein do not require the user to interact with his mobile device at all, which can be contrasted to known systems and methods that require the consumer to, for example, dial a telephone number, enter a machine identification, and/or enter a product identifier using the mobile device to purchase a product.

[00160] The known systems and methods that use a cellular telephone to facilitate cashless transactions at a vending machine use the cellular telephone to authorize a particular

transaction. For example, once the user knows what he wants from a vending machine, he can dial a server and receive authorization to make a specific purchase. Sometimes this includes dialing additional numbers on the cellular telephone to specify a particular product. The mobile-device-to-machine payment systems described herein take a completely different approach. The mobile-device-to-machine payment systems described herein are not specifically interested in the details of the transaction to authorize the transaction. Instead, the mobile-device-to-machine payment systems function more like a gift card, a credit card, or a debit card in that they allow the user to have funds to make a purchase. When a user is in range, the adapter module 100 (via a mobile device 150) sends an AuthRequest to the server 130 to preemptively obtain authorization to make funds available. The server 130 returns the AuthGrant for funds to the adapter module 100 (via a mobile device 150) so that the user may use the funds to make a purchase. The AuthGrant may remain valid until it expires. This gives the user significantly more flexibility than known systems and methods.

Miscellaneous

[00161] It is to be understood that the inventions, examples, and embodiments described herein are not limited to particularly exemplified materials, methods, and/or structures. It is to be understood that the inventions, examples, and embodiments described herein are to be considered preferred inventions, examples, and embodiments whether specifically identified as such or not.

[00162] All references (including, but not limited to, foreign and/or domestic publications, patents, and patent applications) cited herein, whether supra or infra, are hereby incorporated by reference in their entirety.

[00163] The terms and expressions that have been employed in the foregoing specification are used as terms of description and not of limitation, and are not intended to exclude equivalents of the features shown and described. While the above is a complete description of selected embodiments of the present invention, it is possible to practice the invention using various alternatives, modifications, adaptations, variations, and/or combinations and their equivalents. It will be appreciated by those of ordinary skill in the art that any arrangement that is calculated to achieve the same purpose may be substituted for the specific embodiment shown. It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described and

all statements of the scope of the invention that, as a matter of language, might be said to fall therebetween.

WHAT IS CLAIMED IS:

1. A method of payment processing, comprising:
 - at a device with one or more processors, memory, and two or more communication capabilities:
 - obtaining, from a payment module, an authorization request via a first communication capability;
 - sending, to a server, the authorization request via a second communication capability distinct from the first communication capability;
 - in response to sending the authorization request, obtaining, from the server, authorization information via the second communication capability;
 - after obtaining the authorization information, detecting a trigger condition to perform a transaction with a payment accepting unit associated with the payment module; and
 - in response to detecting the trigger condition, sending, to the payment module, at least a portion of the authorization information via the first communication capability.

METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS

ABSTRACT OF THE DISCLOSURE

A device with one or more processors, memory, and two or more communication capabilities obtains, from a payment module, an authorization request via a first communication capability (e.g., Bluetooth). The device sends, to a server, the authorization request via a second communication capability distinct from the first communication capability (e.g., cellular or WiFi technology). In response to sending the authorization request, the device obtains, from the server, authorization information via the second communication capability. After obtaining the authorization information, the device detects a trigger condition to perform a transaction with a payment accepting unit associated with the payment module. In response to detecting the trigger condition, the device sends, to the payment module, at least a portion of the authorization information via the first communication capability.

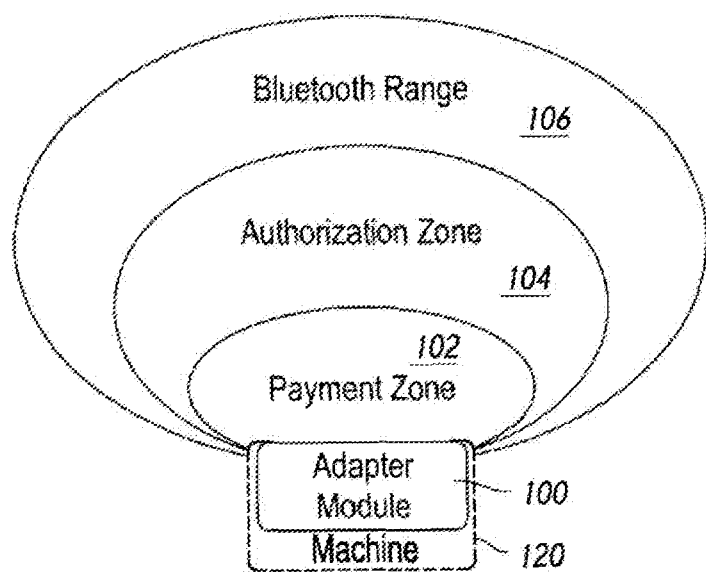


FIG. 1

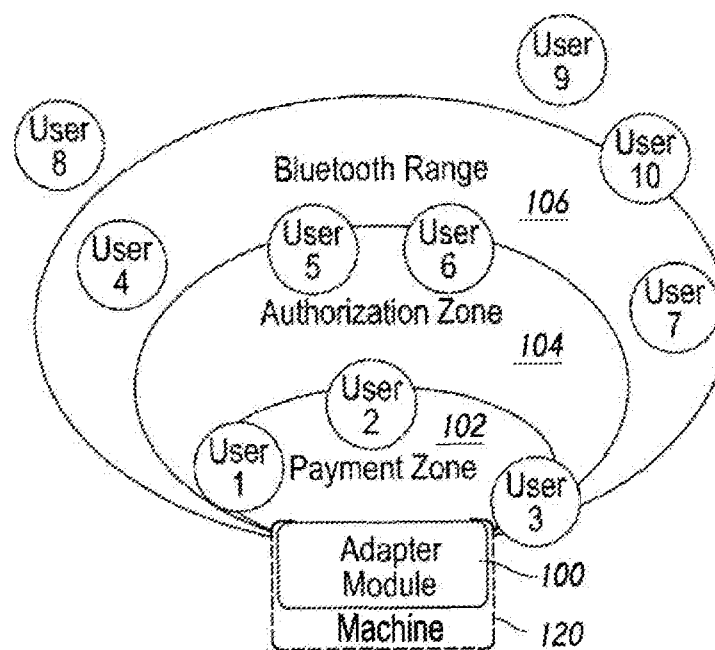


FIG. 2

Tab	Favorite?	Alert	View to User
All	Yes	No	User can make Hands-free Credit with the connected vending machine
All	No	Yes	User needs to launch Mobile Device and then swipe to make transaction manually
Favorite	Yes	No	Hands-free transaction will be available to the user via vending machine
Favorite	No	No	User is not alerted for the vending machine which is not a favorite machine. Hands-free mode will not work, manual swipe for transaction required by user.
Either All or Favorite	Yes	Yes	BUT Hands-free Credit is not available (disabled by module, expired AuthGrant, insufficient balance, or other issue), then user will get an alert so that user can swipe credit manually.

FIG. 3

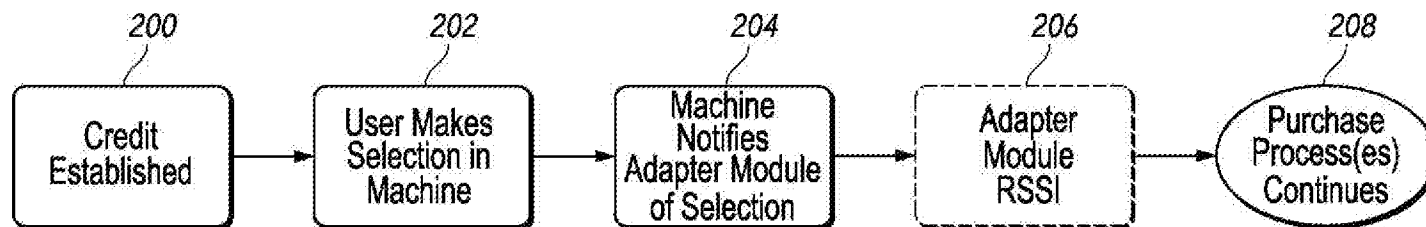


FIG. 4

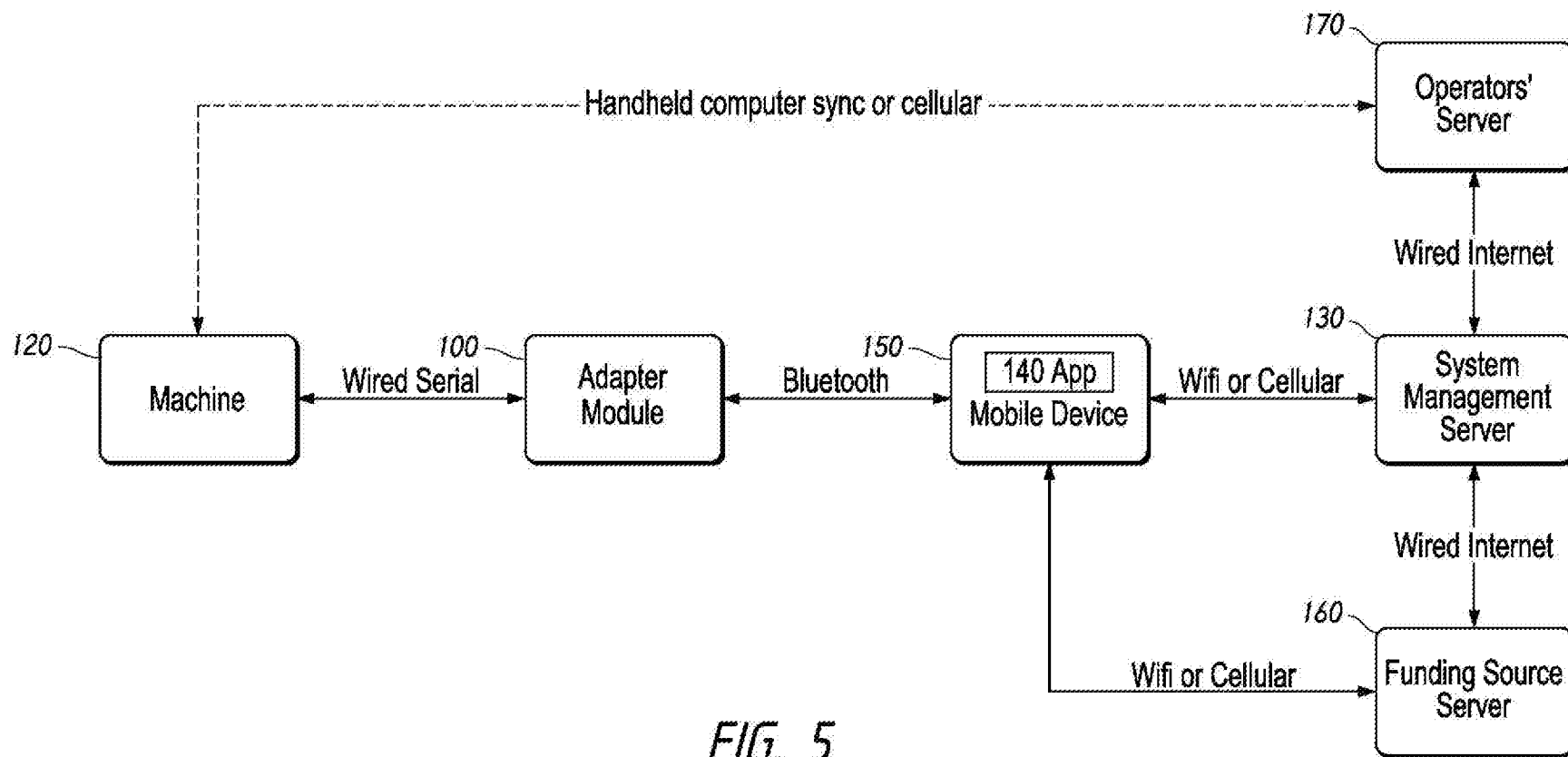
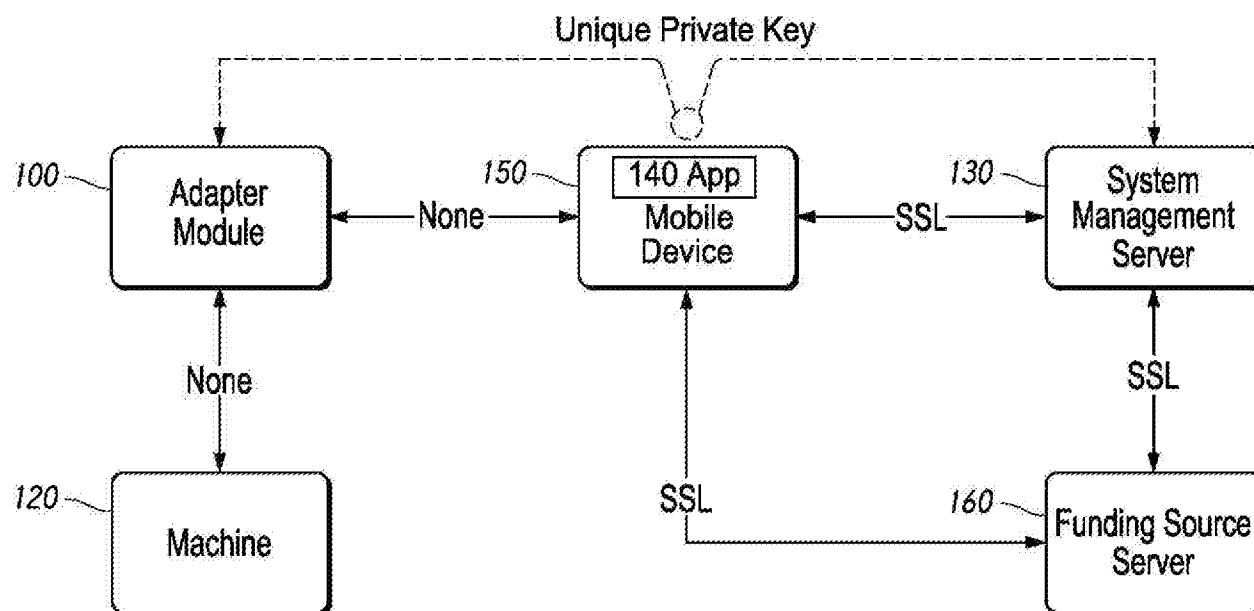


FIG. 5

*FIG. 6*

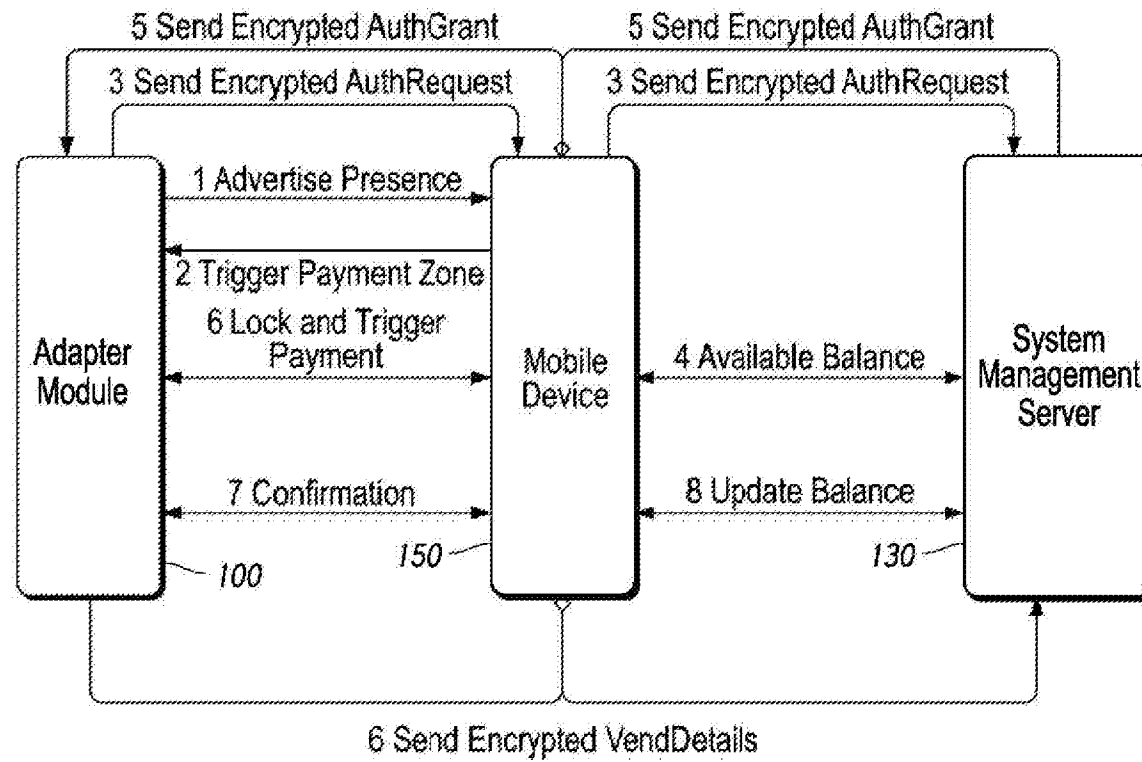


FIG. 7

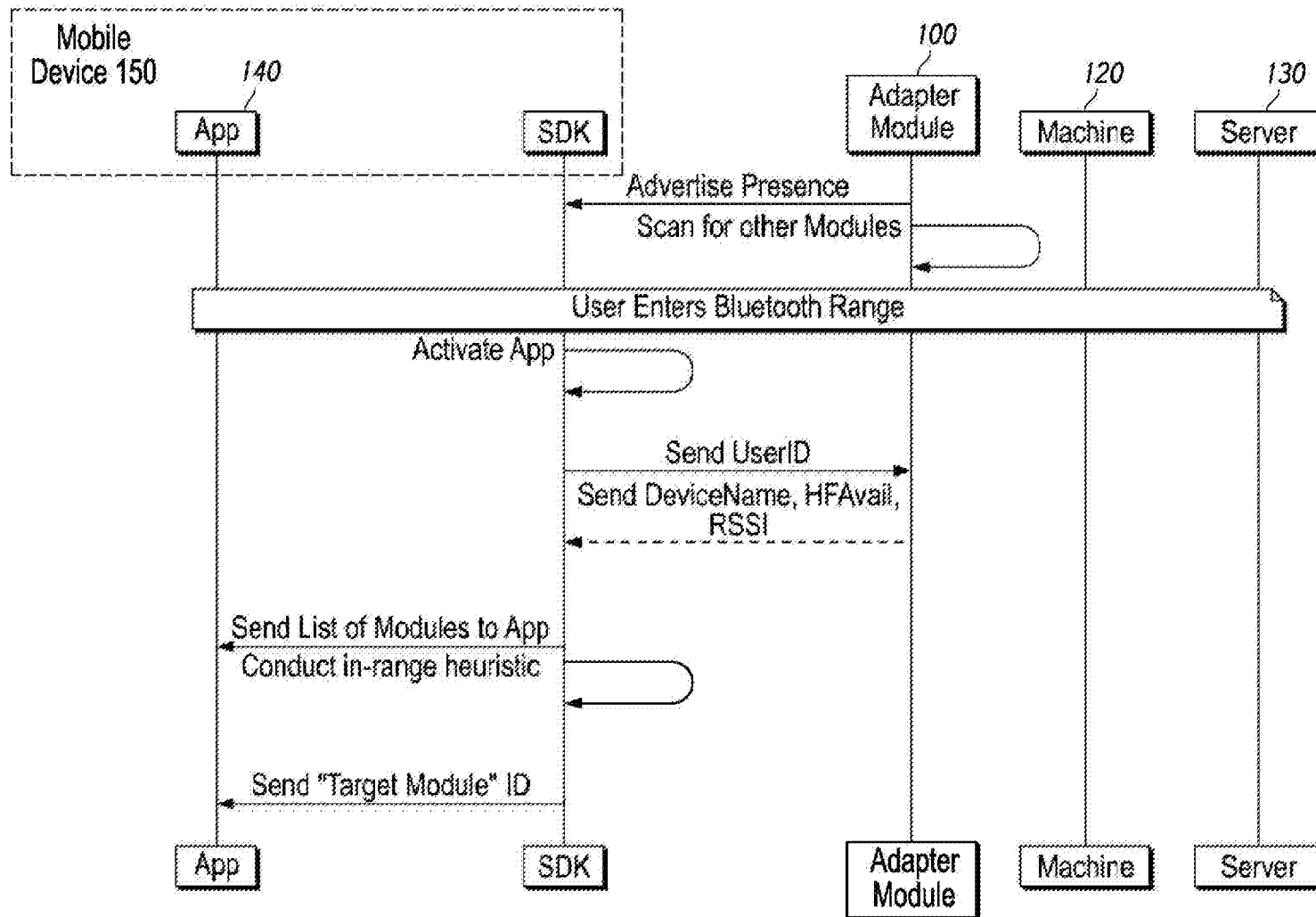


FIG. 8A

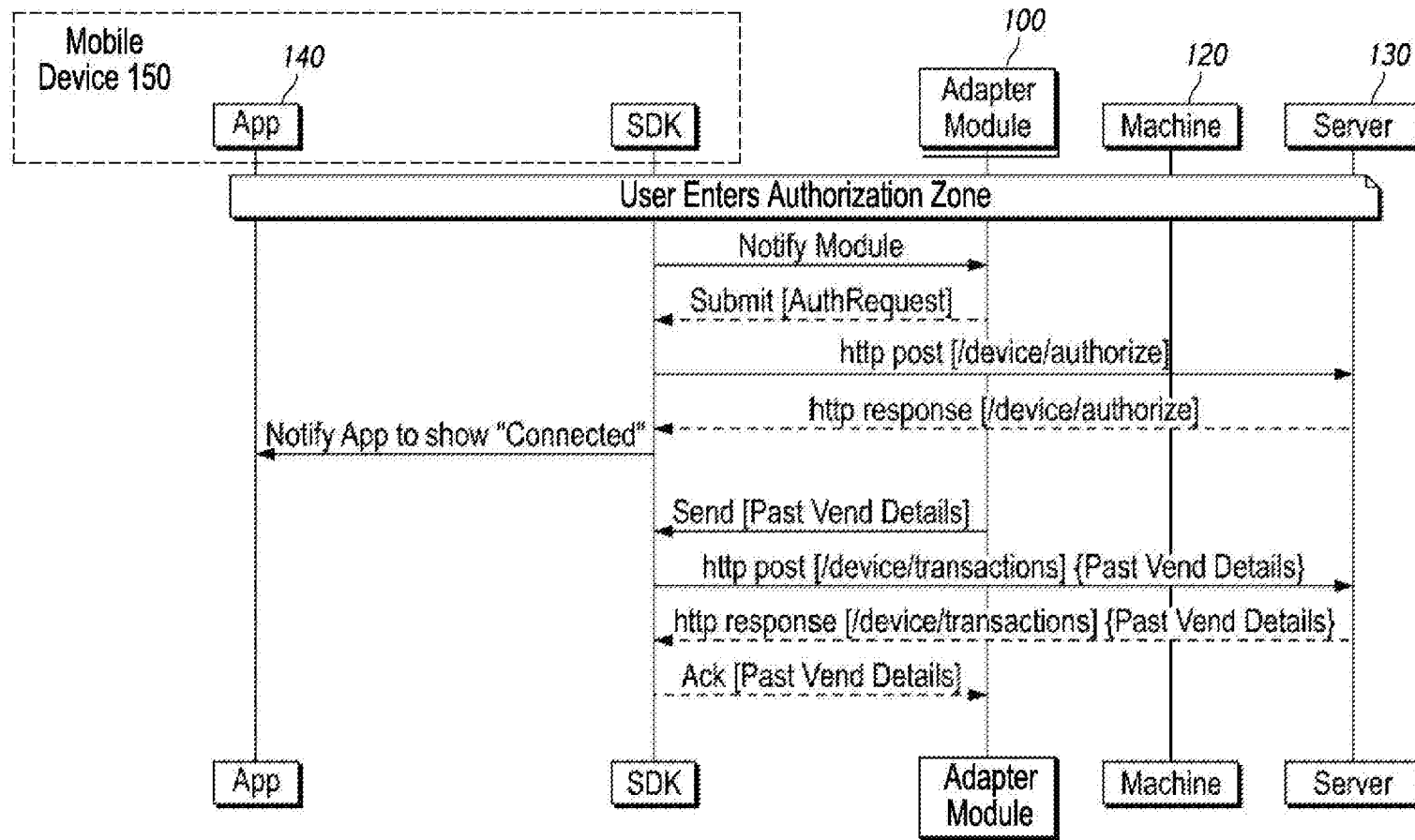


FIG. 8B

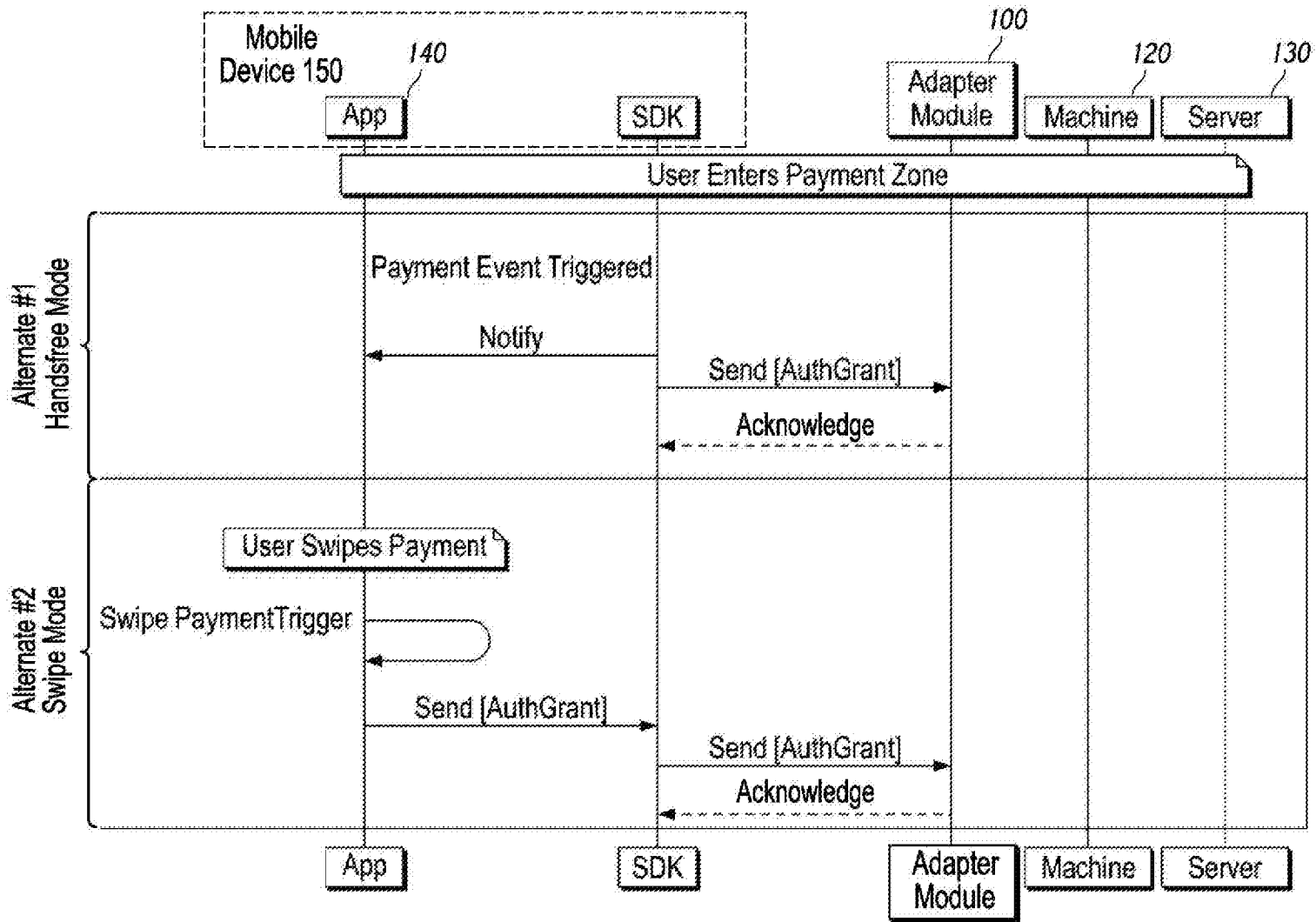


FIG. 8C

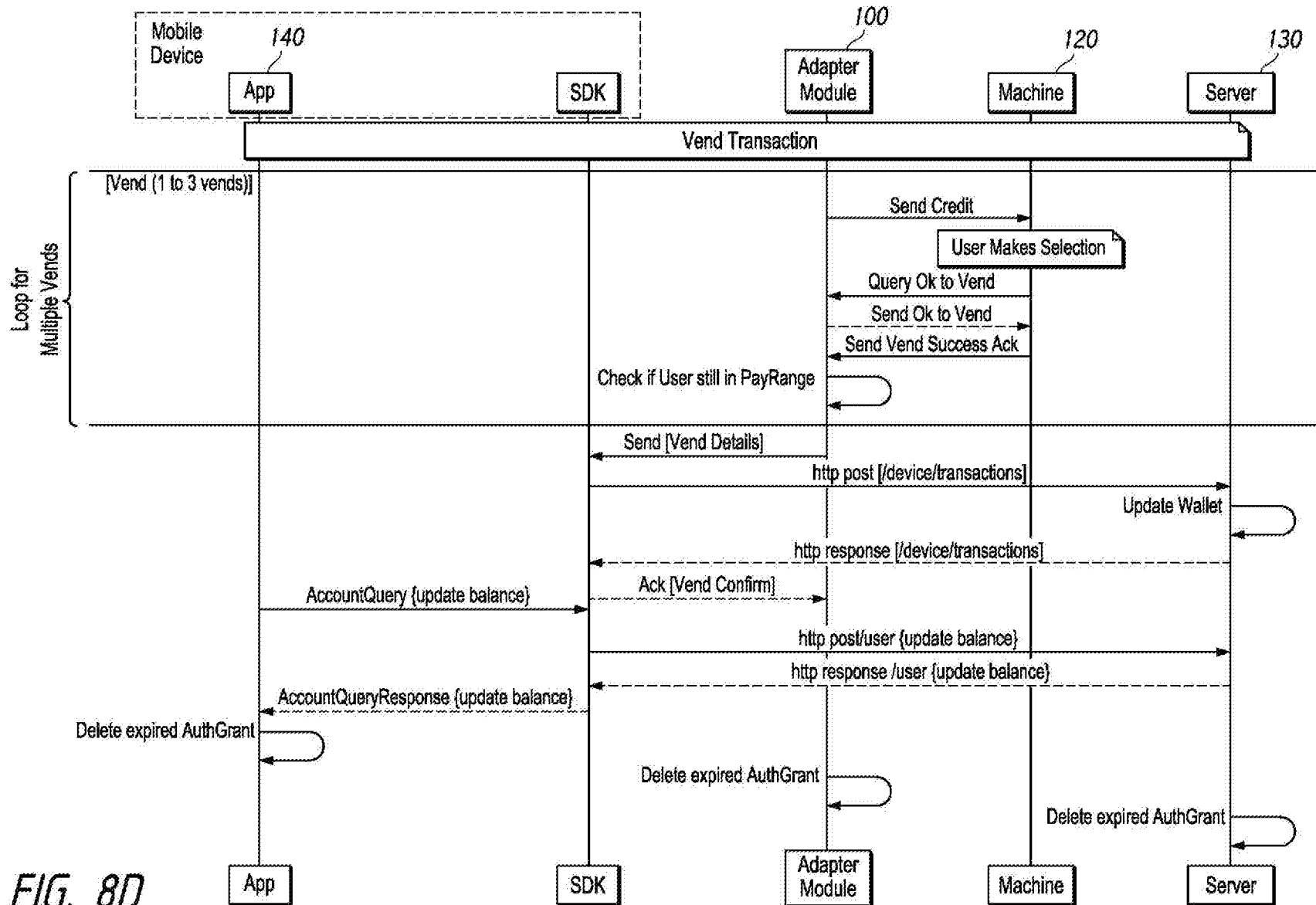


FIG. 8D

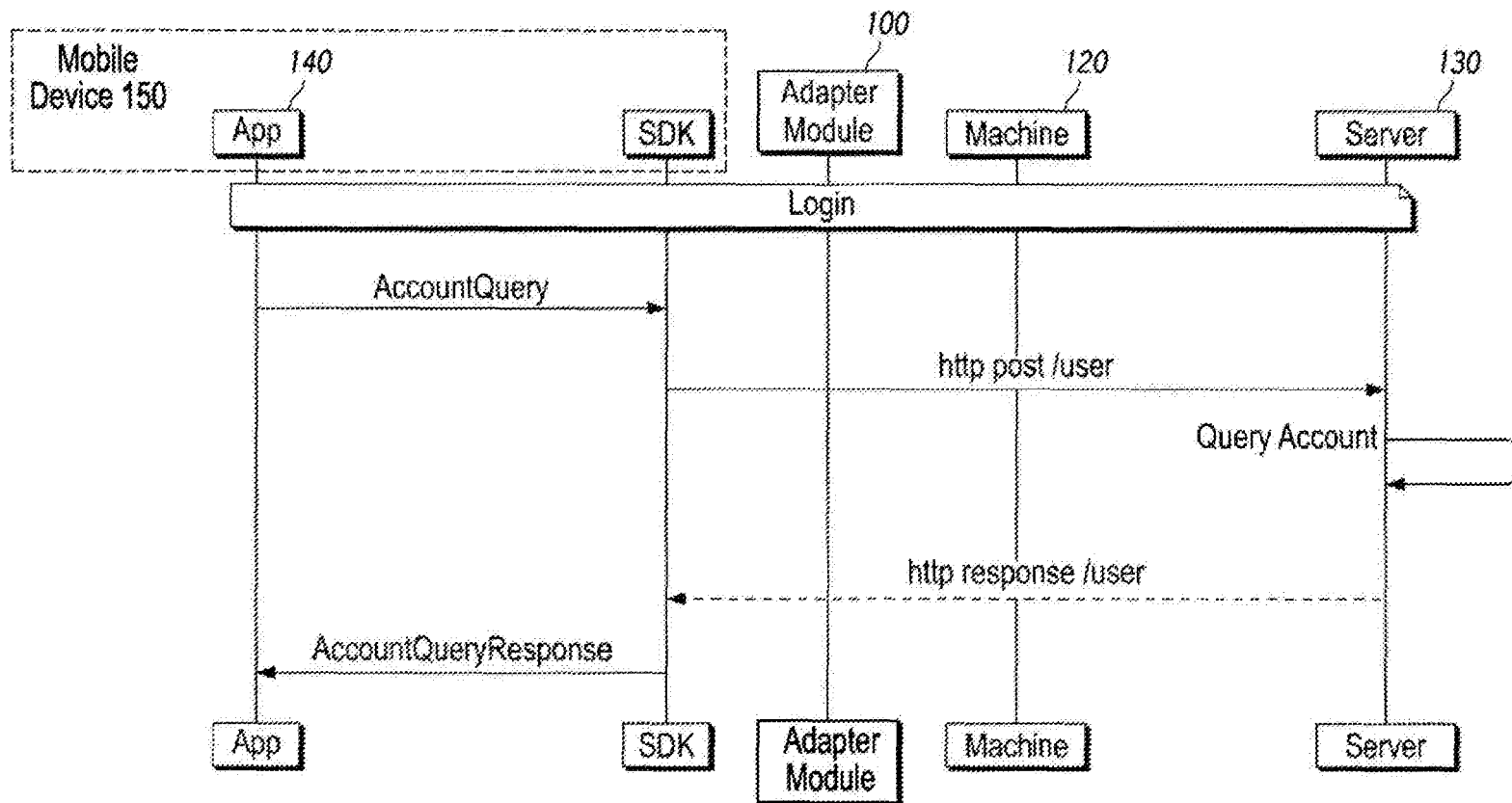


FIG. 8E

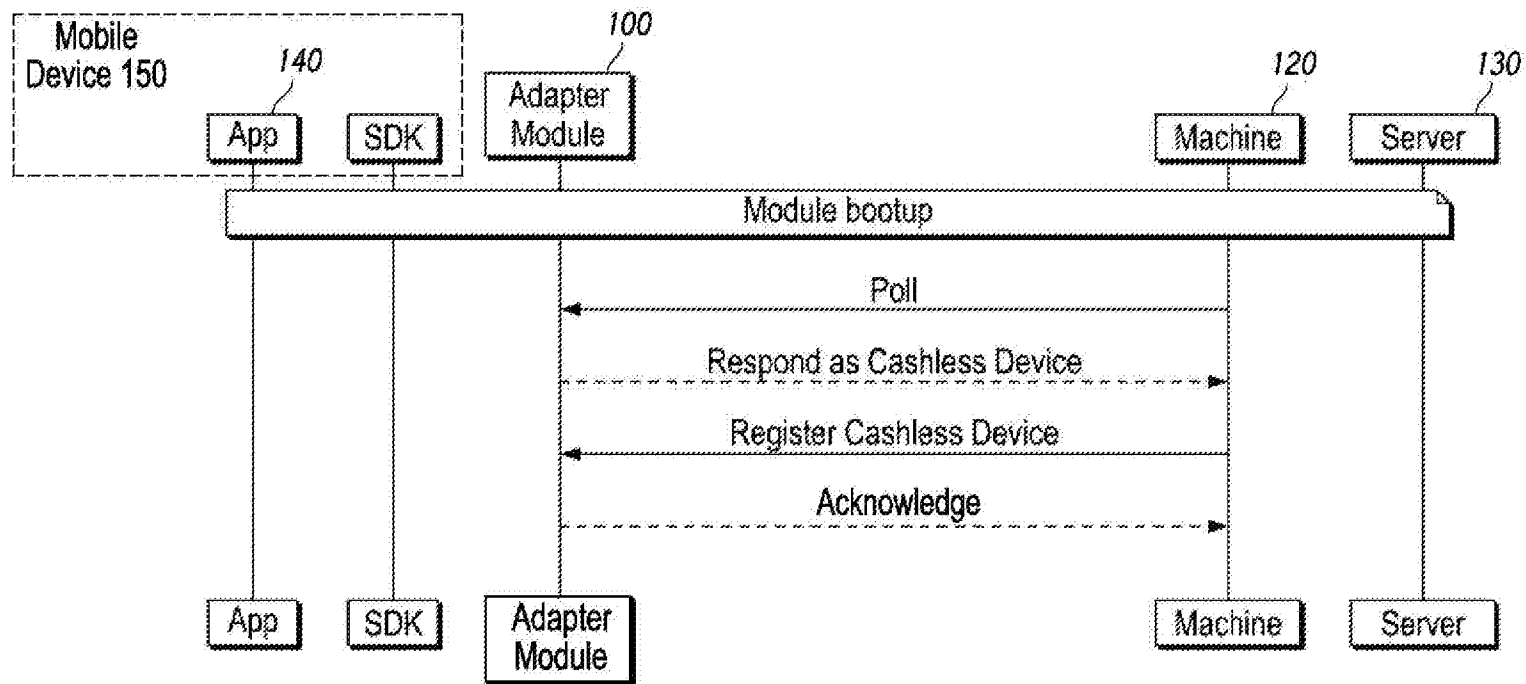


FIG. 8F

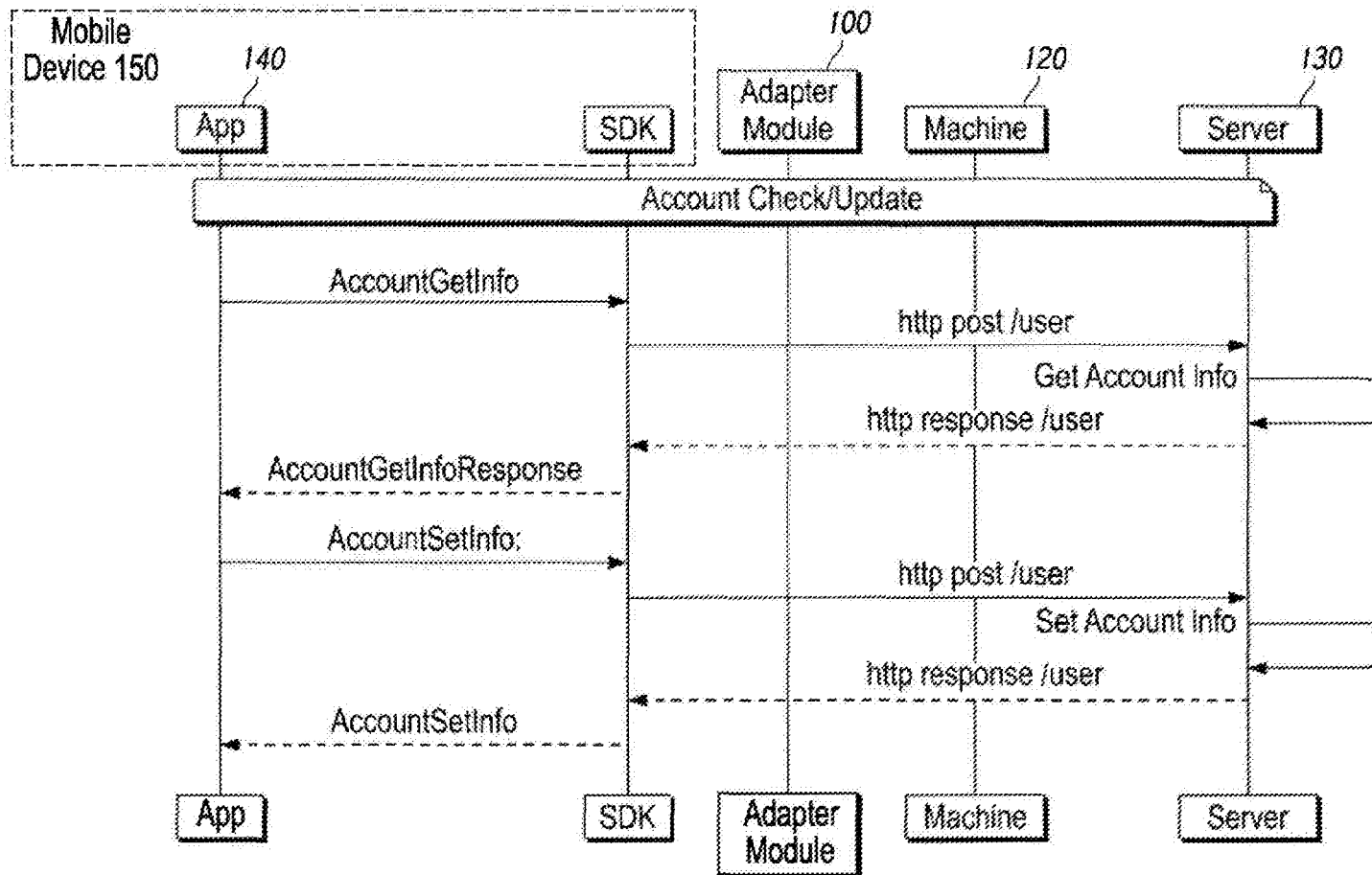


FIG. 8G

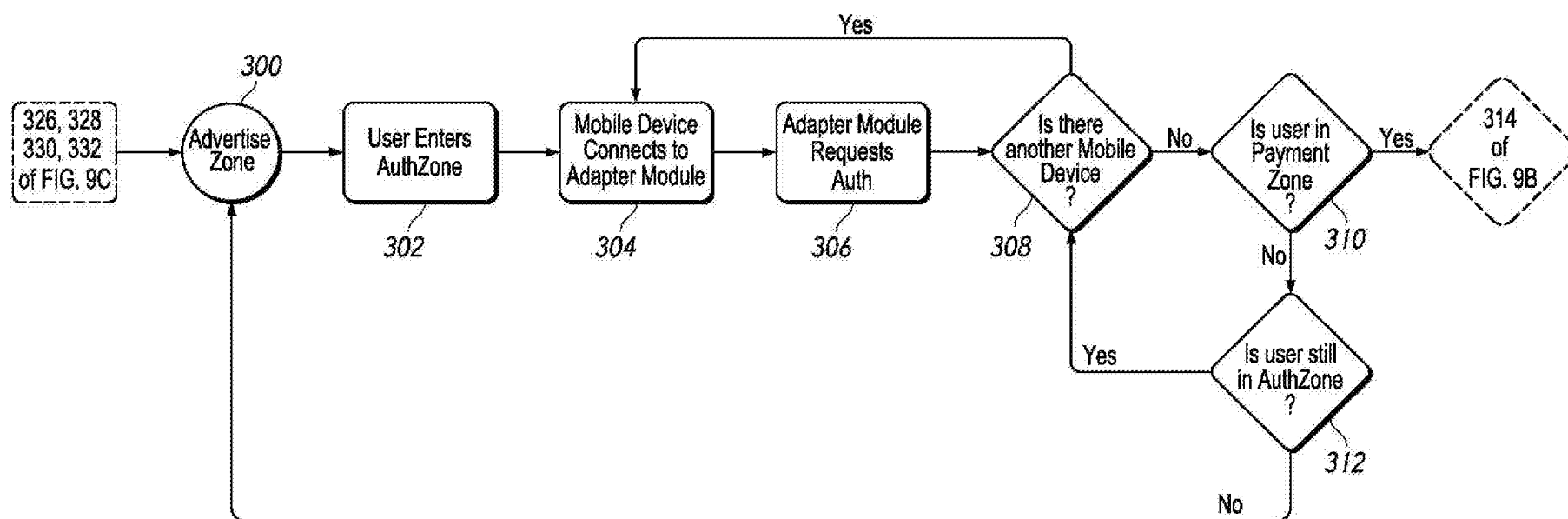


FIG. 9A

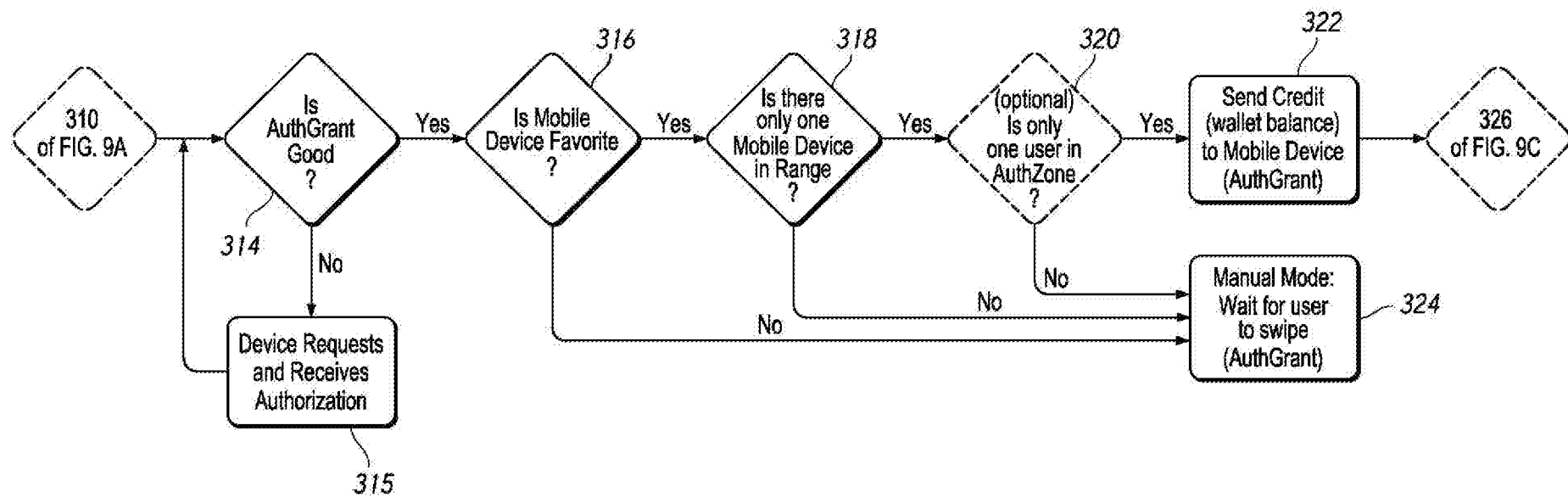
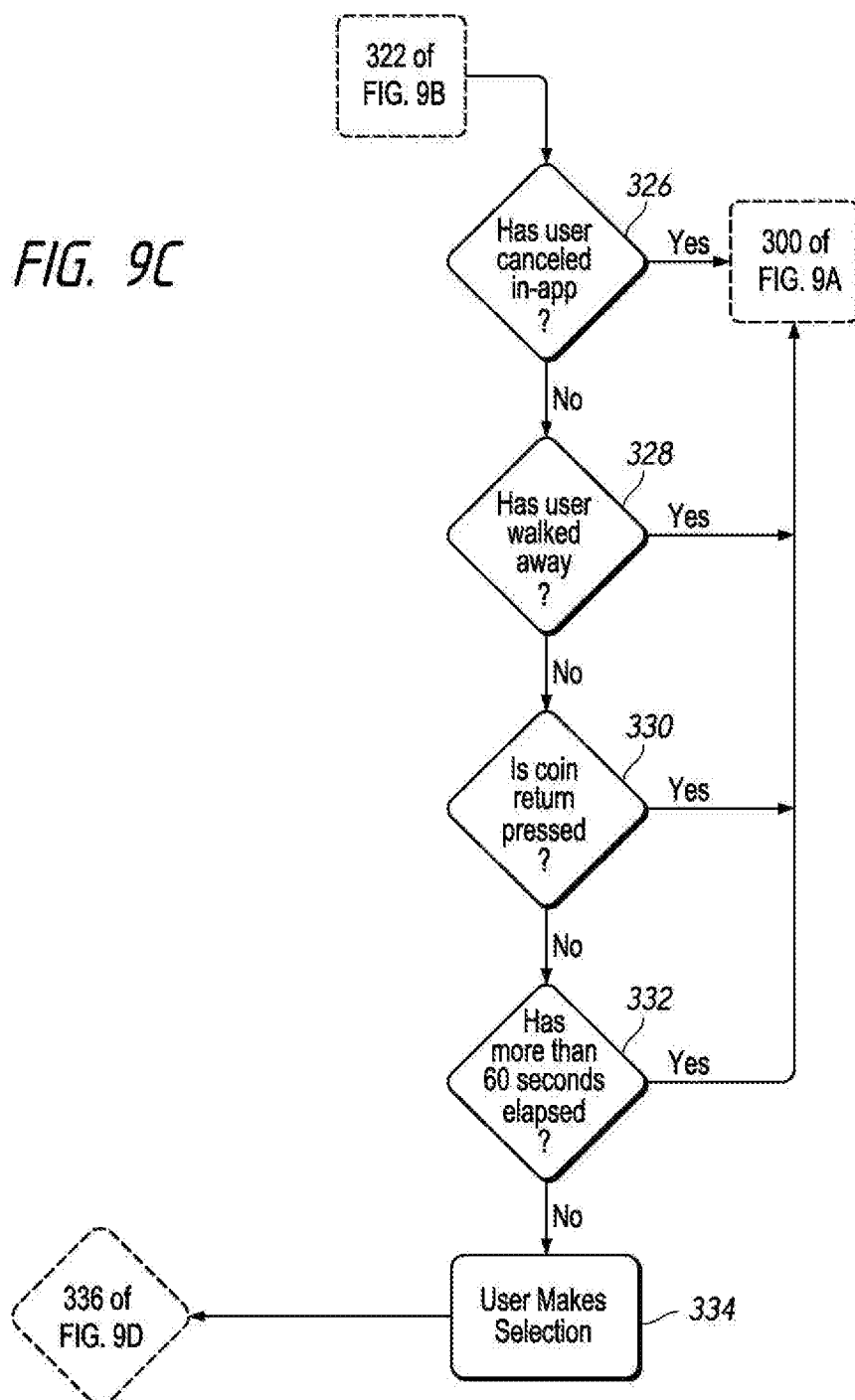
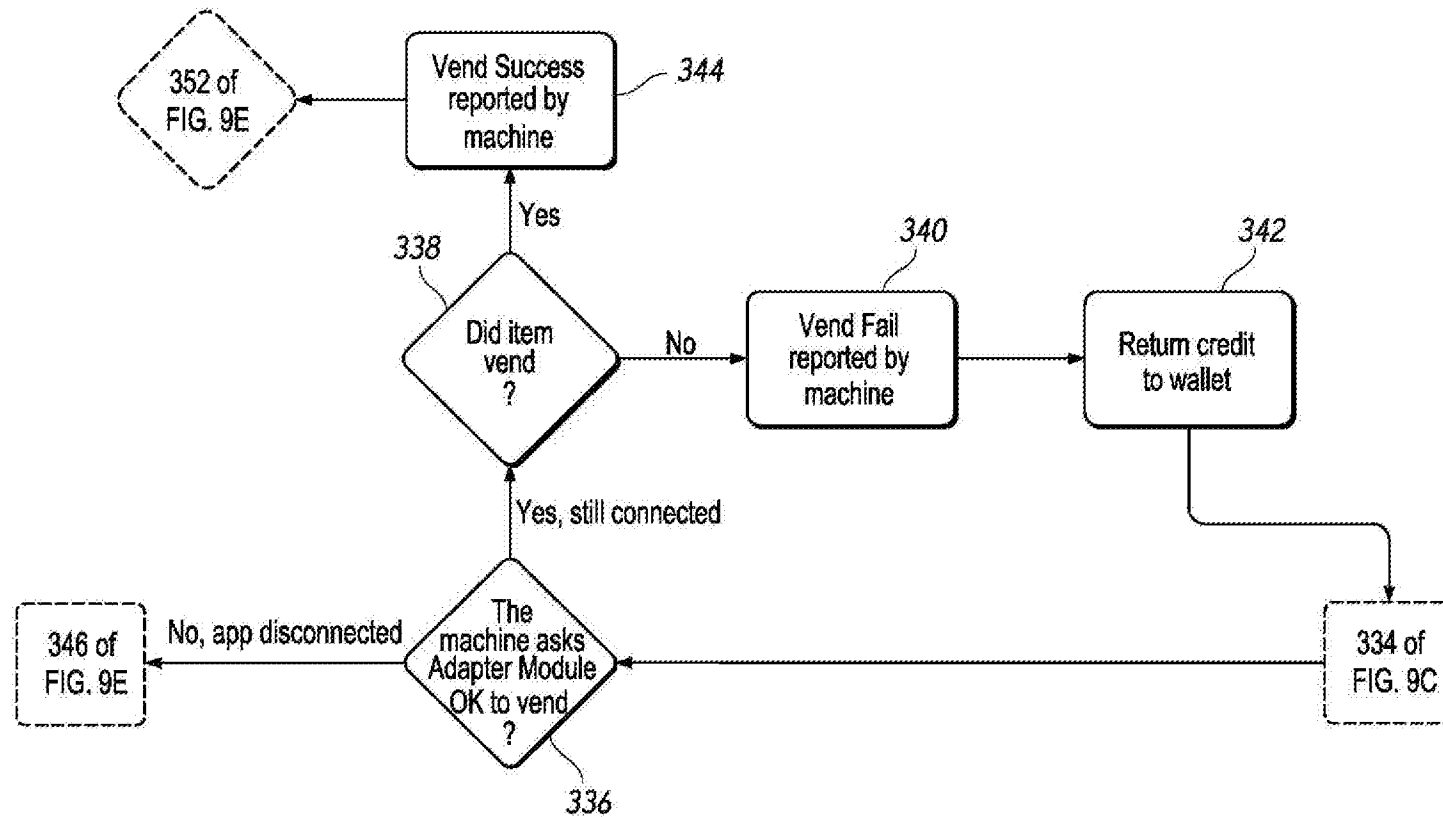
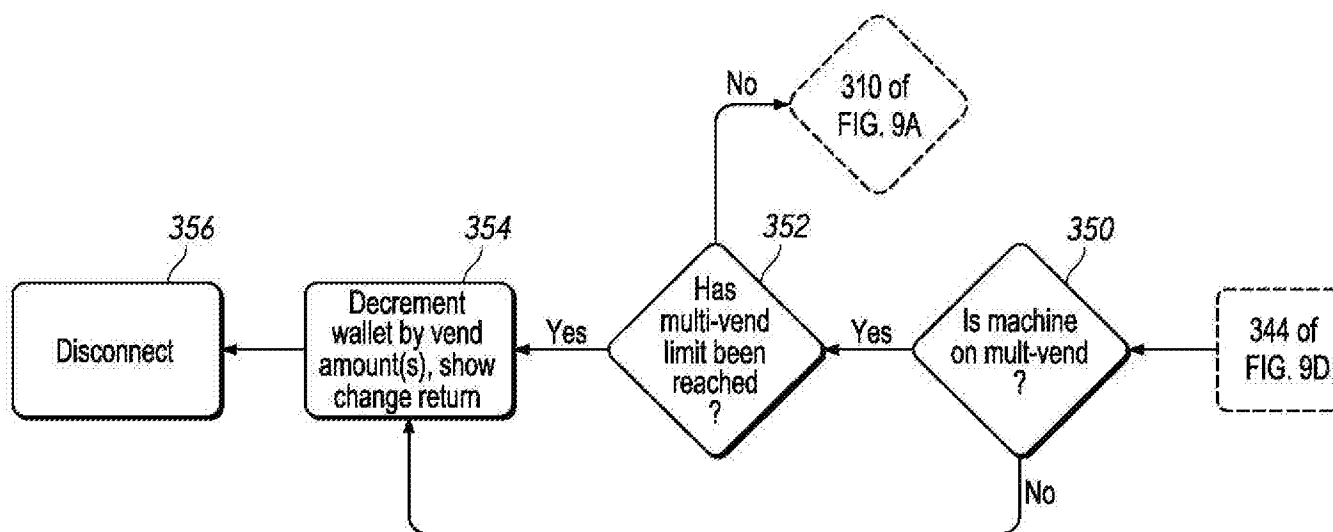


FIG. 9B

FIG. 9C



*FIG. 9D*

*FIG. 9E*

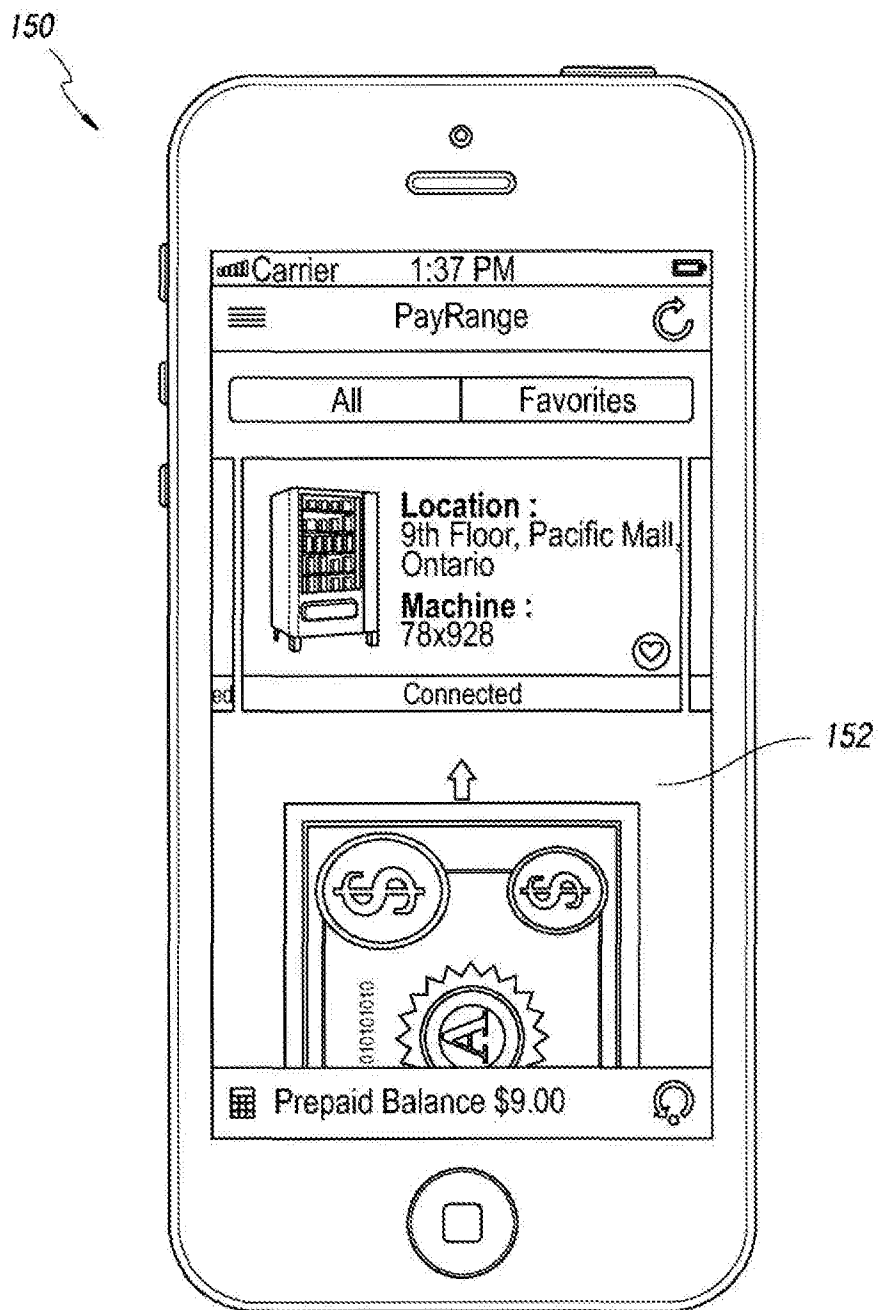


FIG. 10A

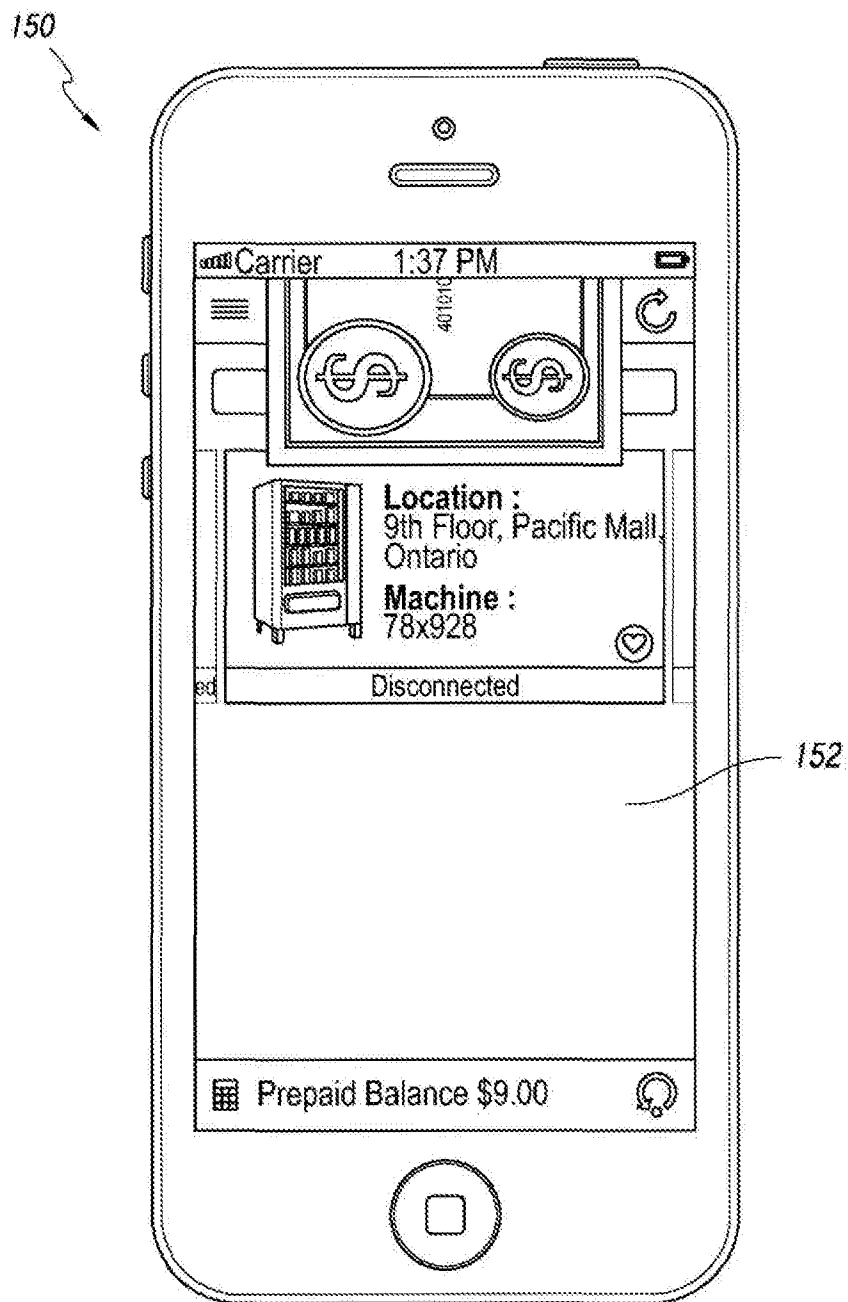


FIG. 10B

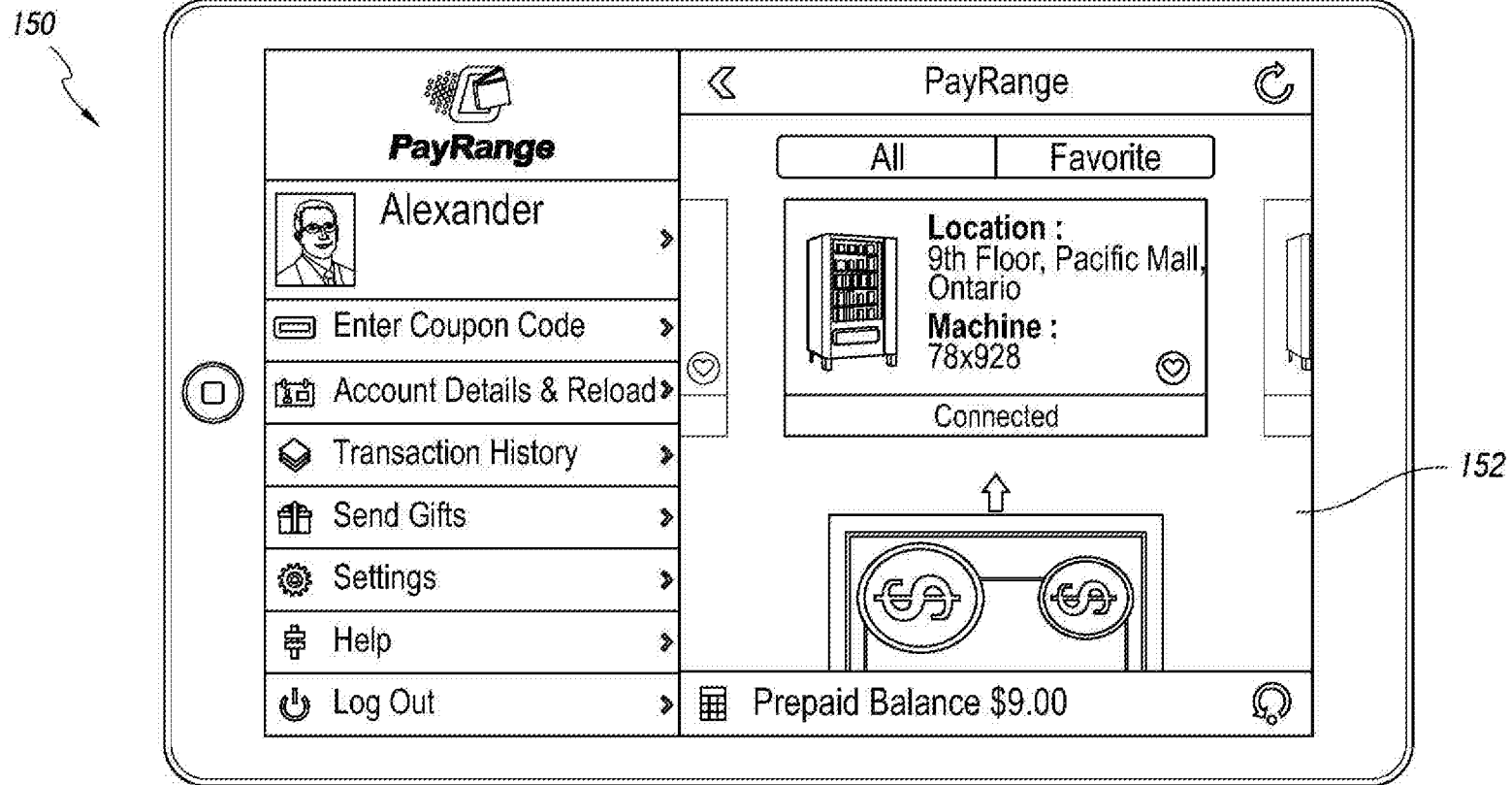


FIG. 10C

150

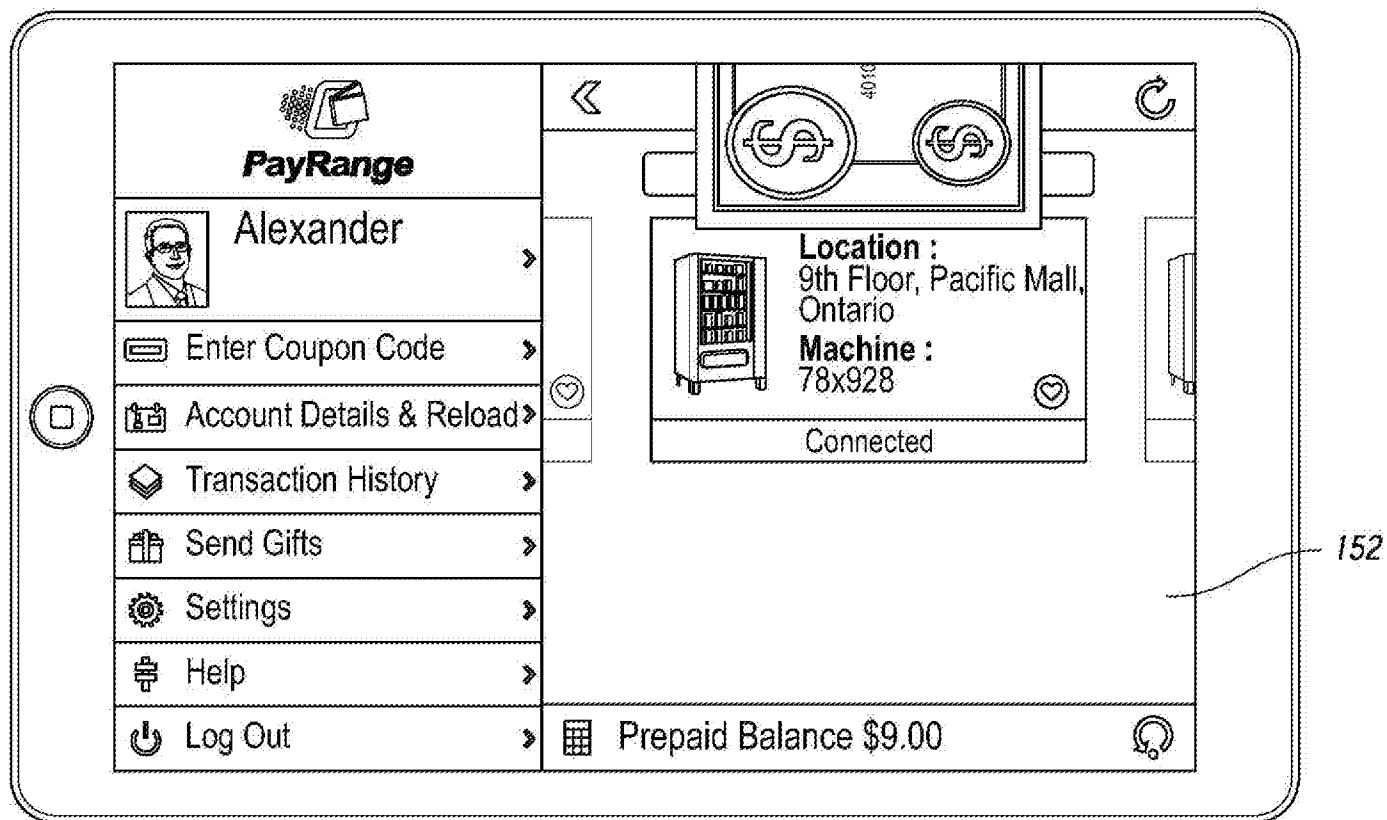


FIG. 10D

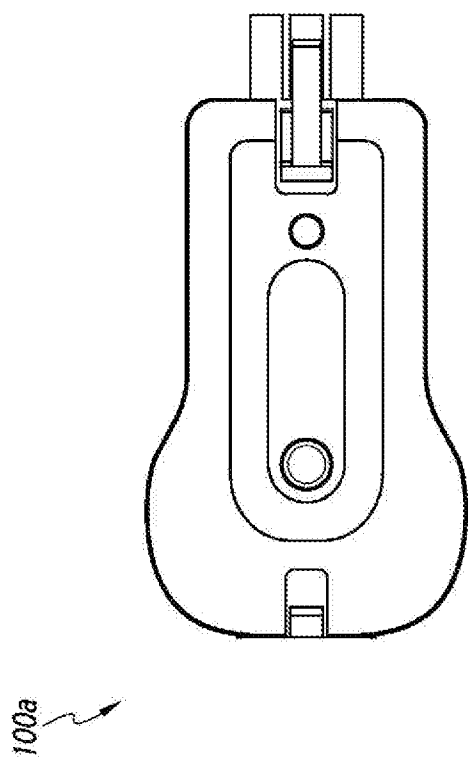


FIG. 12

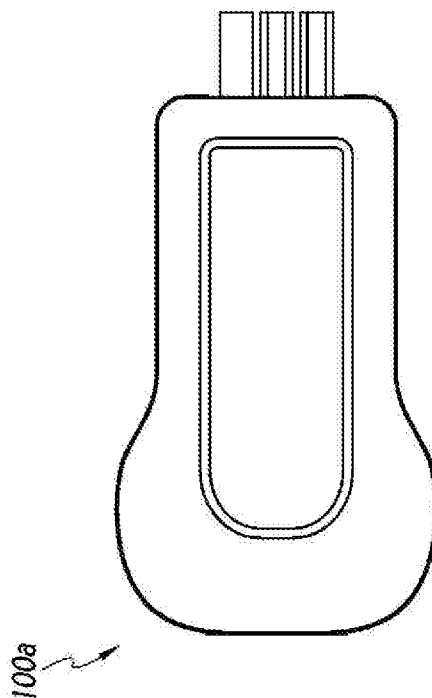


FIG. 13

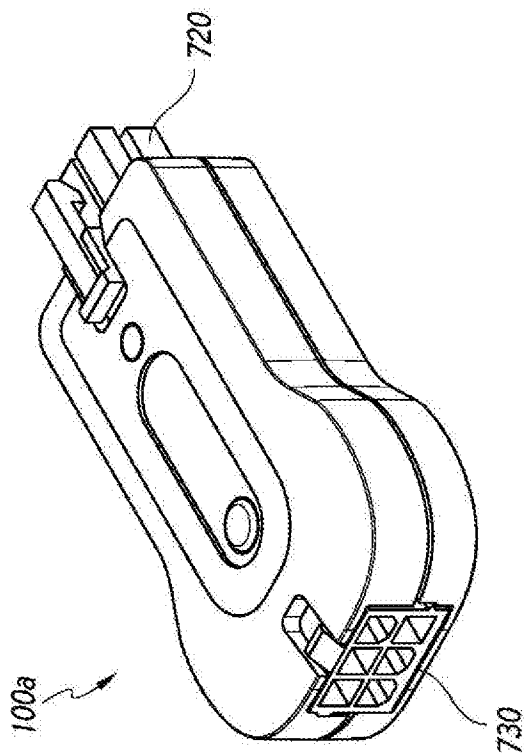
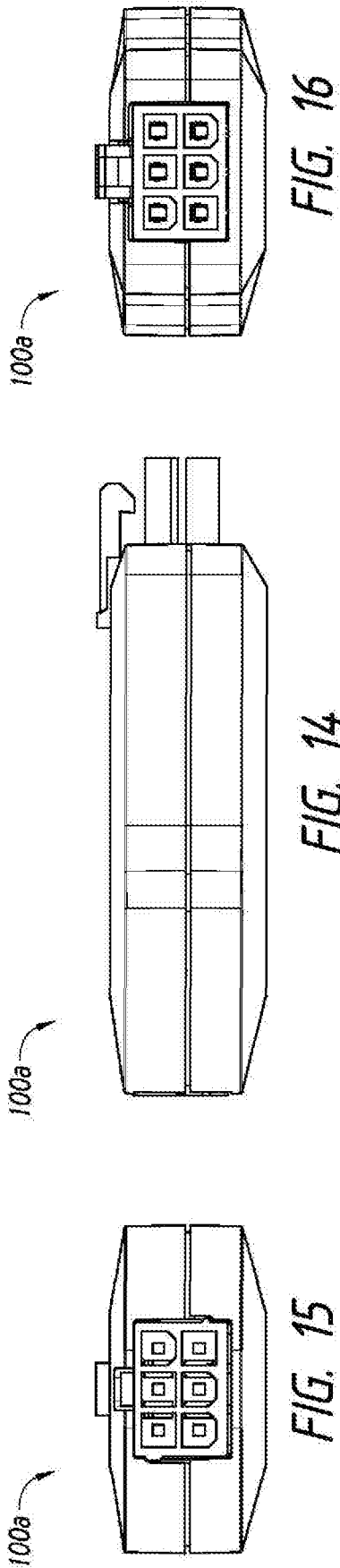
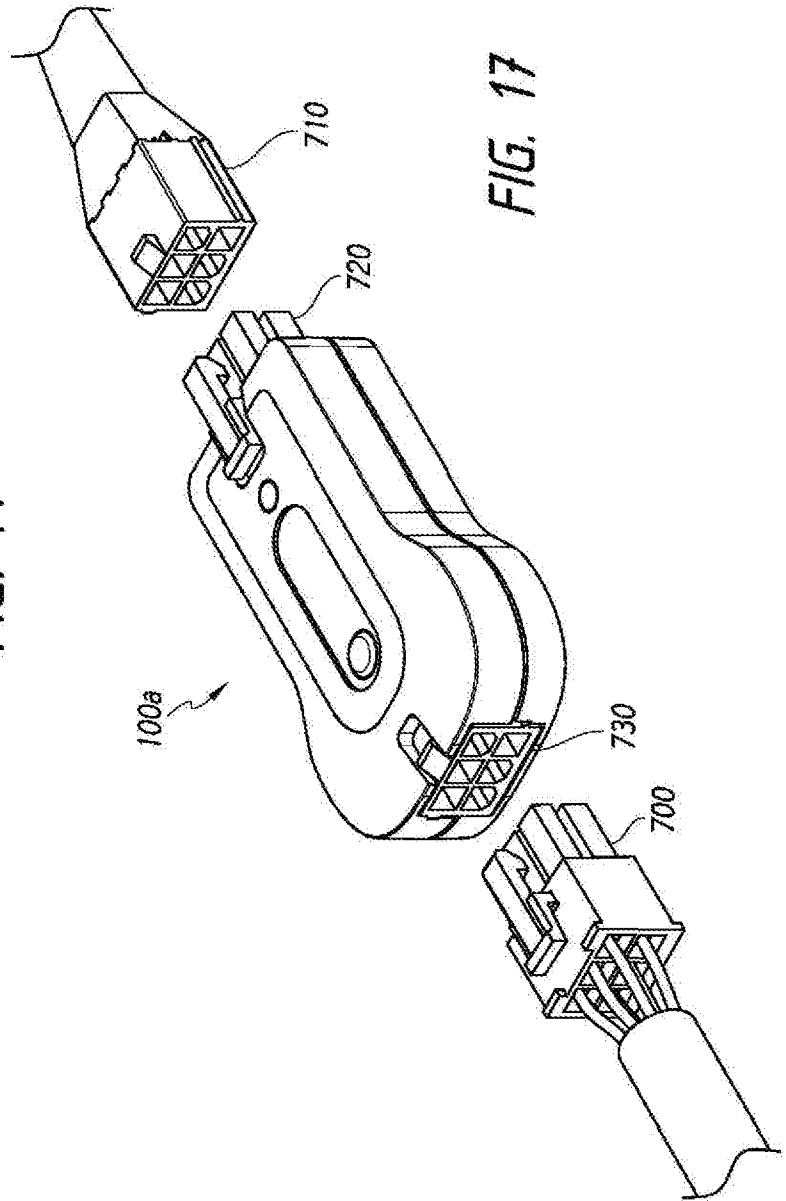
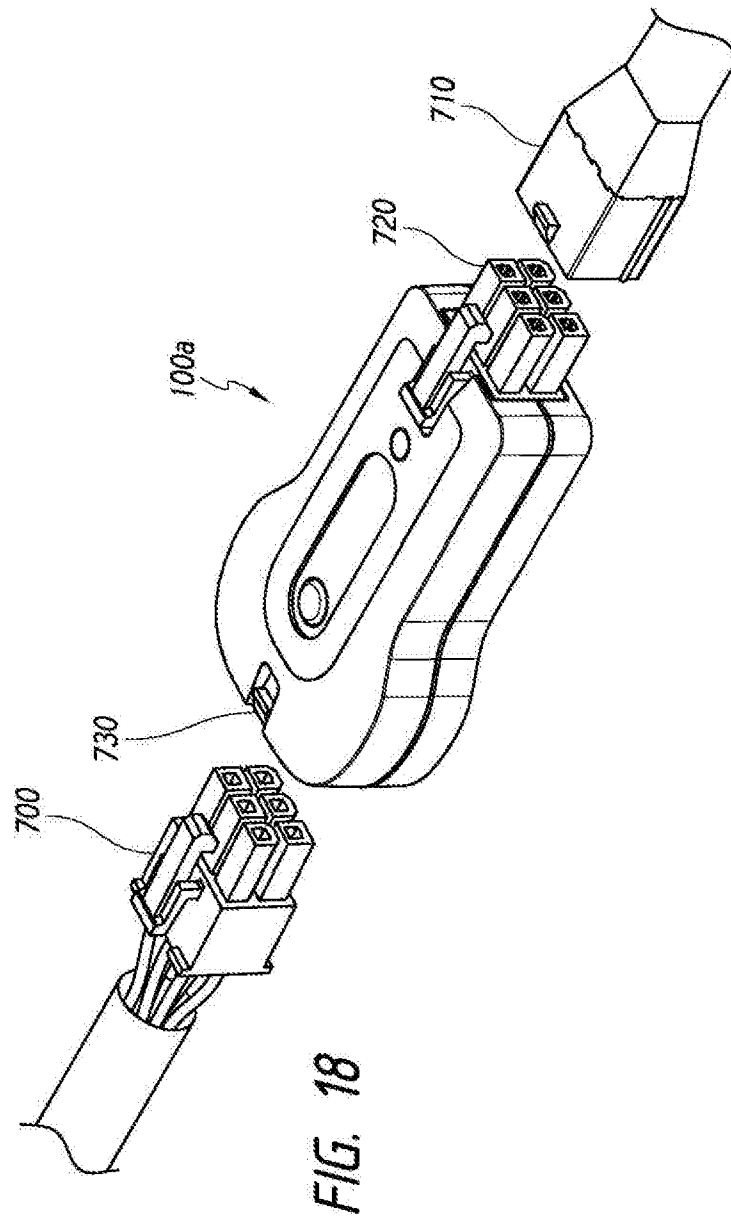


FIG. 11





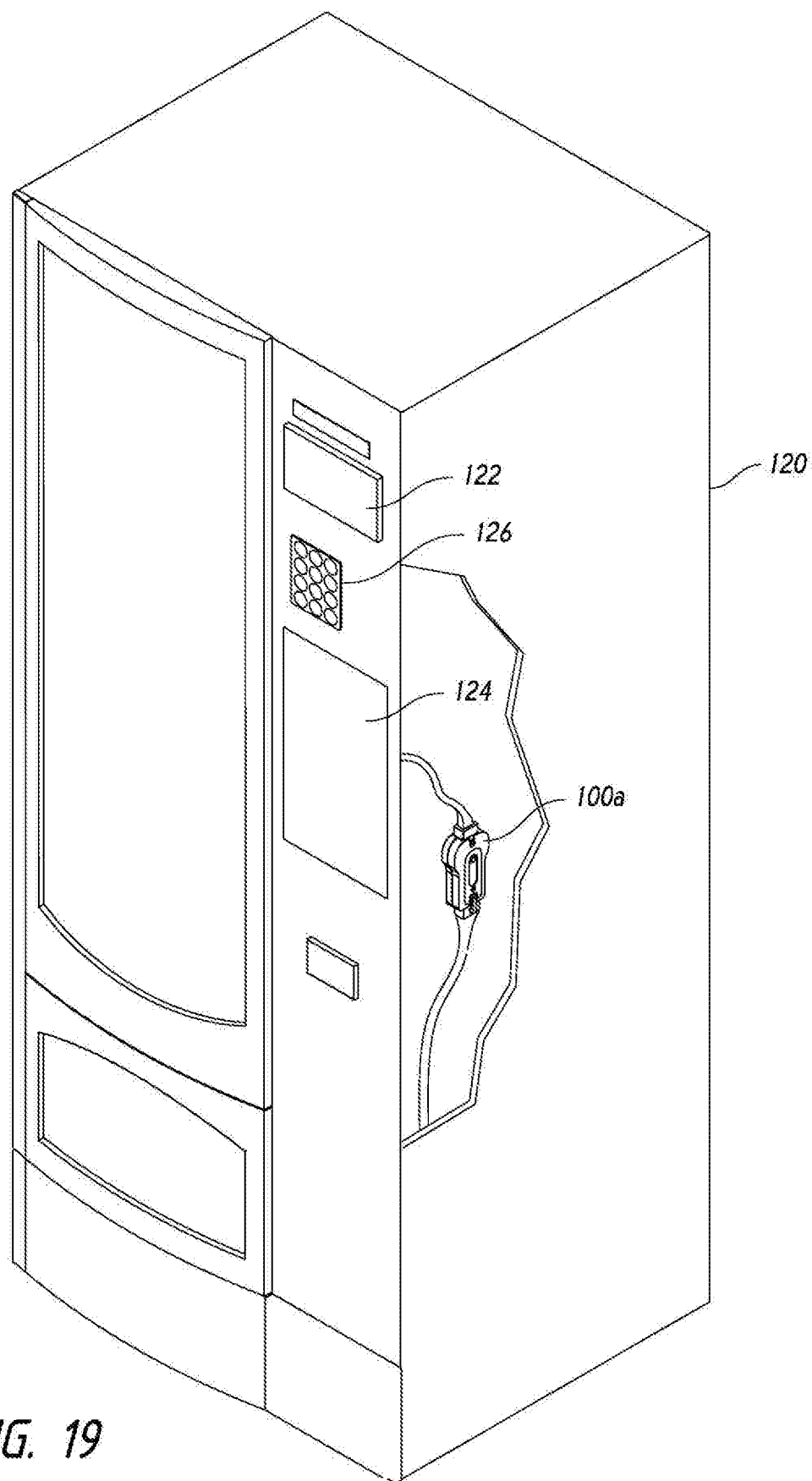


FIG. 19

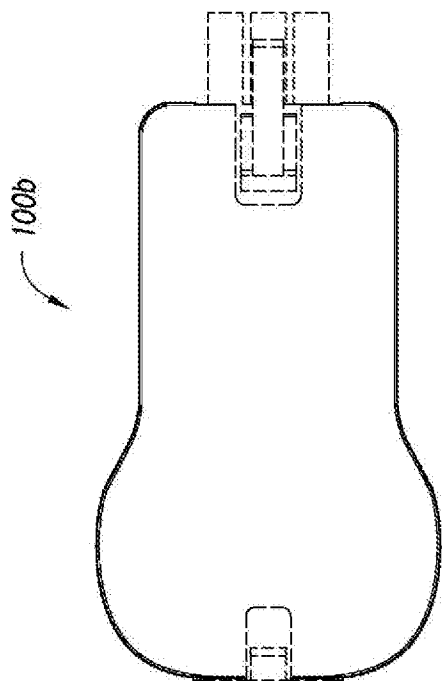


FIG. 21

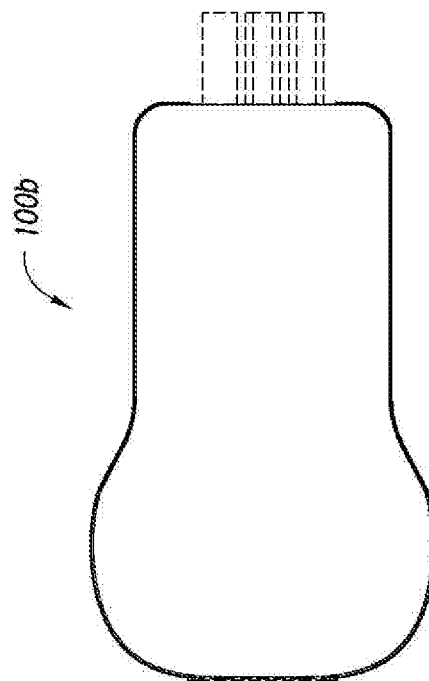


FIG. 22

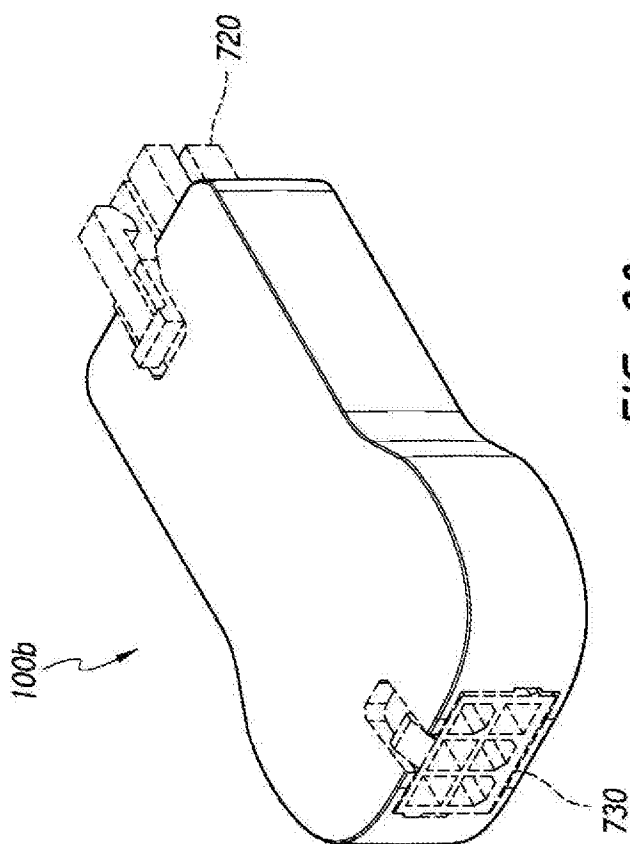


FIG. 20

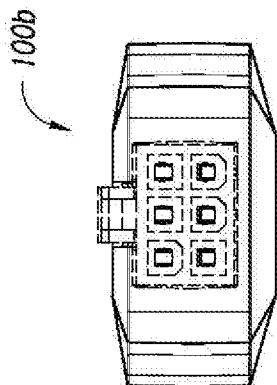


FIG. 25

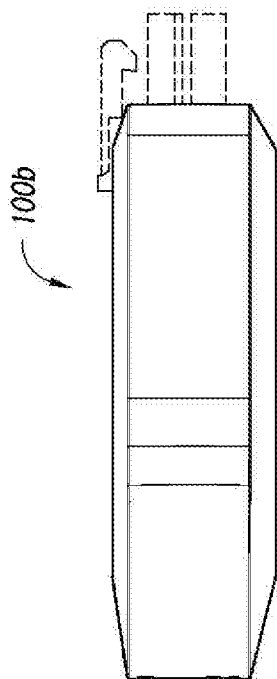


FIG. 23

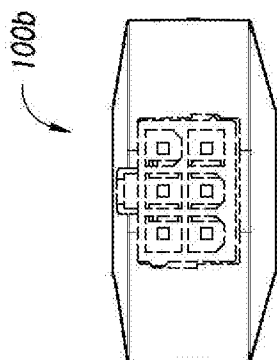


FIG. 24

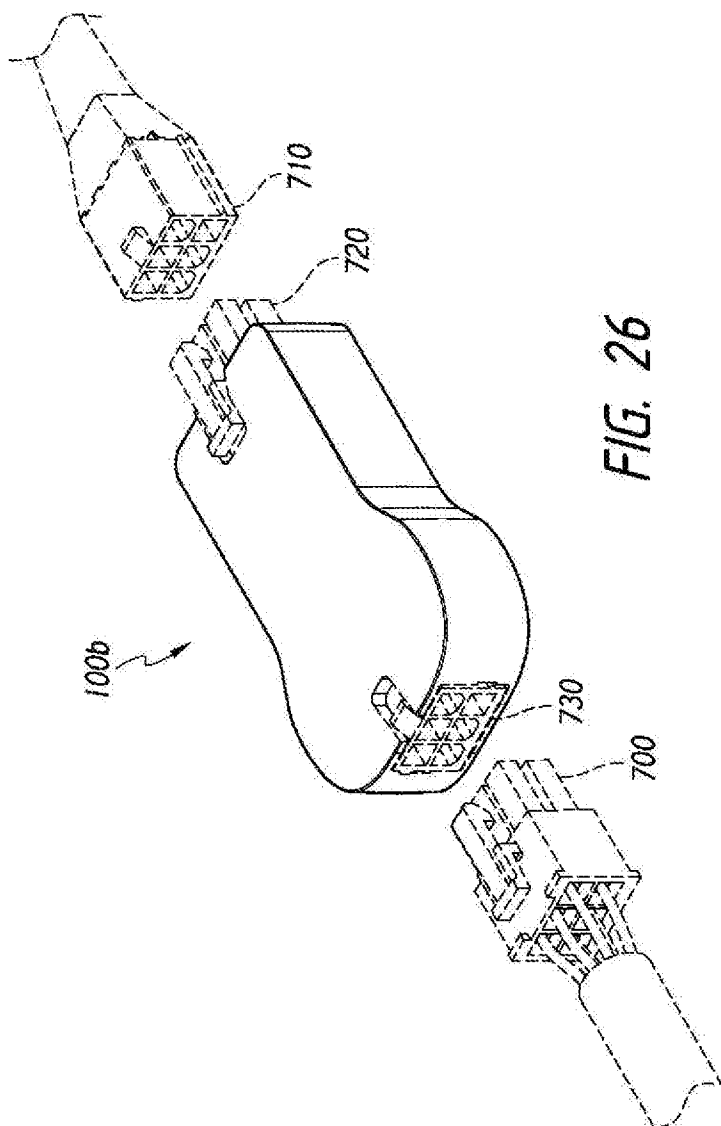


FIG. 26

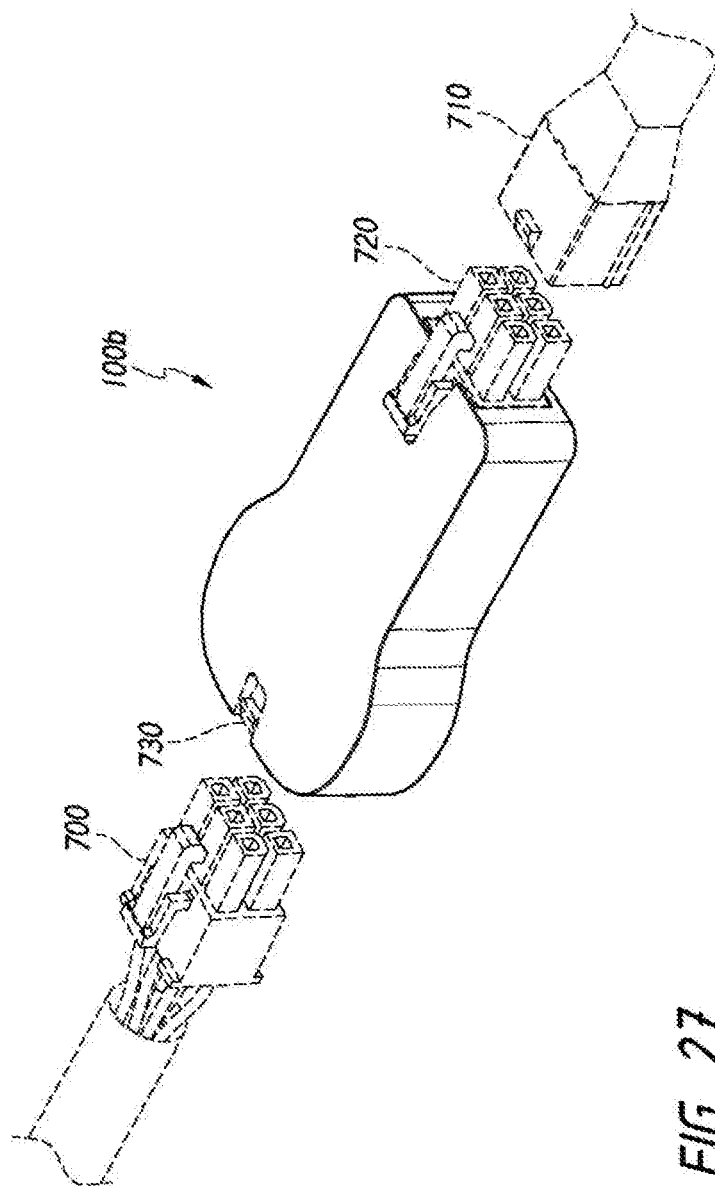


FIG. 27

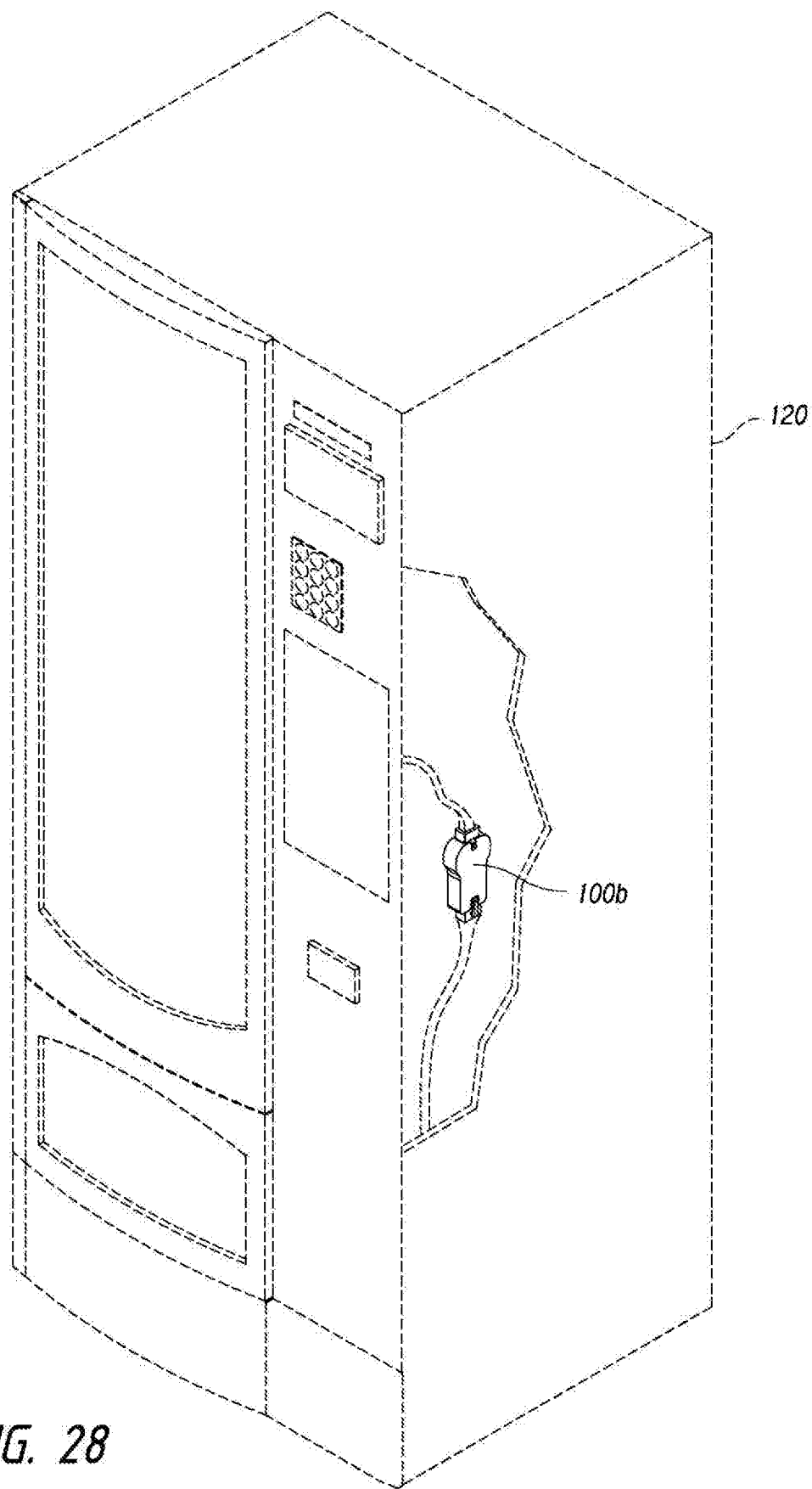


FIG. 28

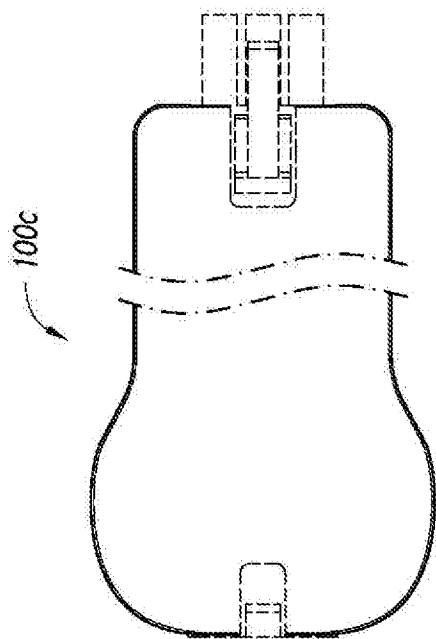


FIG. 30

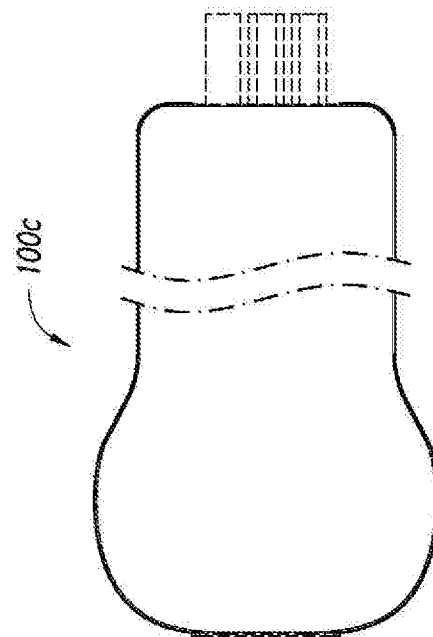


FIG. 31

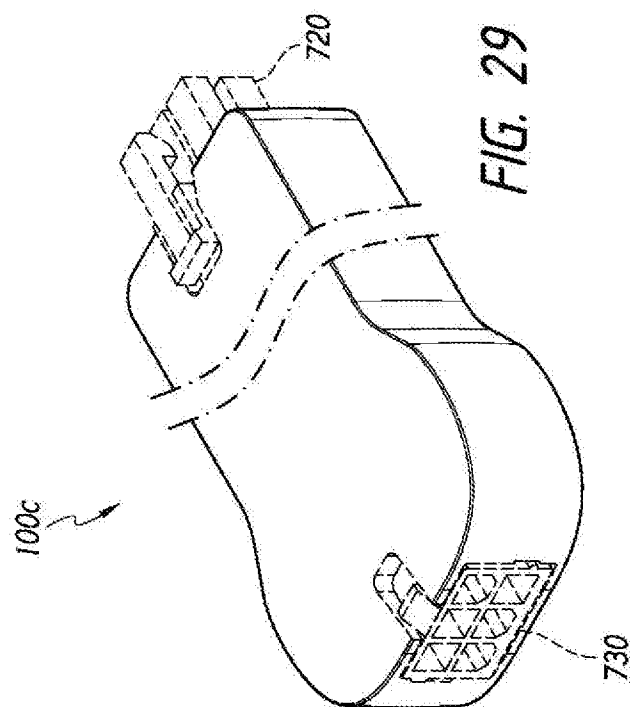


FIG. 29

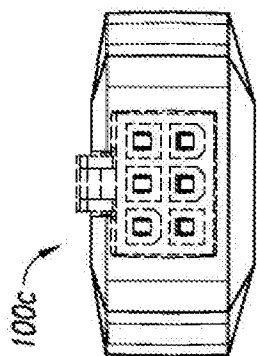


FIG. 34

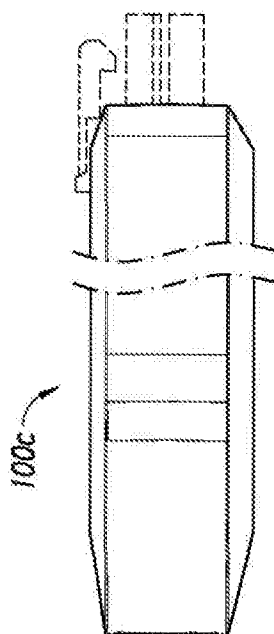


FIG. 32

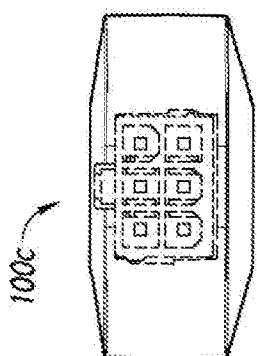


FIG. 33

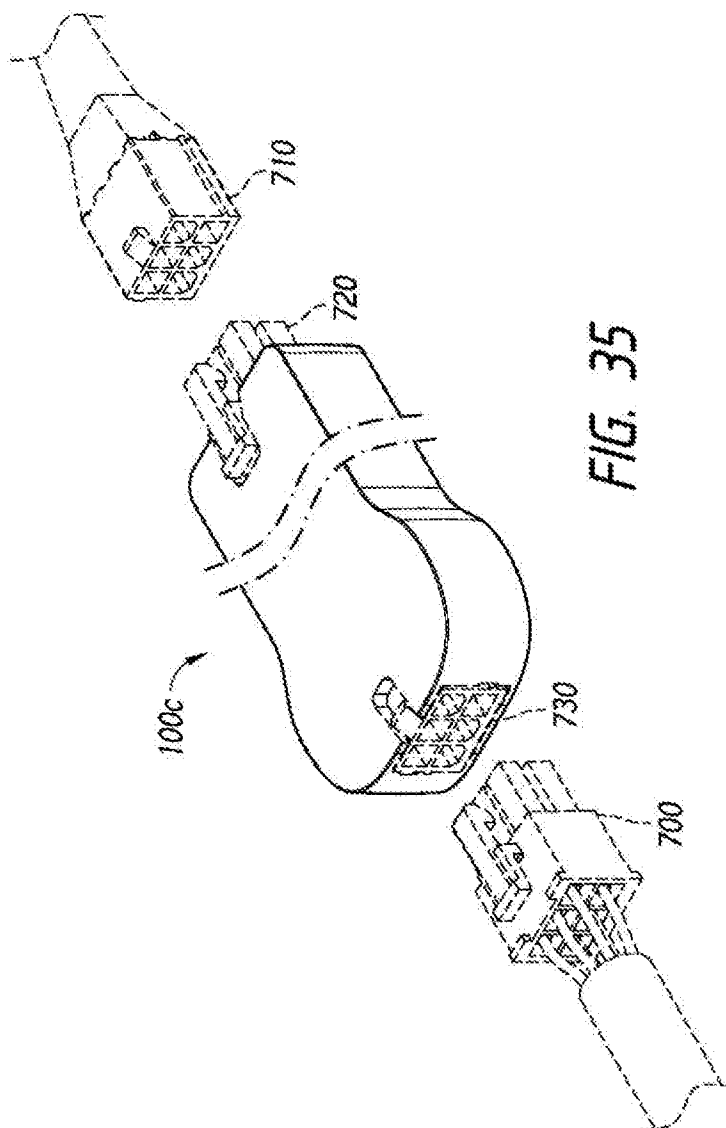


FIG. 35

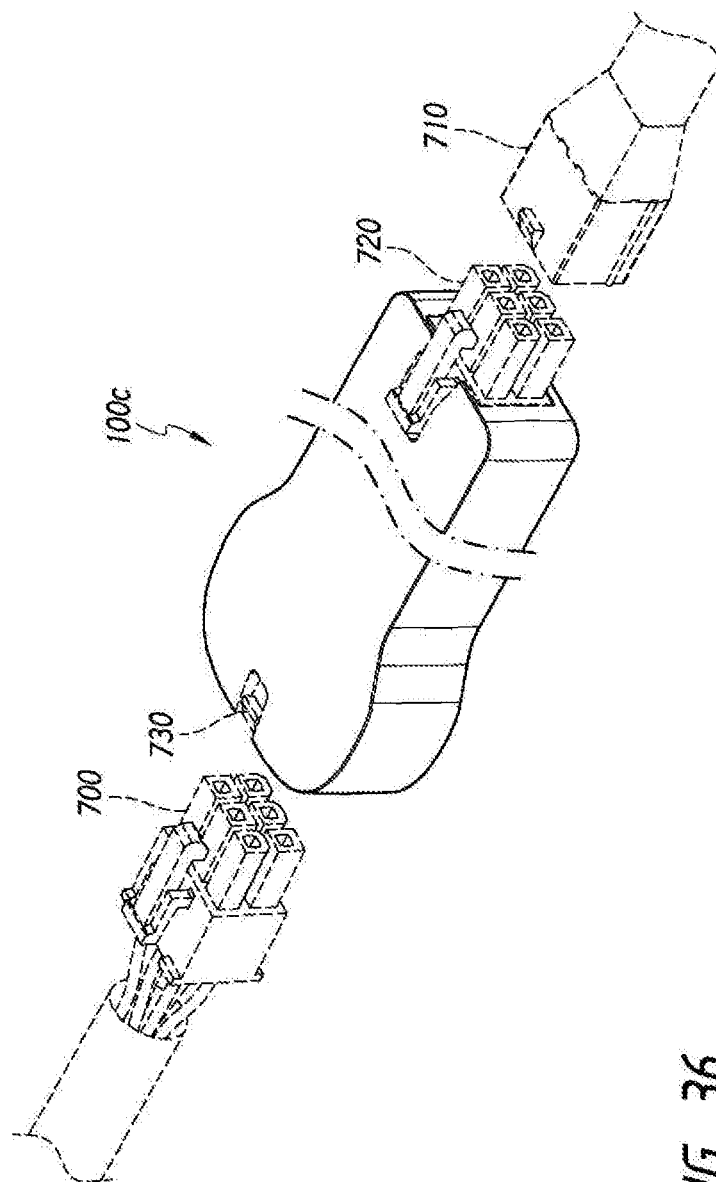


FIG. 36

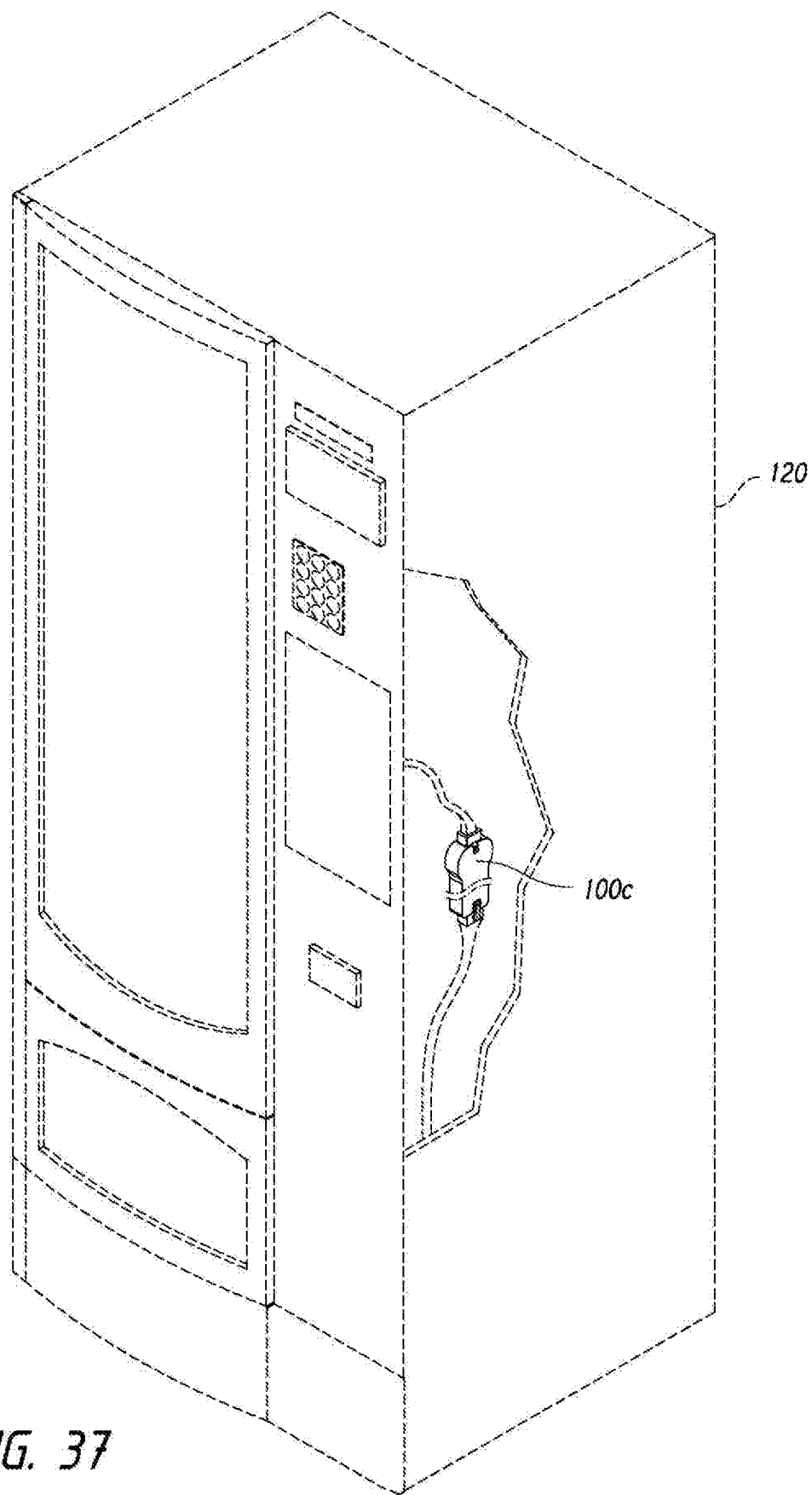


FIG. 37

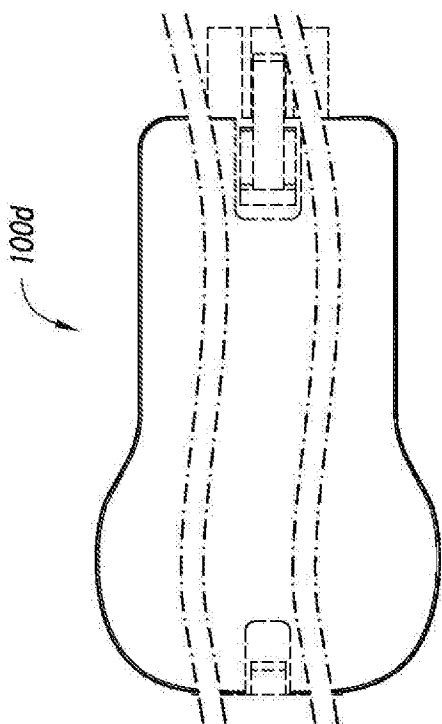


FIG. 39

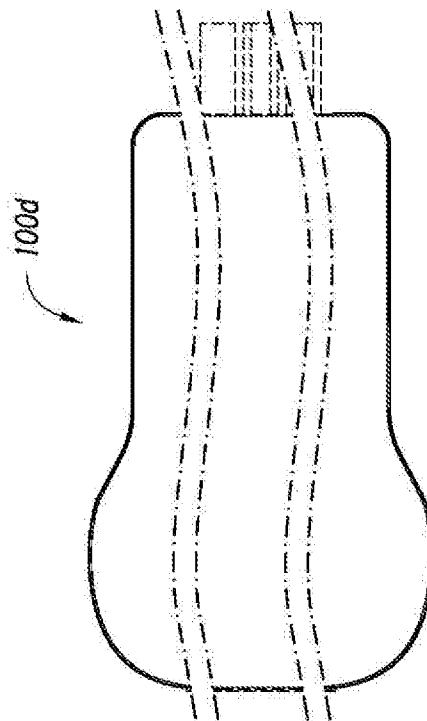


FIG. 40

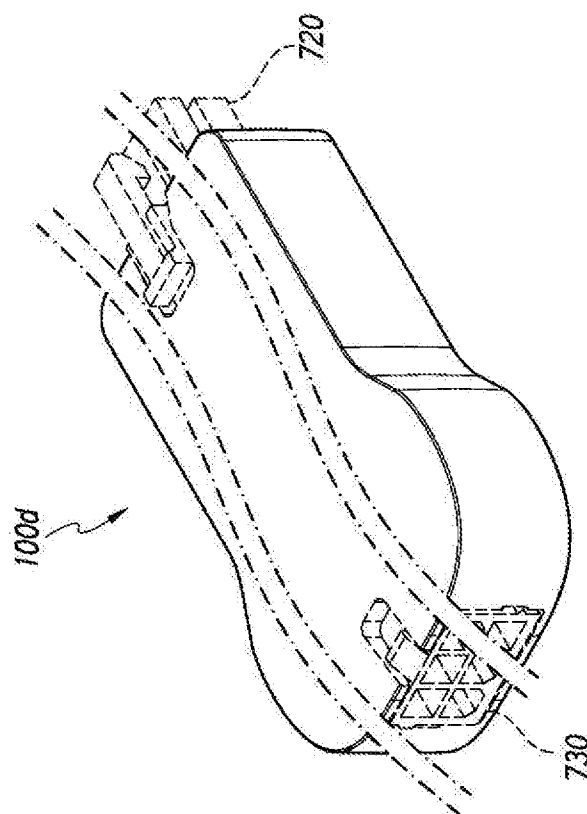


FIG. 38

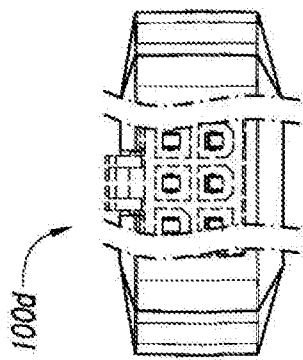


FIG. 43

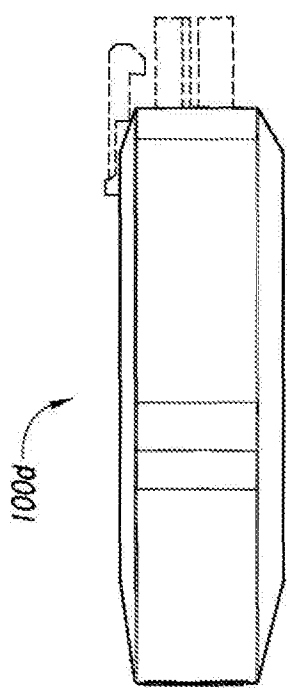


FIG. 41

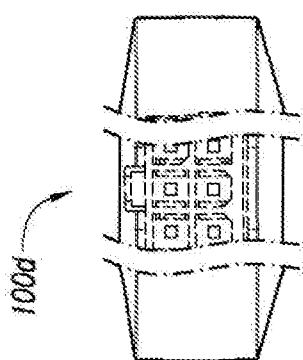


FIG. 42

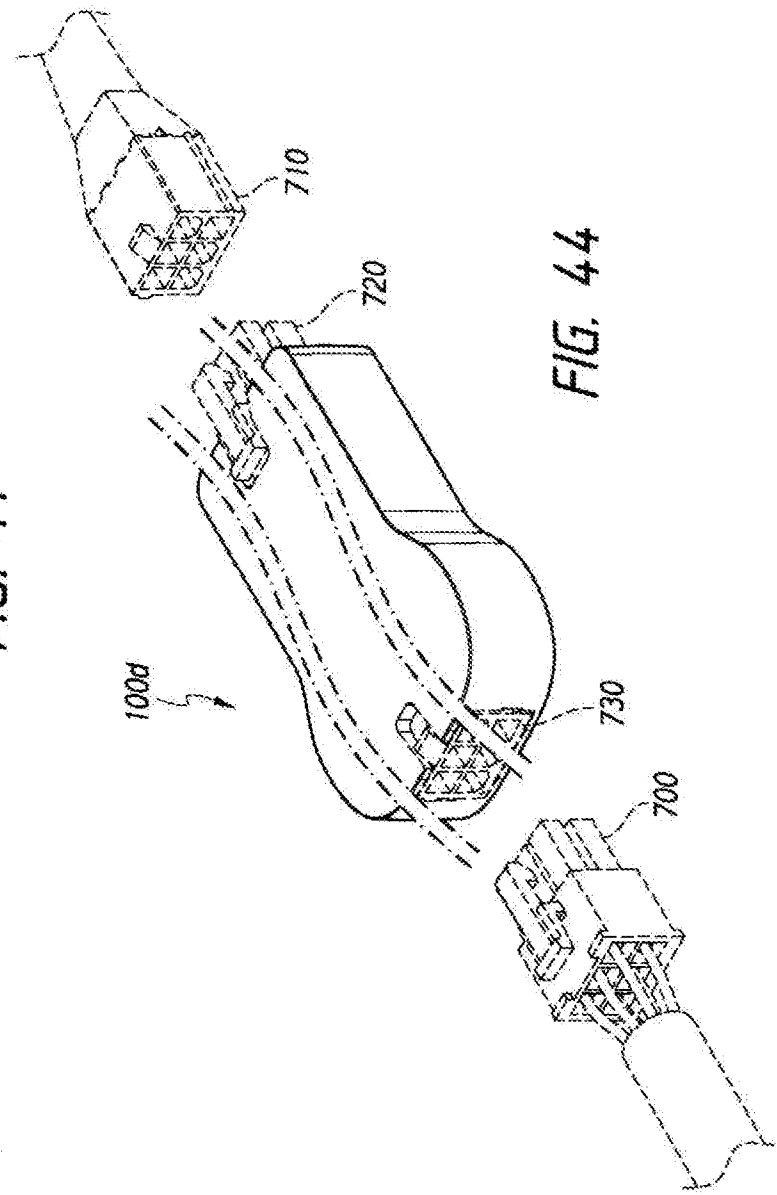
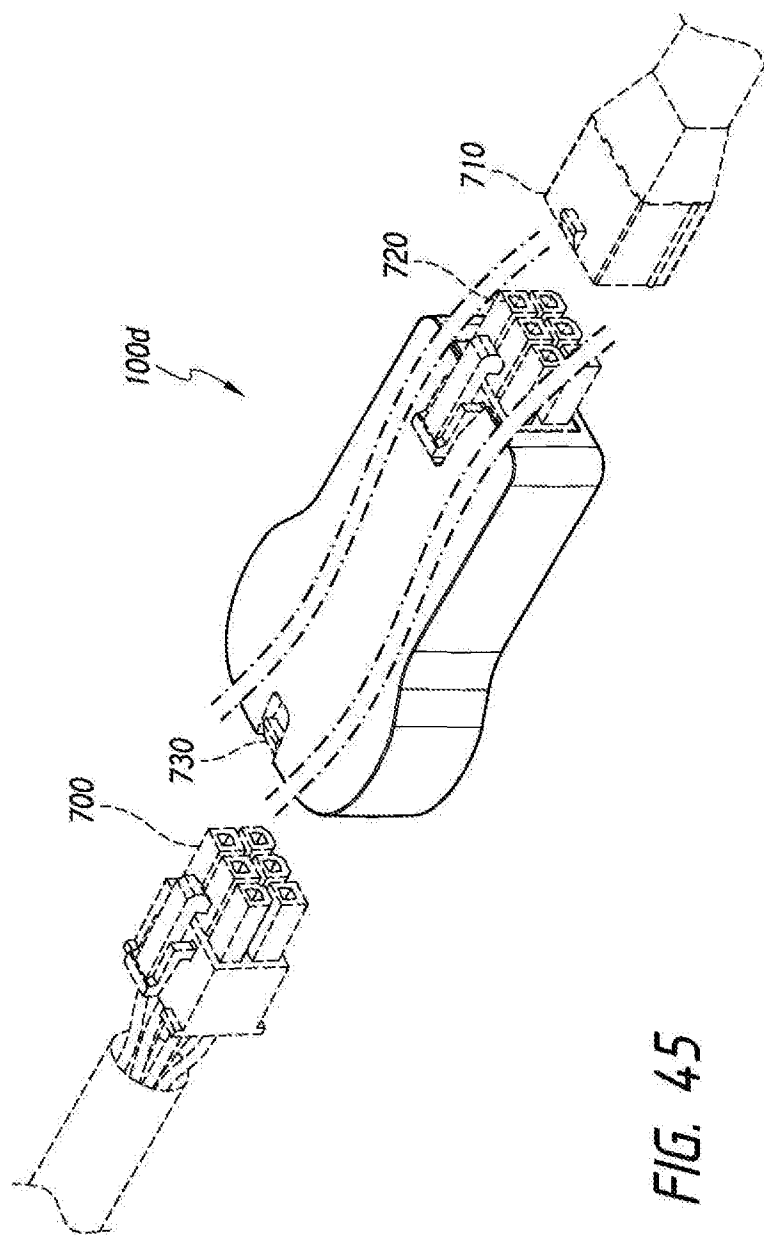


FIG. 44



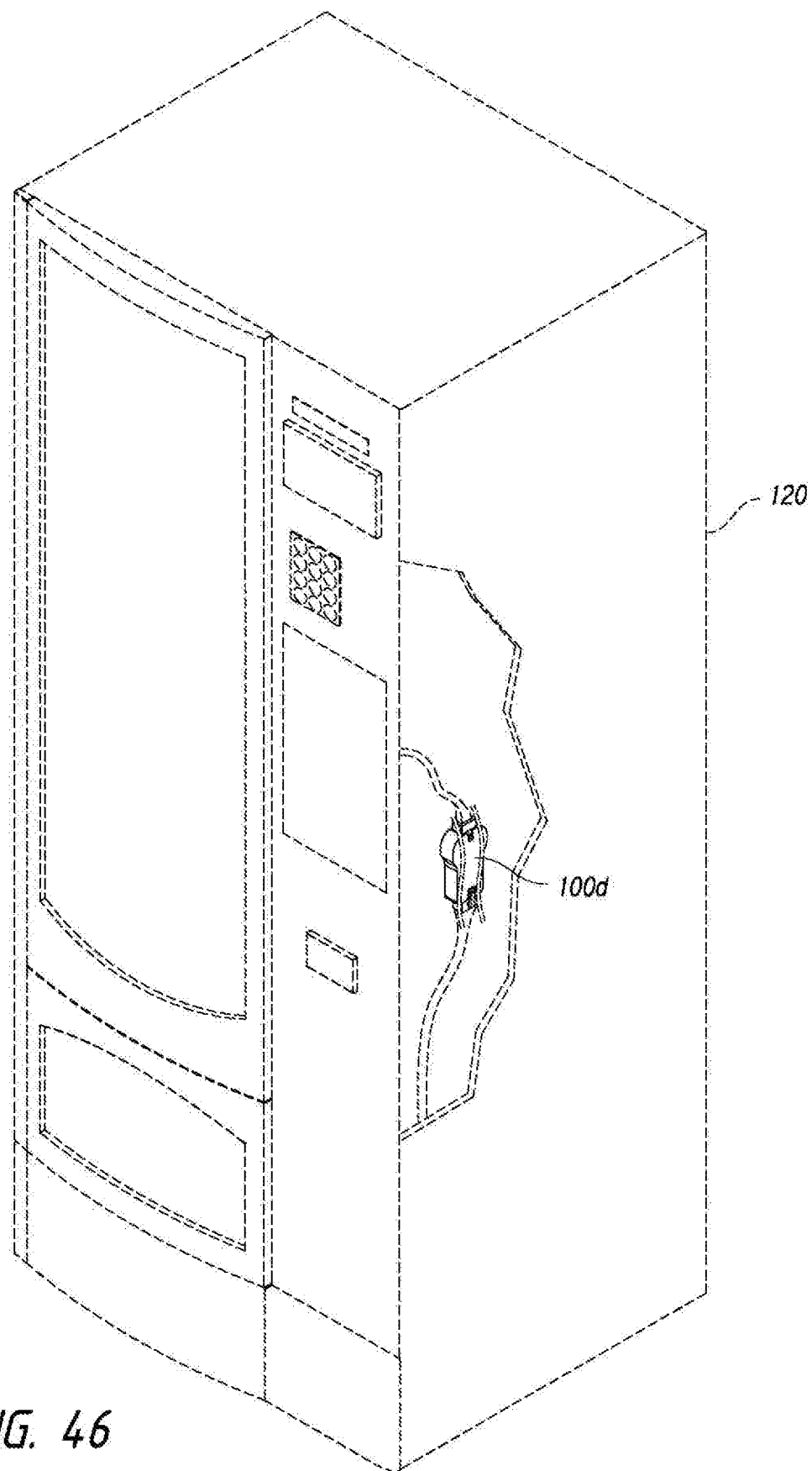


FIG. 46

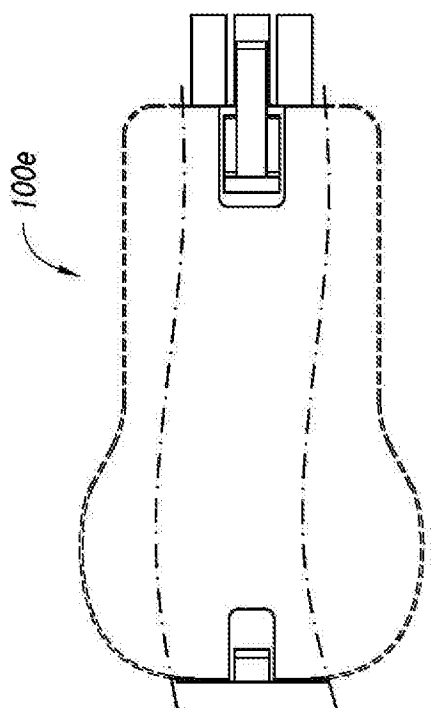


FIG. 48

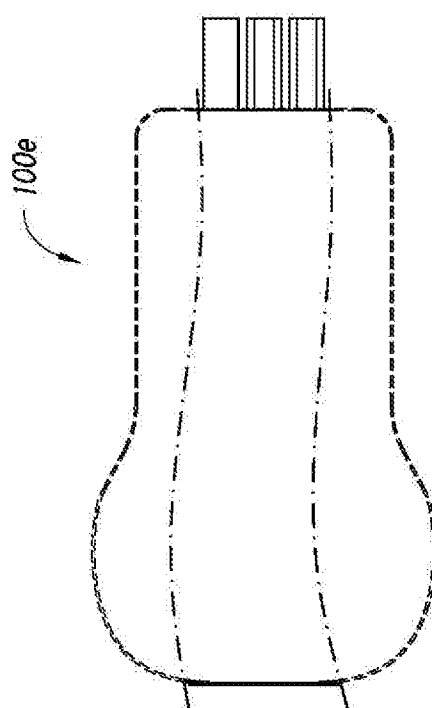


FIG. 49

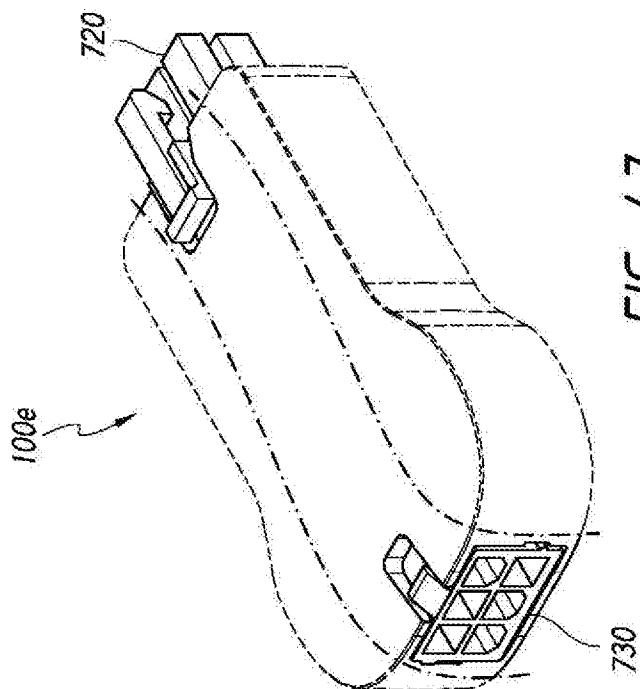


FIG. 47

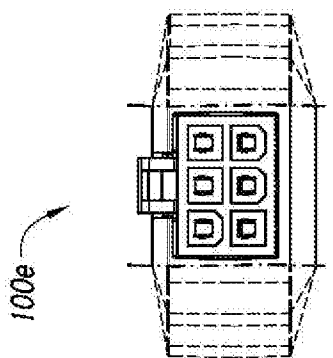


FIG. 52

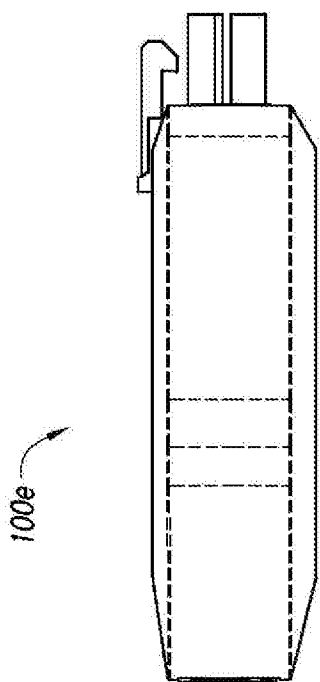


FIG. 50

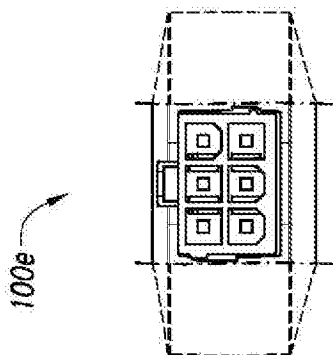


FIG. 51

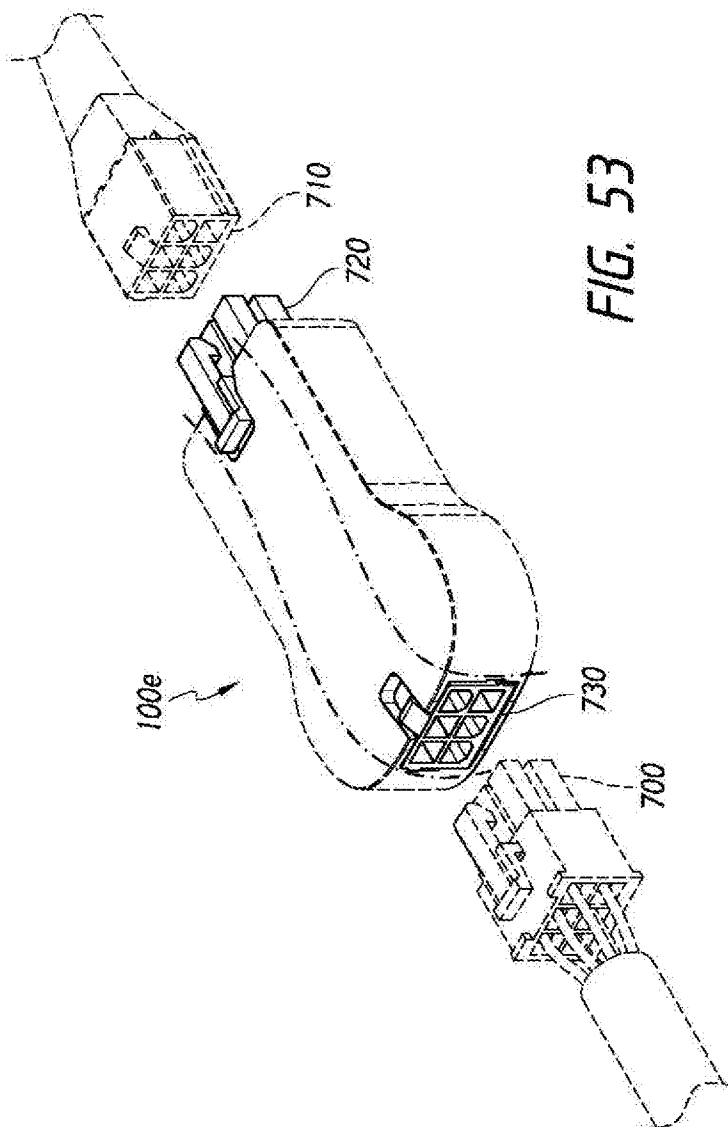
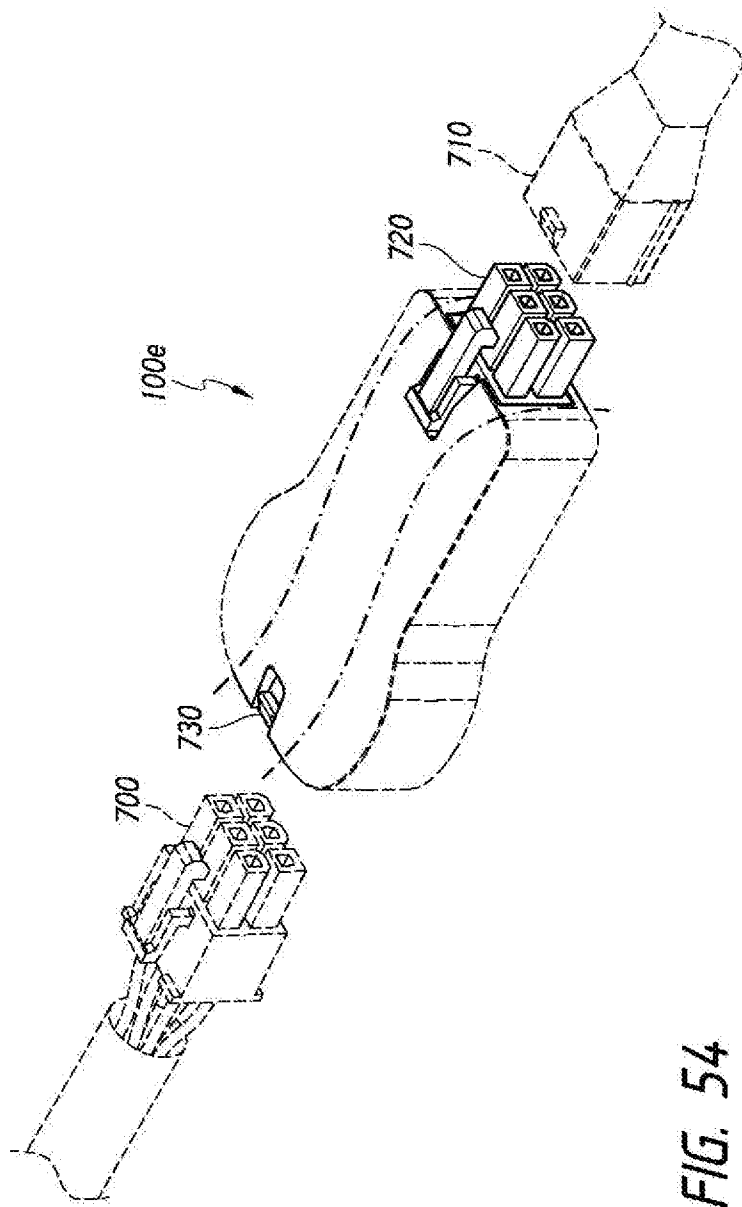


FIG. 53



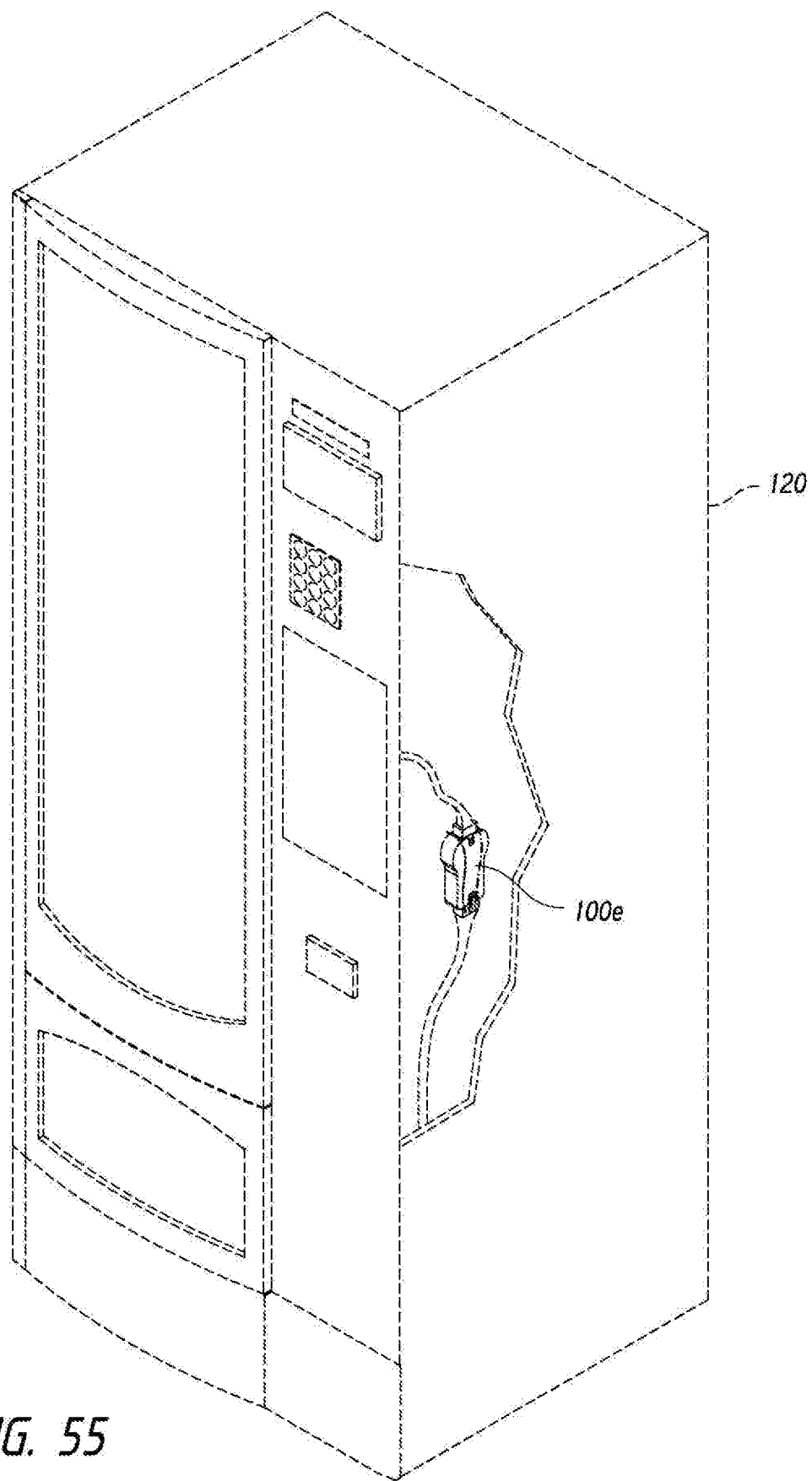
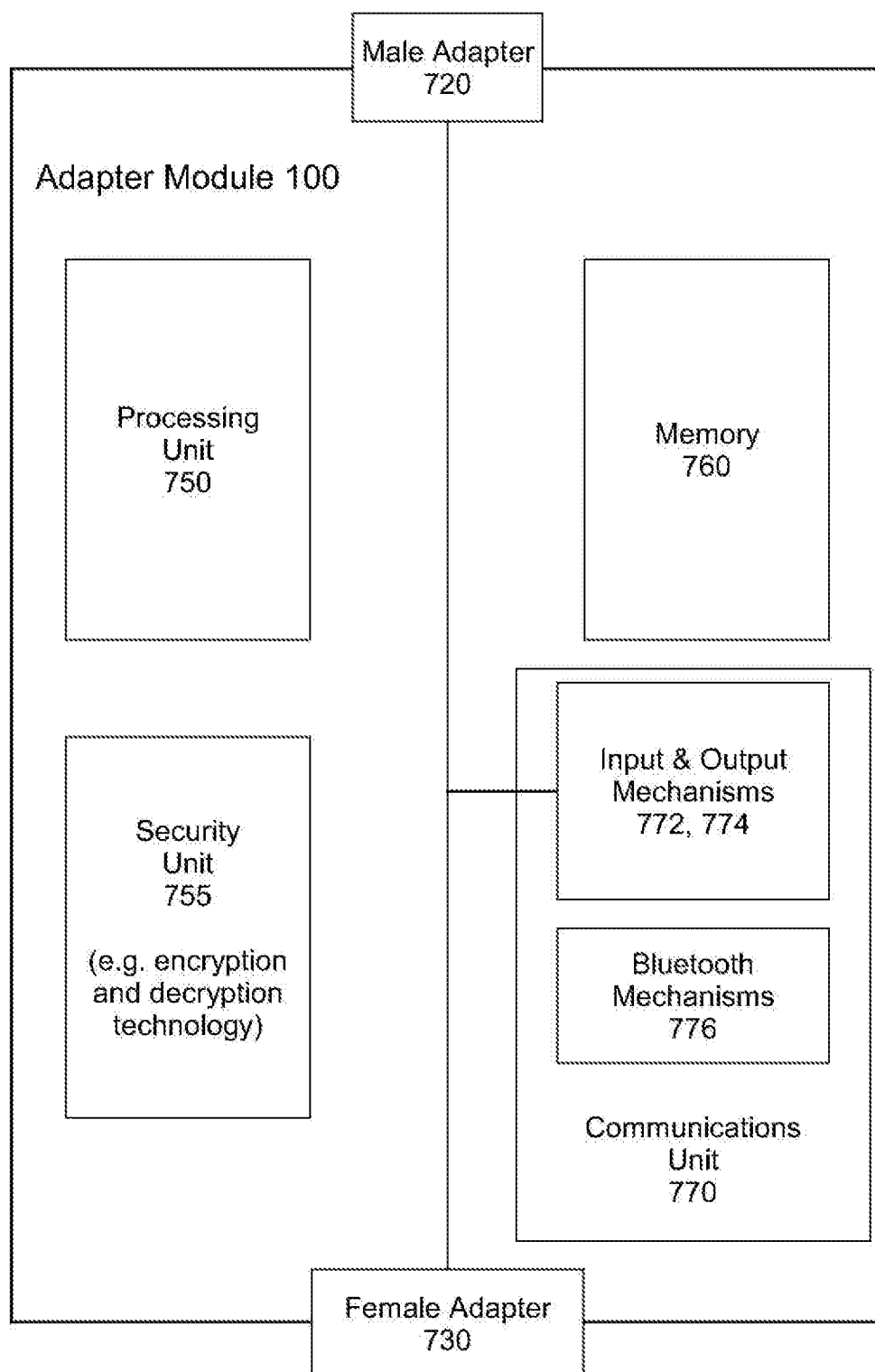


FIG. 55

**FIG. 56**

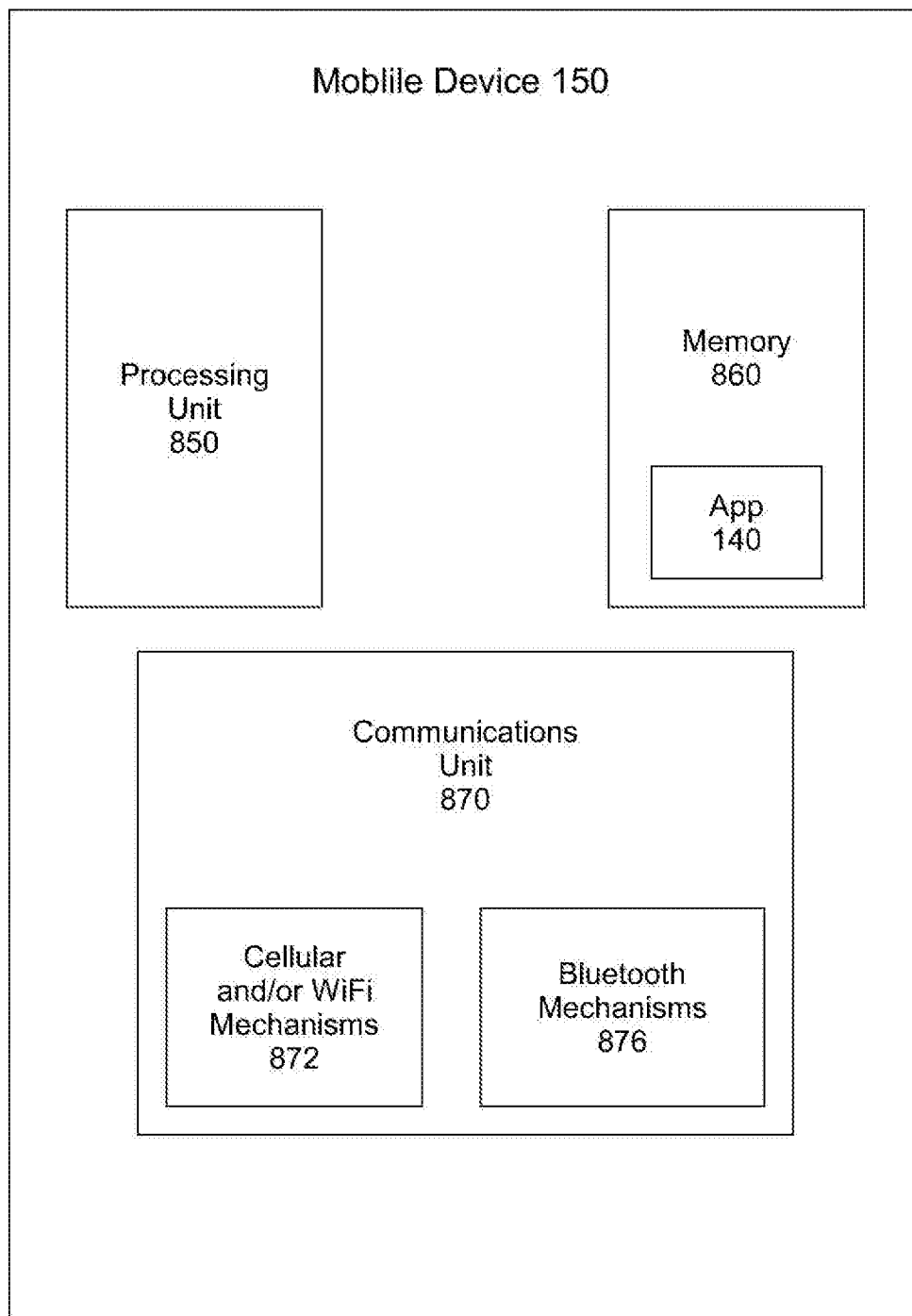
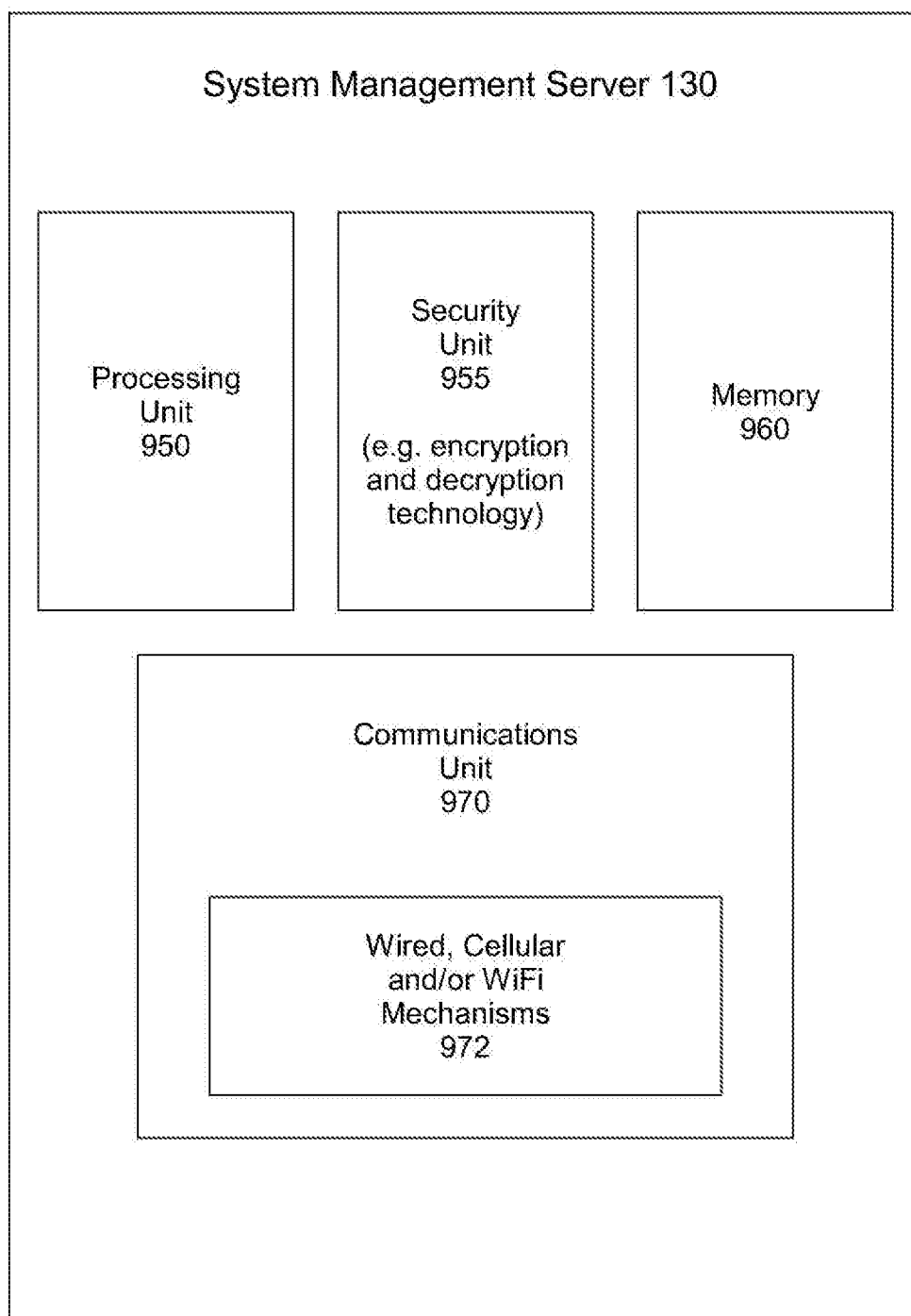


FIG. 57

**FIG. 58**

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104402-5043-US
		Application Number	
Title of Invention	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

Secrecy Order 37 CFR 5.2

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--------------------------	---

Inventor Information:

Inventor 1 Remove				
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	Paresh	K.	Patel	
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service				
City	Portland	State/Province	OR	Country of Residence US
Mailing Address of Inventor:				
Address 1	9600 NE Cascades Pkwy, Suite 280			
Address 2				
City	Portland	State/Province	OR	
Postal Code	97220	Country	US	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. Add				

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
☐ An Address is being provided for the correspondence Information of this application.	
Customer Number	24341
Email Address	Add Email Remove Email

Application Information:

Title of the Invention	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS		
Attorney Docket Number	104402-5043-US	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	44	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104402-5043-US
		Application Number	
Title of Invention	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS		

Publication Information:

☐	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐	Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.											
<table border="1"> <tr> <td>Please Select One:</td> <td>☒ Customer Number</td> <td>☐ US Patent Practitioner</td> <td>☐ Limited Recognition (37 CFR 11.9)</td> </tr> <tr> <td>Customer Number</td> <td colspan="3">24341</td> </tr> </table>				Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)	Customer Number	24341		
Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)								
Customer Number	24341										

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the application number blank.

Prior Application Status	Pending	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
	Continuation of	15406492	2017-01-13		
Prior Application Status	Patented	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15406492	Continuation of	14335762	2014-07-18	9547859	2017-01-17
Prior Application Status	Patented	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14335762	Continuation of	14214644	2014-03-14	8856045	2014-10-07
Prior Application Status	Expired	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
14214644	Claims benefit of provisional	61917936	2013-12-18		
Prior Application Status	Patented	Remove			

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104402-5043-US		
		Application Number			
Title of Invention	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS				

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14214644	Continuation in part of	29477025	2013-12-18	D755183	2016-05-03

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove			
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

☐ NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104402-5043-US
		Application Number	
Title of Invention	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS		

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.			
Applicant 1			
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.			
<input type="button" value="Clear"/>			
☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor	
☐ Person to whom the inventor is obligated to assign.		☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor : <input type="text"/>			
If the Applicant is an Organization check here. ☒			
Organization Name	PAYRANGE INC.		
Mailing Address Information For Applicant:			
Address 1	9600 NE Cascades Pkwy, Suite 280		
Address 2			
City	Portland	State/Province	OR
Country	US	Postal Code	97220
Phone Number		Fax Number	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104402-5043-US
		Application Number	
Title of Invention	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS		

Email Address	
---------------	--

Additional Applicant Data may be generated within this form by selecting the Add button.

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
If the Assignee or Non-Applicant Assignee is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country ⁱ	Postal Code			
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.					
Signature	/Douglas J. Crisman/			Date (YYYY-MM-DD)	2020-07-21
First Name	Douglas J.	Last Name	Crisman	Registration Number	39951
Additional Signature may be generated within this form by selecting the Add button.					

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	104402-5043-US
		Application Number	
Title of Invention	METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel	Confirmation No.:	To be assigned
Serial No.:	To be assigned	Art Unit	To be assigned
Filed:	July 20, 2020	Examiner:	To be assigned
For:	<i>METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS</i>		
	Attorney Docket No.:	104402-5043-US	

STATEMENT UNDER 37 C.F.R. § 3.73(c)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

PAYRANGE INC., a Corporation, states that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of an assignment from the inventors of the parent of the patent application identified above.

The assignment was recorded in the United States Patent and Trademark Office on August 14, 2014 at Reel 033538, Frame 0157, or for which a copy thereof is attached.

The undersigned is authorized to act on behalf of the assignee.

Date: July 21, 2020

/Douglas J. Crisman/	39,951
Douglas J. Crisman	(Reg. No.)
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Palo Alto, CA 94304	
(650) 843-4000	