METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

ABSTRACT OF THE DISCLOSURE

After sending a request to a payment module, via a first communication capability (e.g., BLE), to initiate a transaction with a payment accepting unit associated with the payment module, a mobile device with one or more processors, memory, one or output devices, and two or more communication capabilities obtains a notification from the payment module via the first communication capability. The notification indicates an event at the payment accepting unit associated with the payment module. In response to obtaining the notification, mobile device provides a representation of the notification to a user of the mobile device via the one or more output devices of the mobile device. For example, a message is displayed on a display of the mobile device, a vibration alert is produced by a vibration mechanism of the mobile device, an aural alert is produced by a speaker of the mobile device, and/or the like.

Petitioner Kiosoft Exhibit 1002
1

PTO/AIA/14 (11-13)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	104402-5046-US
	Application Number	
Title of Invention	Method and System for Presenting Representations of Payment Accepting Unit Events	

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.
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.

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
Dr.	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

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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 Presenting Representations of Payment Accepting Unit Events		
Attorney Docket Number	104402-5046-US	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	45	**Suggested Figure for Publication (if any)**	

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	104402-5046-US
	Application Number	
Title of Invention	Method and System for Presenting Representations of Payment Accepting Unit Events	

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.

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	15603400	2017-05-23

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15603400	Continuation of	14458199	2014-08-12	9659296	2017-05-23

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14458199	Continuation in part of	14456683	2014-08-11	9256873	2016-02-09

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14456683	Continuation of	14335762	2014-07-18	9547859	2017-01-17

Prior Application Status	Patented		Remove

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	104402-5046-US
	Application Number	
Title of Invention	Method and System for Presenting Representations of Payment Accepting Unit Events	

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 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.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	104402-5046-US
	Application Number	
Title of Invention	Method and System for Presenting Representations of Payment Accepting Unit Events	

Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices

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 o f 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.

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 :	

If the Applicant is an Organization check here. ☒

Organization Name	PayRange Inc.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	104402-5046-US
	Application Number	
Title of Invention	Method and System for Presenting Representations of Payment Accepting Unit Events	

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	
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 subsitute 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		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.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	104402-5046-US
	Application Number	
Title of Invention	Method and System for Presenting Representations of Payment Accepting Unit Events	

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)	2021-01-12
First Name	Douglas J.	Last Name	Crisman	Registration Number	39951
Additional Signature may be generated within this form by selecting the Add button.					

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 C o o p eration 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.

What is claimed is:

1. A method of presenting representations of payment accepting unit events, comprising:

at a mobile device with one or more processors, memory, one or more output devices including a display, and one or more radio transceivers:

identifying one or more payment accepting units in proximity to the mobile device that are available to accept payment from a mobile payment application executing on the mobile device, the identifying including detecting predefined radio messages broadcast by the one or more payment accepting units;

displaying a user interface of the mobile payment application on the display of the mobile device, the user interface being configured to accept user input to trigger payment by the mobile payment application for a vending transaction initiated by a user of the mobile device with an available payment accepting unit of the one or more payment accepting units;

establishing via the one or more radio transceivers a wireless connection between the mobile device and the available payment accepting unit of the one or more payment accepting units;

after establishing the wireless connection, presenting on the user interface of the mobile payment application and enabling user interaction with the user interface of the mobile payment application to complete the vending transaction;

exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the vending transaction; and

in response to receiving the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.

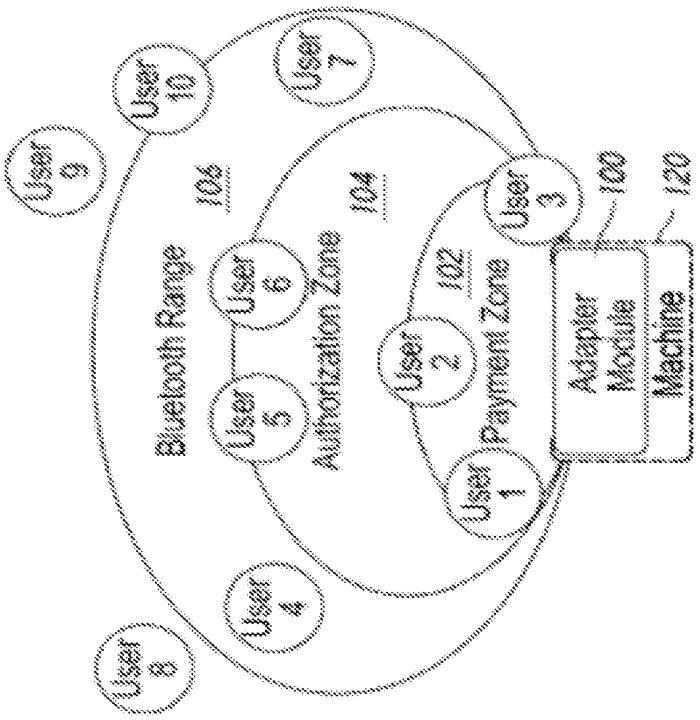


Figure 2

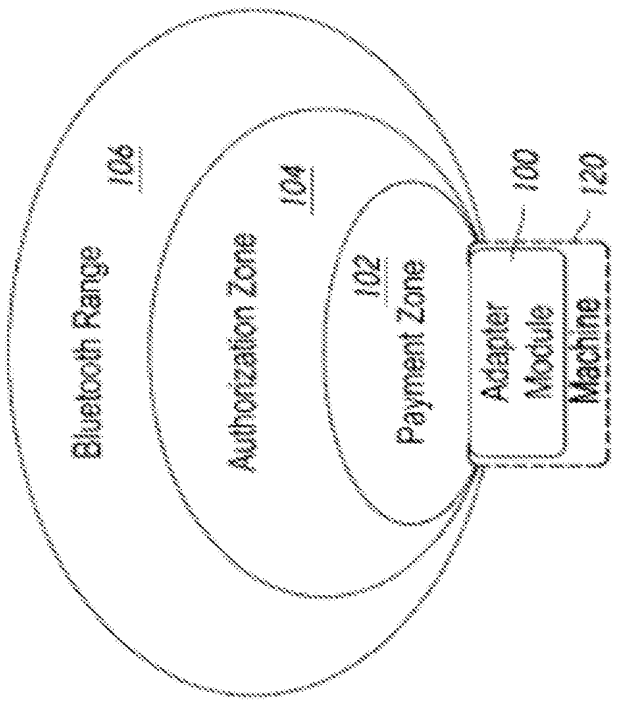


Figure 1

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.

Figure 3

Figure 4

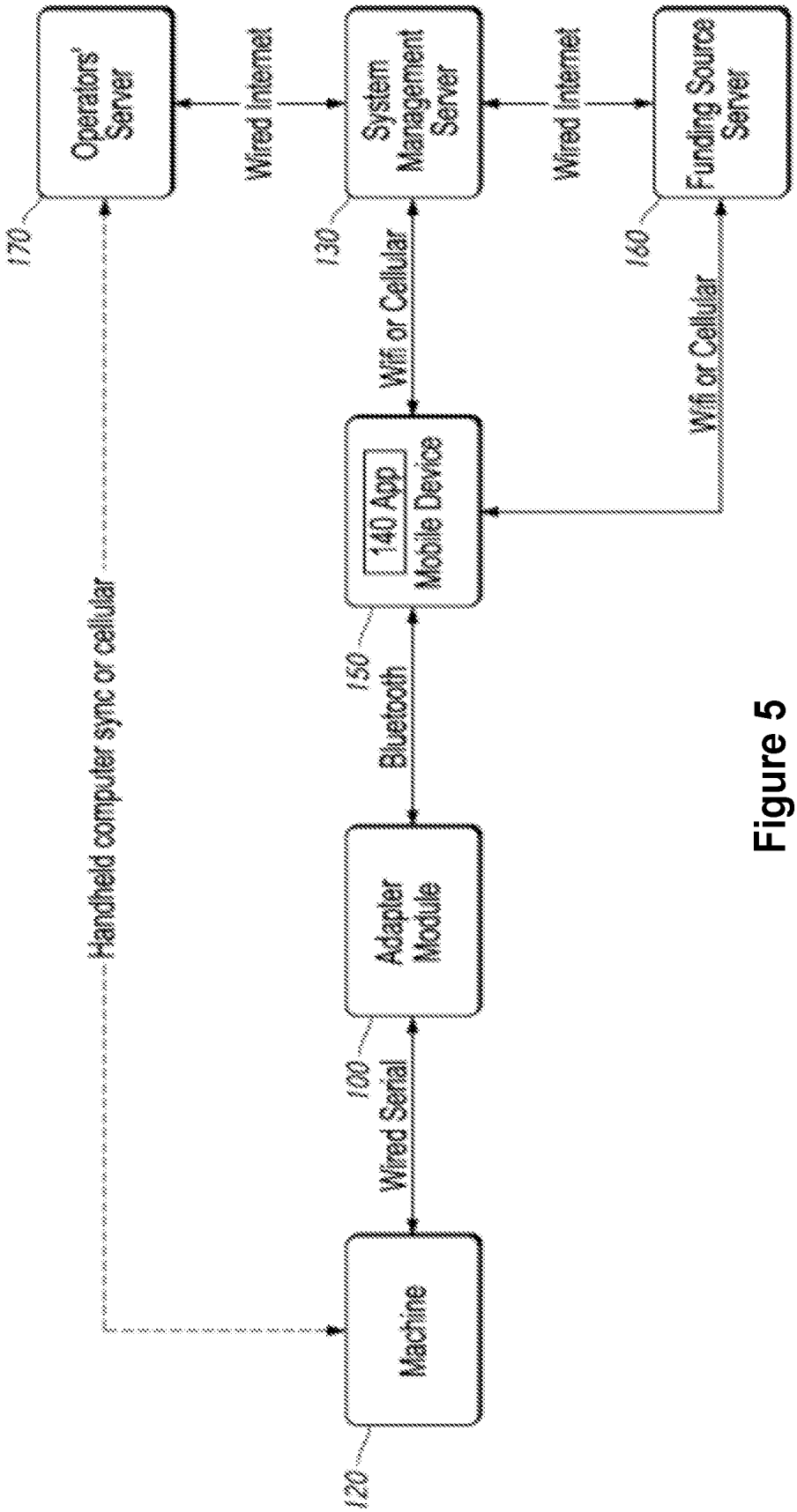

Operators' Server
170
Wired Internet
System Management Server
130
Wired Internet
Funding Source Server
160
Handheld computer sync or cellular
Wifi or Cellular
Wifi or Cellular
140 App
Mobile Device
150
Bluetooth
Adapter Module
100
Wired Serial
Machine
120

Figure 5

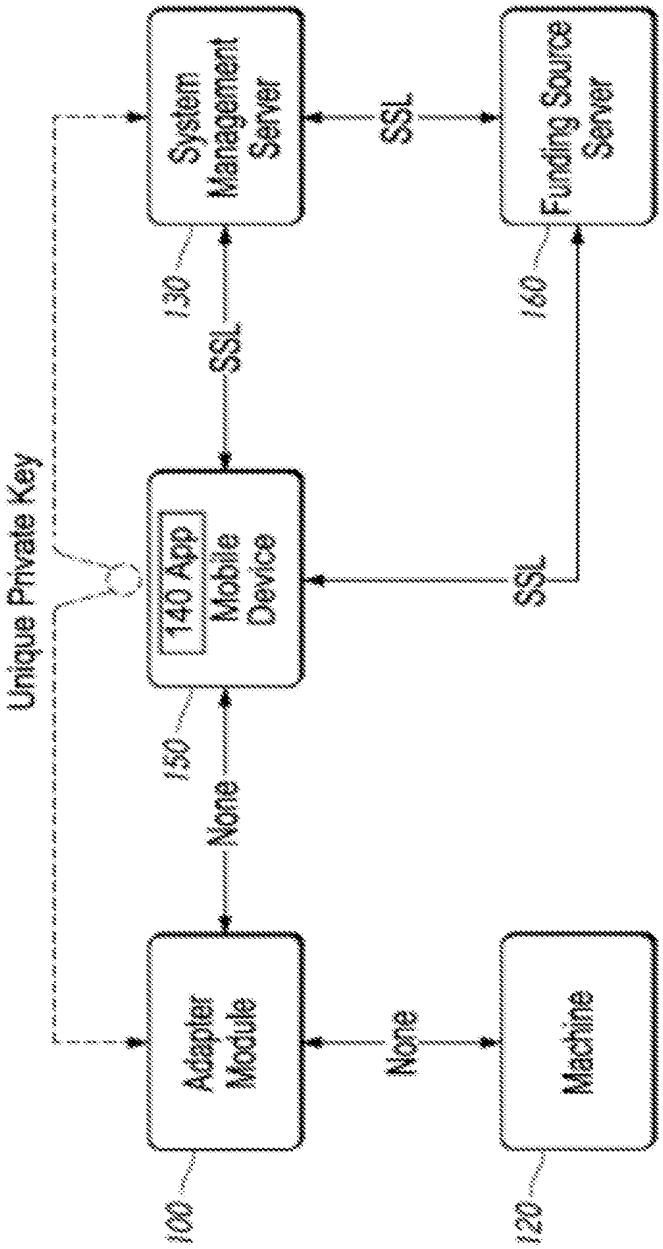

System Management Server
Funding Source Server
SSL
SSL
130
160
Unique Private Key
140 App
Mobile Device
SSL
150
None
Adapter Module
None
Machine
100
120

Figure 6

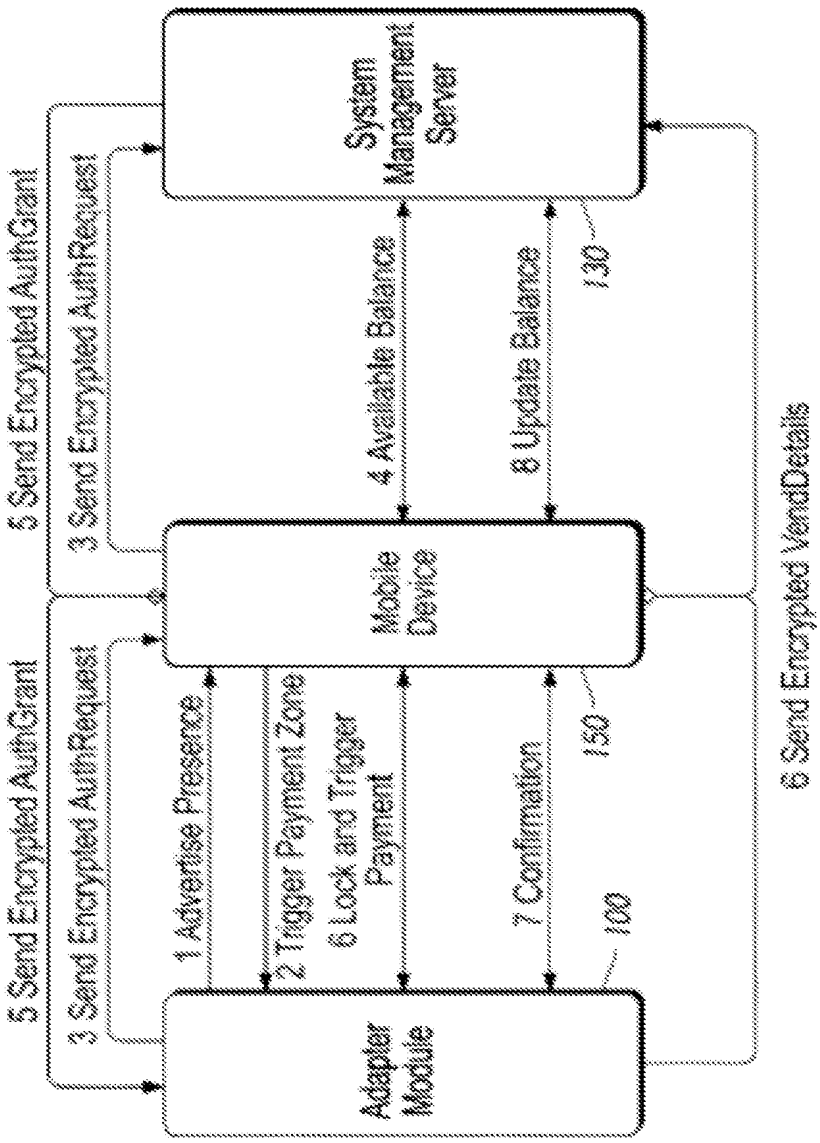

System Management Server
Mobile Device
Adapter Module
4 Available Balance
8 Update Balance
130
3 Send Encrypted AuthRequest
5 Send Encrypted AuthGrant
1 Advertise Presence
2 Trigger Payment Zone
6 Lock and Trigger Payment
7 Confirmation
150
100
6 Send Encrypted VendDetails

Figure 7

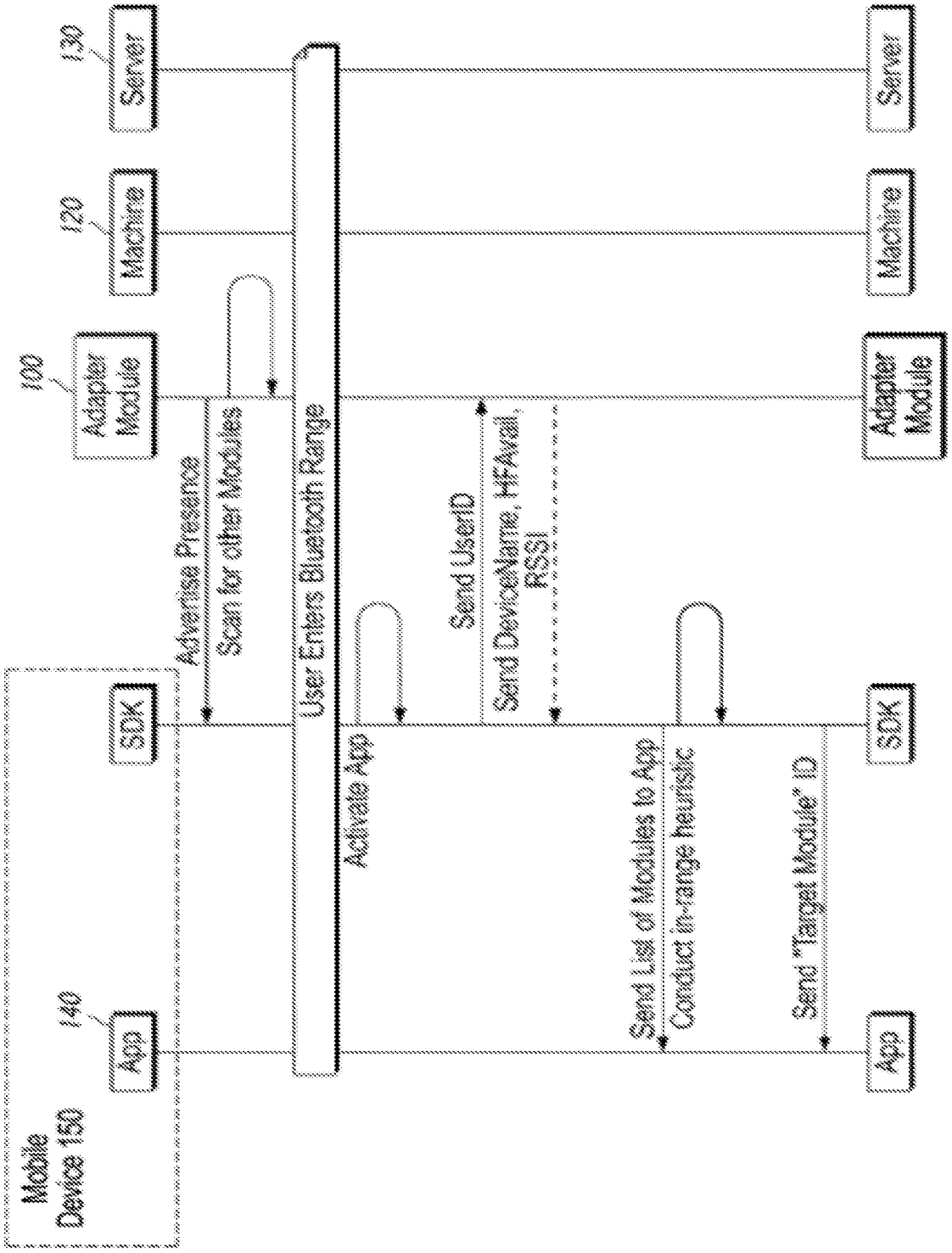

Mobile Device 150
140
App
SDK
100
Adapter Module
120
Machine
130
Server
Advertise Presence
Scan for other Modules
User Enters Bluetooth Range
Activate App
Send UserID
Send DeviceName, HFAvail, RSSI
Send List of Modules to App
Conduct in-range heuristic
Send "Target Module" ID
App
SDK
Adapter Module
Machine
Server

Figure 8A

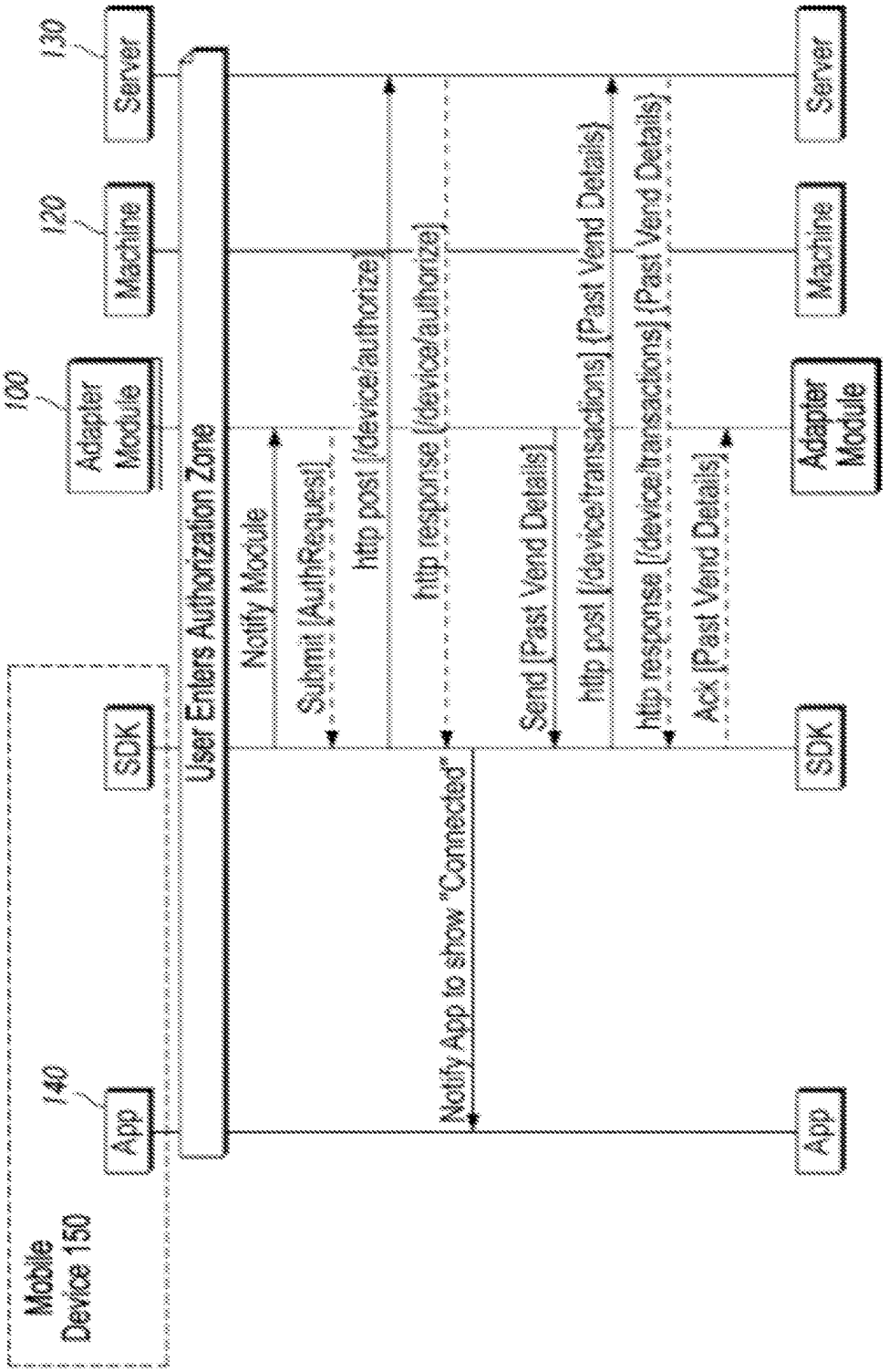

Mobile Device 150
140
App
SDK
User Enters Authorization Zone
100
Adapter Module
120
Machine
130
Server
Notify Module
Submit [AuthRequest]
http post [/device/authorize]
http response [/device/authorize]
Send [Past Vend Details]
http post [/device/transactions] [Past Vend Details]
http response [/device/transactions] [Past Vend Details]
Ack [Past Vend Details]
Notify App to show "Connected"
Server
Machine
Adapter Module
SDK
App

Figure 8B

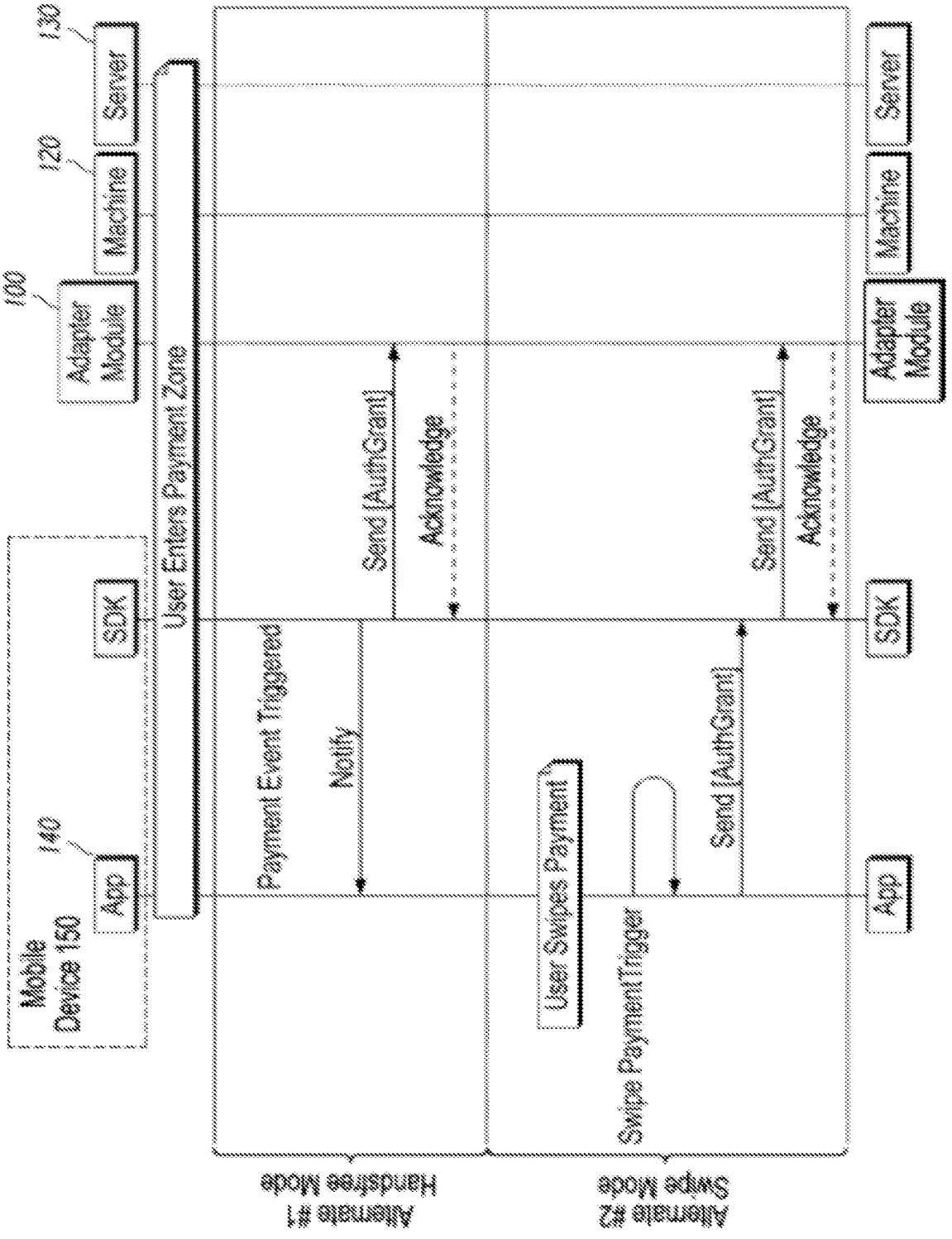

Mobile Device 150
140
App
SDK
100
Adapter Module
120
Machine
130
Server
User Enters Payment Zone
Payment Event Triggered
Notify
Send [AuthGram]
Acknowledge
User Swipes Payment
Swipe PaymentTrigger
Send [AuthGram]
Send [AuthGram]
Acknowledge
Alternate #1 Handshake Mode
Alternate #2 Swipe Mode

Figure 8C

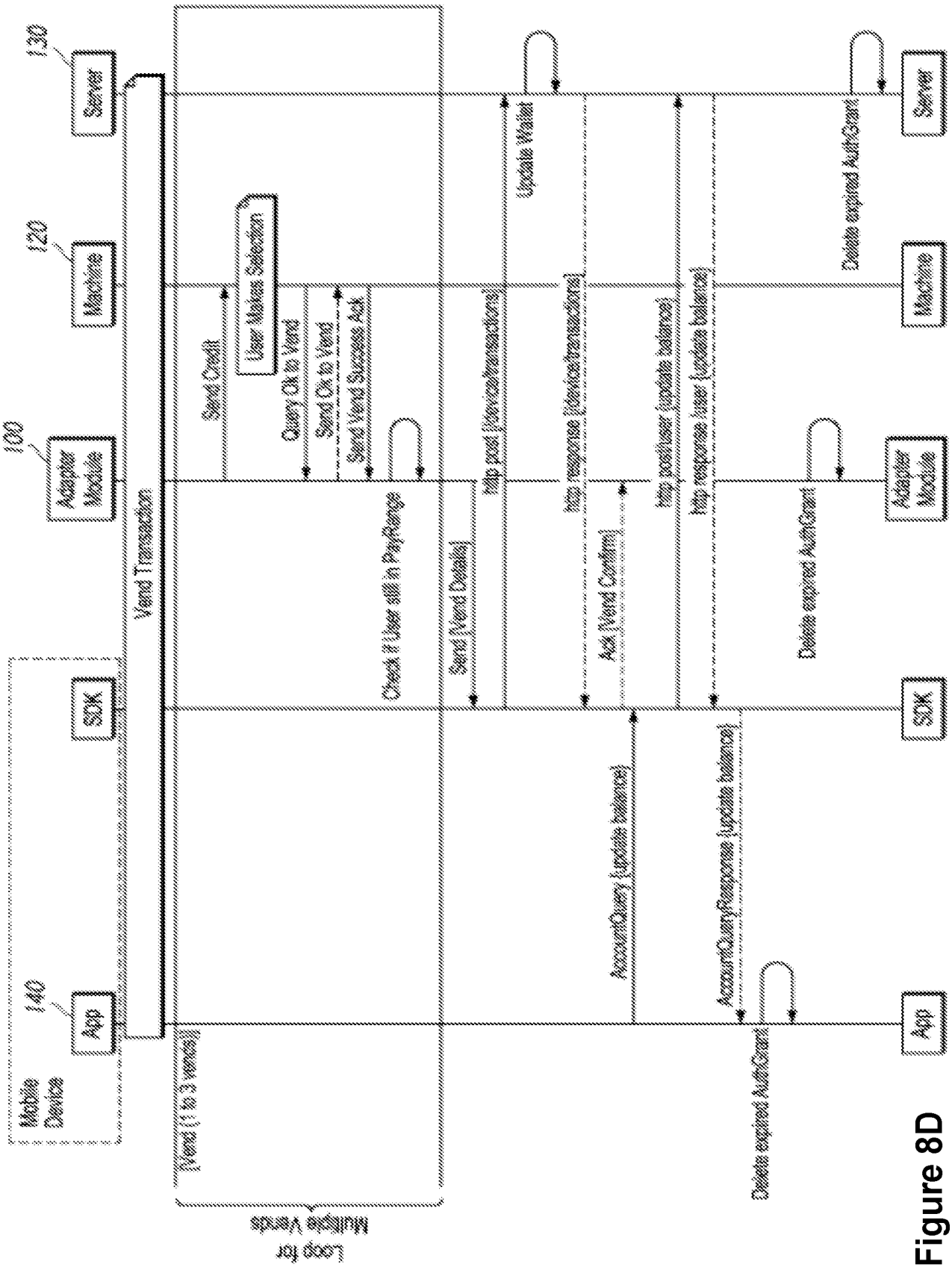

Mobile Device
140
App
SDK
100
Adapter Module
120
Machine
130
Server
Vend Transaction
Send Credit
User Makes Selection
Query Ok to Vend
Send Ok to Vend
Send Vend Success Ack
Check if User still in Pay Range
Send [Vend Details]
http post [/device/transactions]
Update Wallet
http response [/device/transactions]
Ack [Vend Confirm]
AccountQuery [update balance]
http post/user [update balance]
http response /user [update balance]
AccountQueryResponse [update balance]
Delete expired AuthGrant
Delete expired AuthGrant
Delete expired AuthGrant
Delete expired AuthGrant
[Vend (1 to 3 times)]
Loop for Multiple Vends

Figure 8D

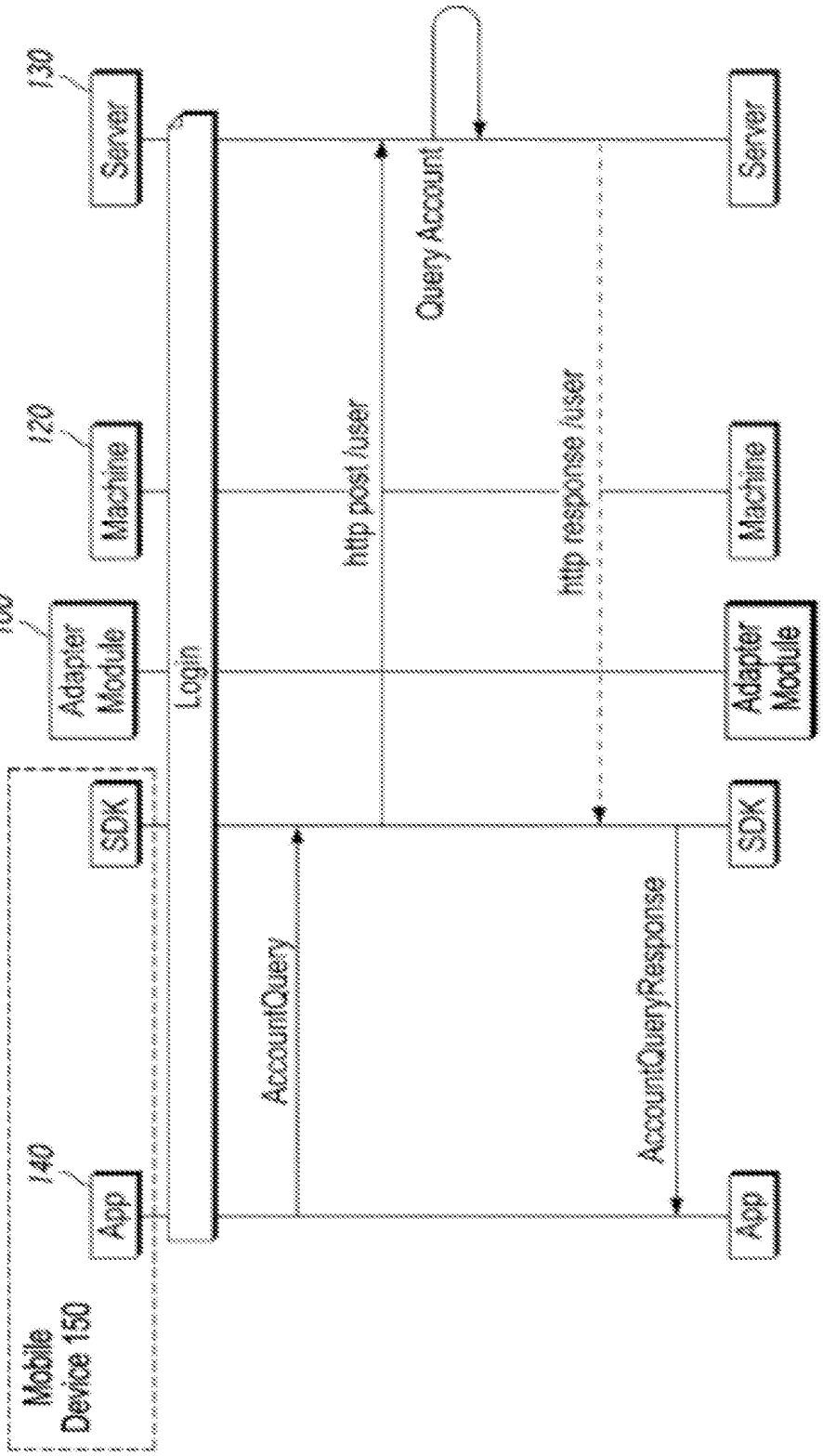

Mobile Device 150
App
140
SDK
Adapter Module
100
Machine
120
Server
130
Login
AccountQuery
http post /user
Query Account
http response /user
AccountQueryResponse
SDK
Adapter Module
Machine
Server
App

Figure 8E

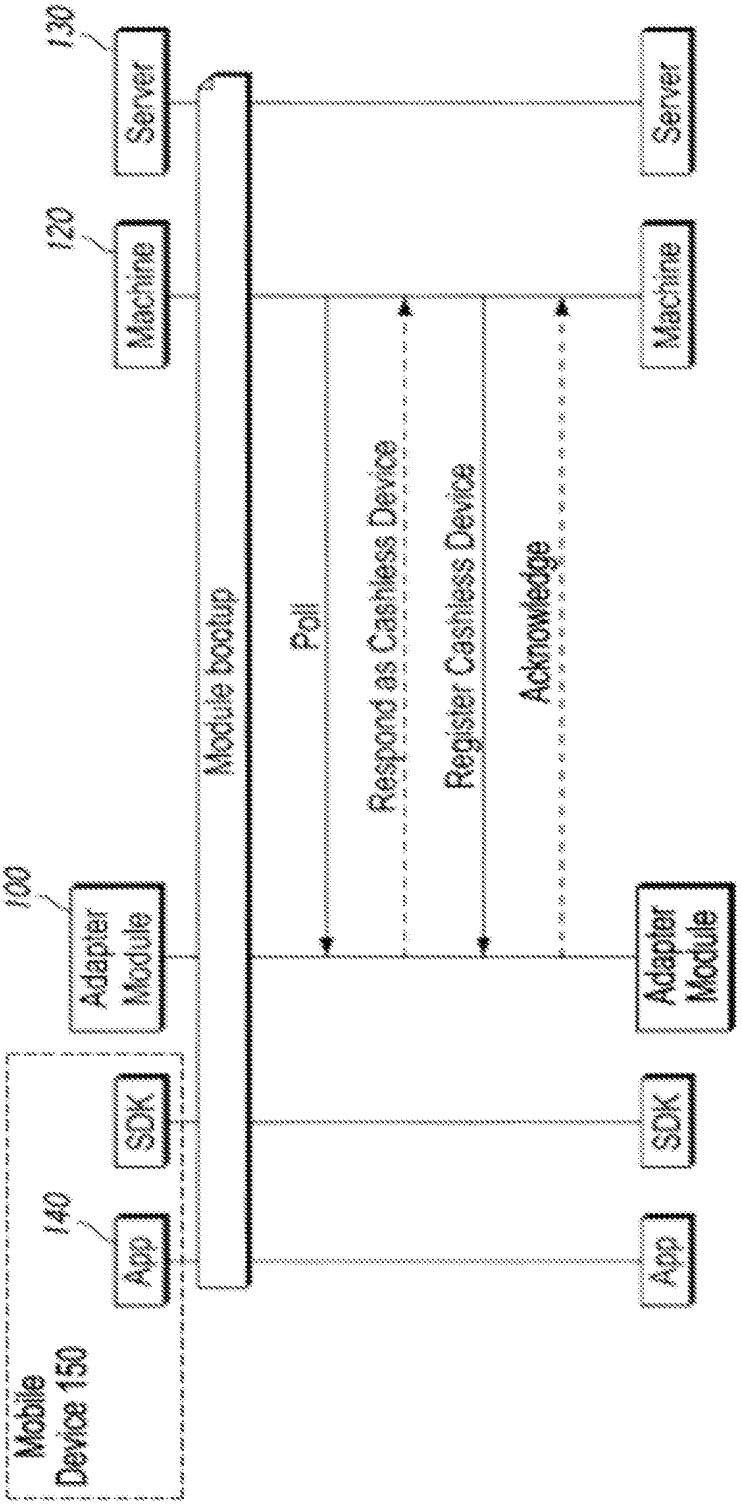

Mobile Device 150
App
SDK
Adapter Module
100
140
120
130
Server
Machine
Module bootup
Poll
Respond as Cashless Device
Register Cashless Device
Acknowledge

Figure 8F

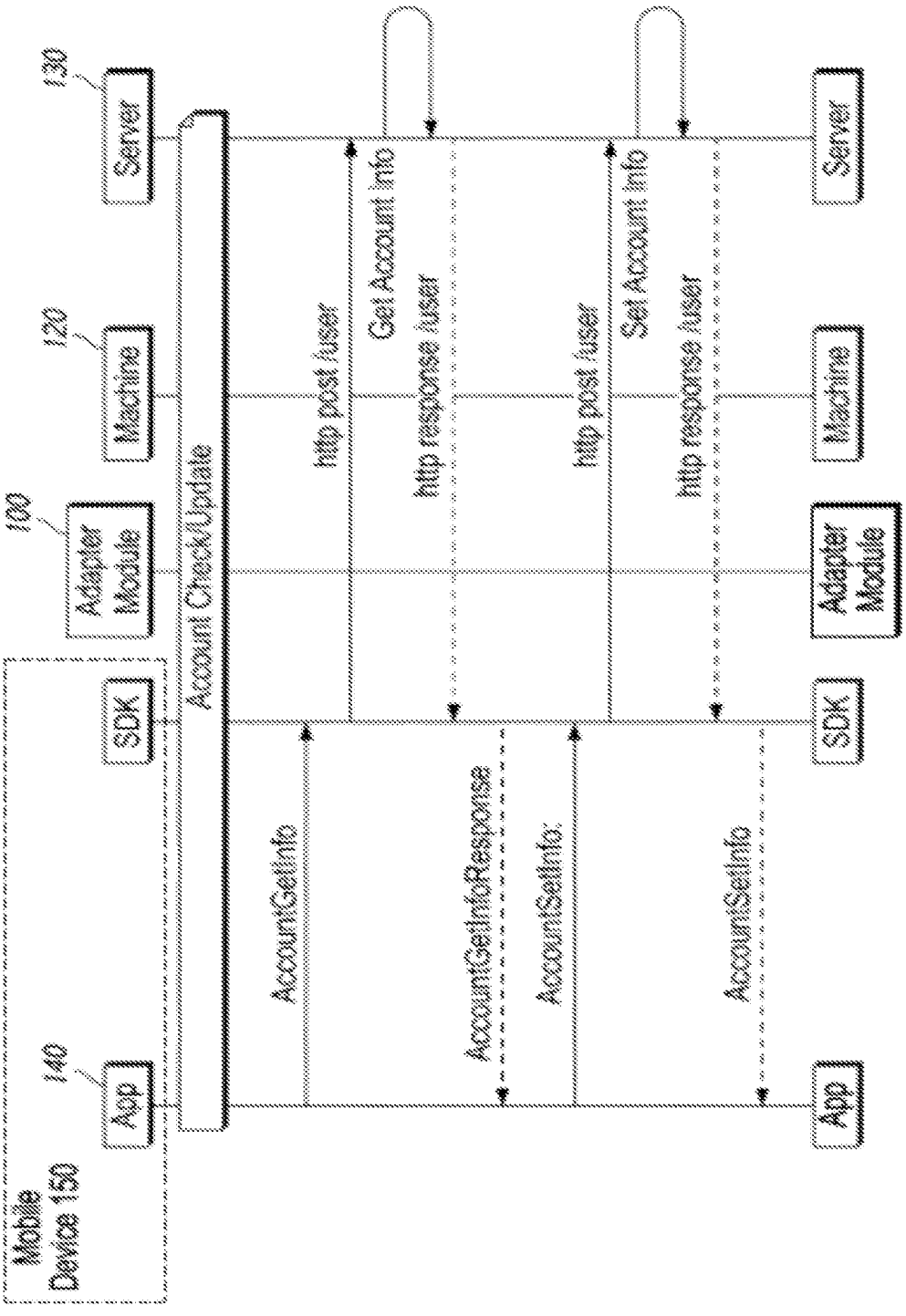

Mobile Device 150
App
140
SDK
Adapter Module
100
Machine
120
Server
130
Account Check/Update
AccountGetInfo
http post /user
Get Account info
http response /user
AccountGetInfoResponse
AccountSetInfo
http post /user
Set Account info
http response /user
AccountSetInfo
SDK
Adapter Module
Machine
Server
App

Figure 8G

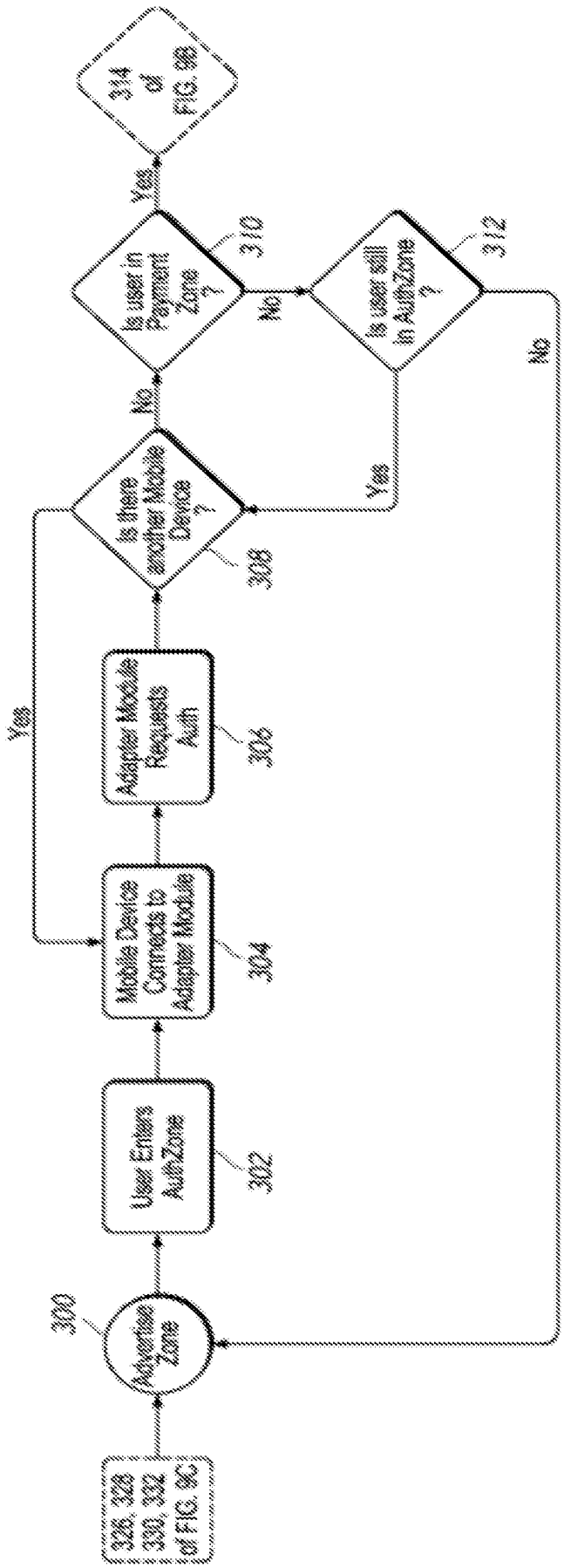

326, 328, 330, 332 of FIG. 9C
300
Advertising Zone
User Enters AuthZone
302
Mobile Device Connects to Adapter Module
304
Adapter Module Requests Auth
306
Is there another Mobile Device ?
308
Is user in Payment Zone ?
310
Is user still in AuthZone ?
312
314 of FIG. 9B
Yes
No
Yes
No
Yes
No

Figure 9A

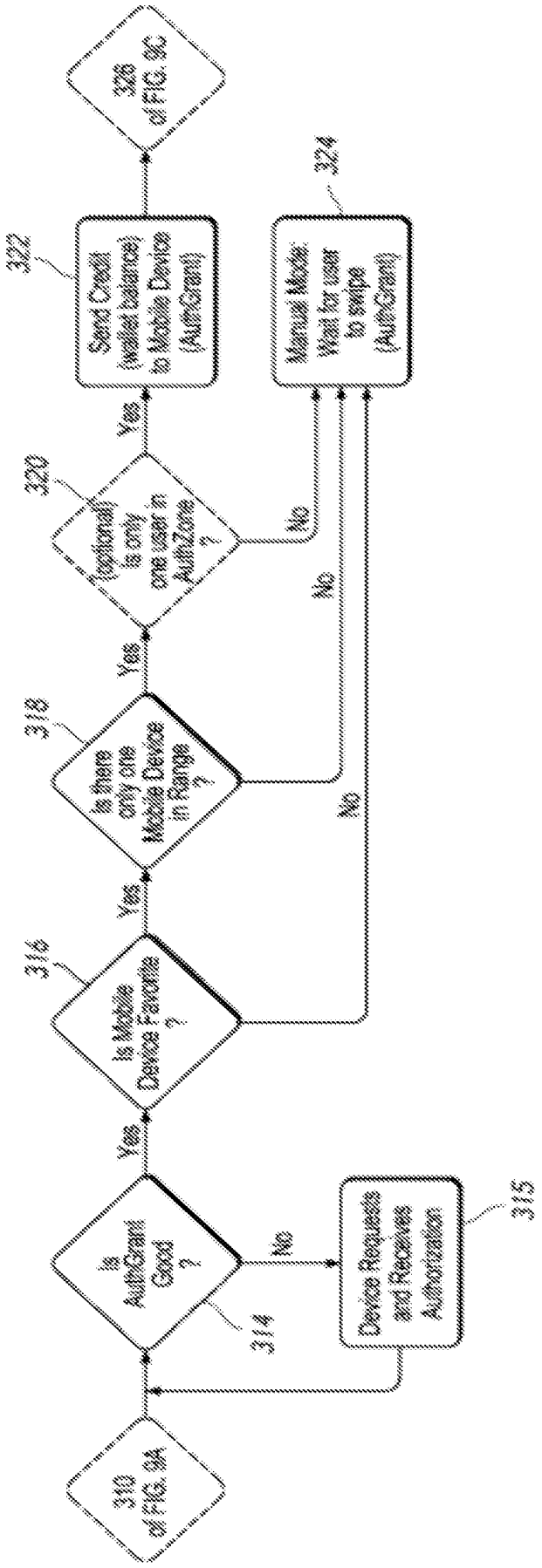
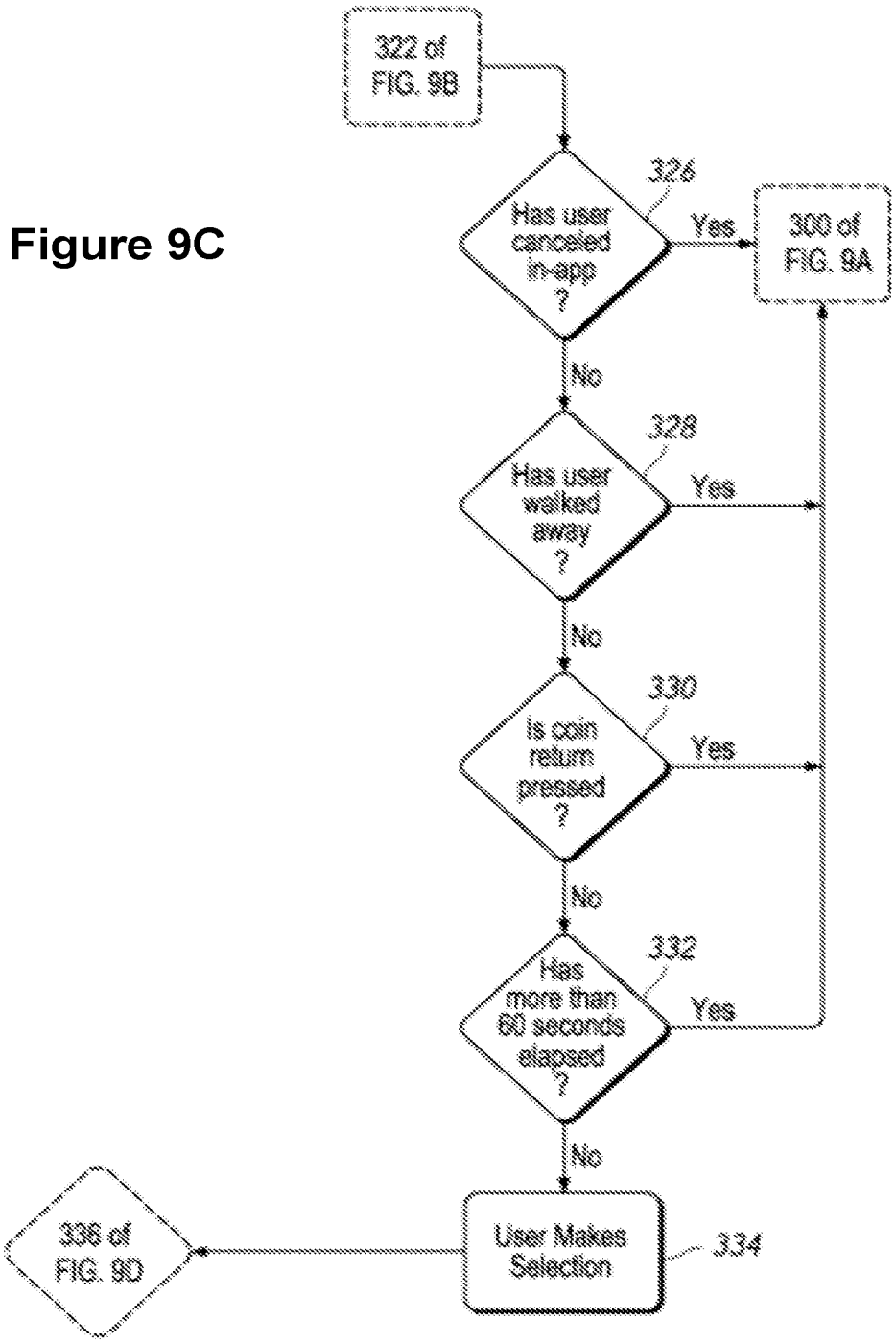

310 of FIG. 9A
Is AuthGram Good ?
314
No
Device Requests and Receives Authorization
315
Yes
Is Mobile Device Favorite ?
316
Yes
Is there only one Mobile Device in Range ?
318
Yes
(optional) Is only one user in AuthZone ?
320
Yes
Send Credit (wallet balance) to Mobile Device (AuthGram)
322
326 of FIG. 9C
No
No
No
Manual Mode: Wait for user to swipe (AuthGram)
324

Figure 9B

Figure 9C


322 of FIG. 9B
326
Has user canceled in-app ?
Yes
300 of FIG. 9A
No
328
Has user walked away ?
Yes
No
330
Is coin return pressed ?
Yes
No
332
Has more than 60 seconds elapsed ?
Yes
No
User Makes Selection
334
336 of FIG. 9D

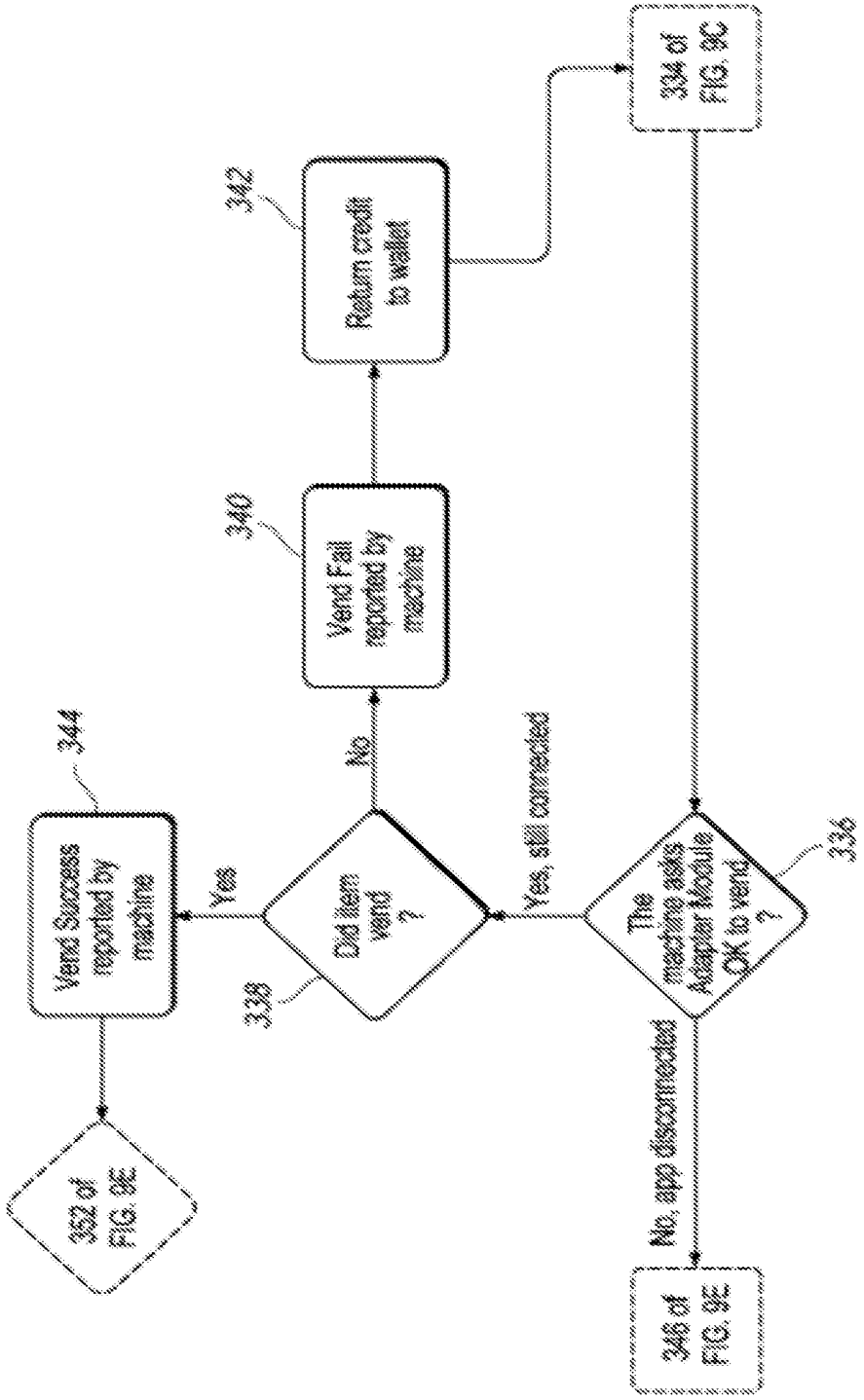

334 of FIG. 9C
342
Return credit to wallet
340
Vend Fail reported by machine
344
Vend Success reported by machine
Yes
No
339
Did item vend ?
Yes, still connected
The machine asks Adapter Module OK to vend ?
336
No, app disconnected
352 of FIG. 9E
348 of FIG. 9E

Figure 9D

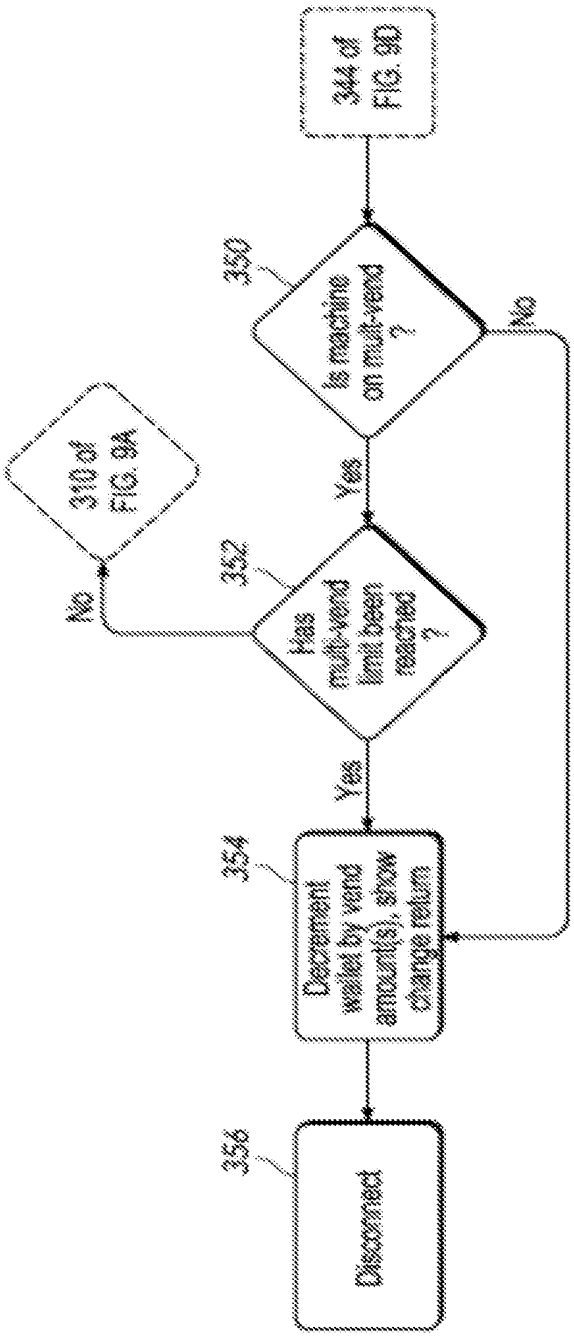

344 of FIG. 9D
350
Is machine on multi-vend ?
No
Yes
352
Has multi-vend limit been reached ?
No
310 of FIG. 9A
Yes
354
Decrement wallet by vend amount(s), show change return
356
Disconnect

Figure 9E

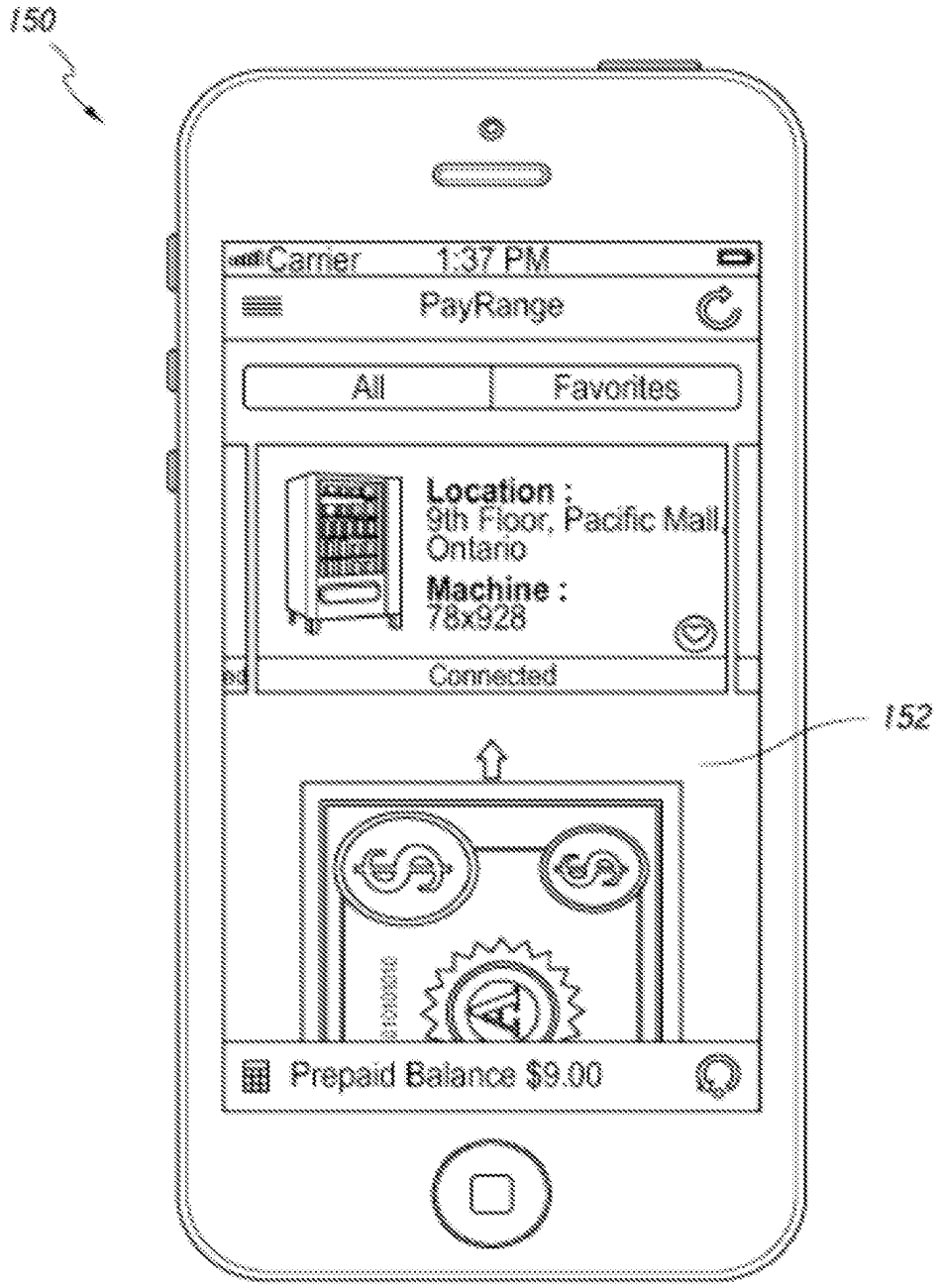

150
Carrier
1:37 PM
PayRange
All
Favorites
Location :
9th Floor, Pacific Mall
Ontario
Machine :
78x928
Connected
152
Prepaid Balance $9.00

Figure 10A

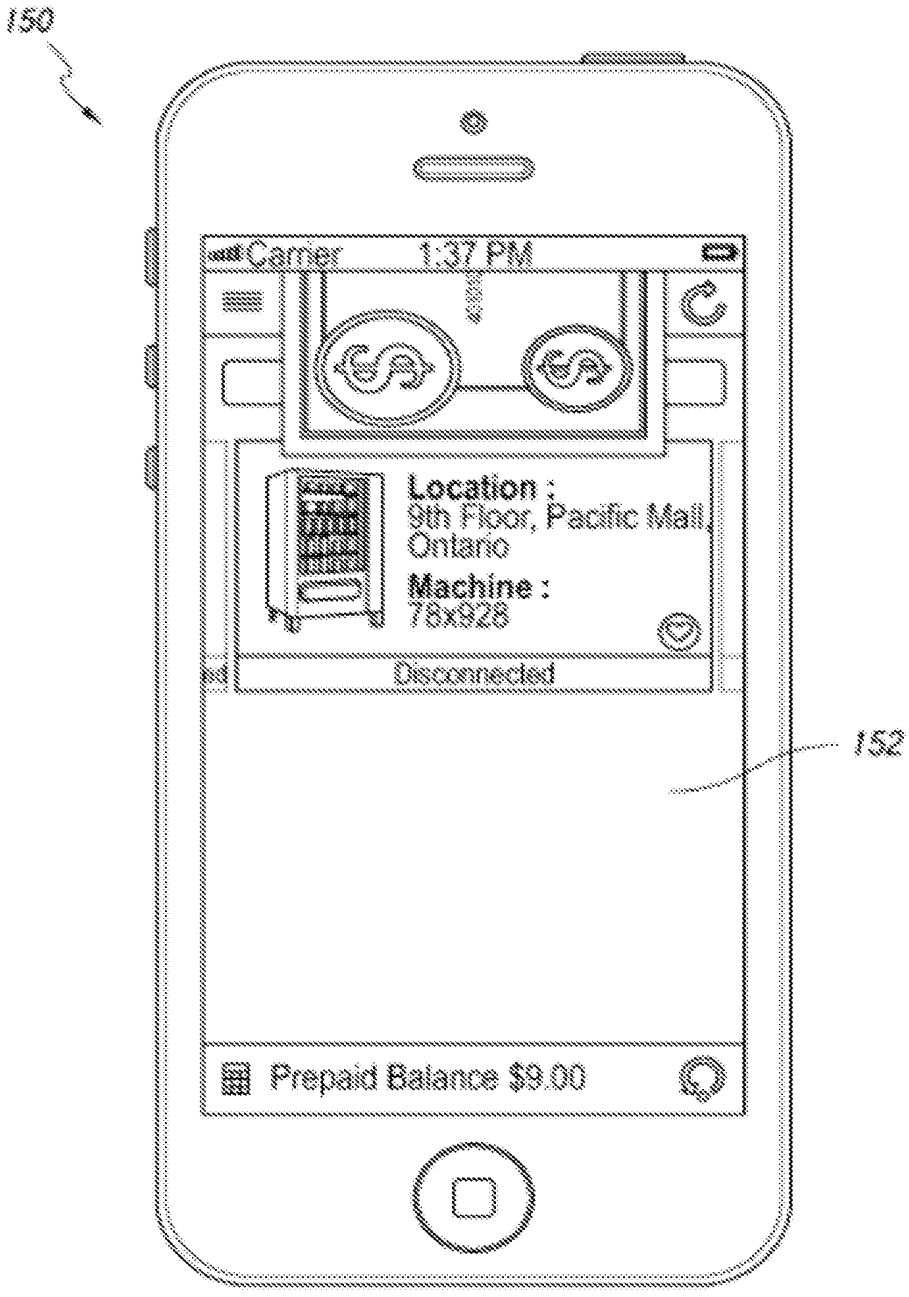

150
Carrier
1:37 PM
Location :
9th Floor, Pacific Mall,
Ontario
Machine :
78x928
Disconnected
152
Prepaid Balance $9.00

Figure 10B

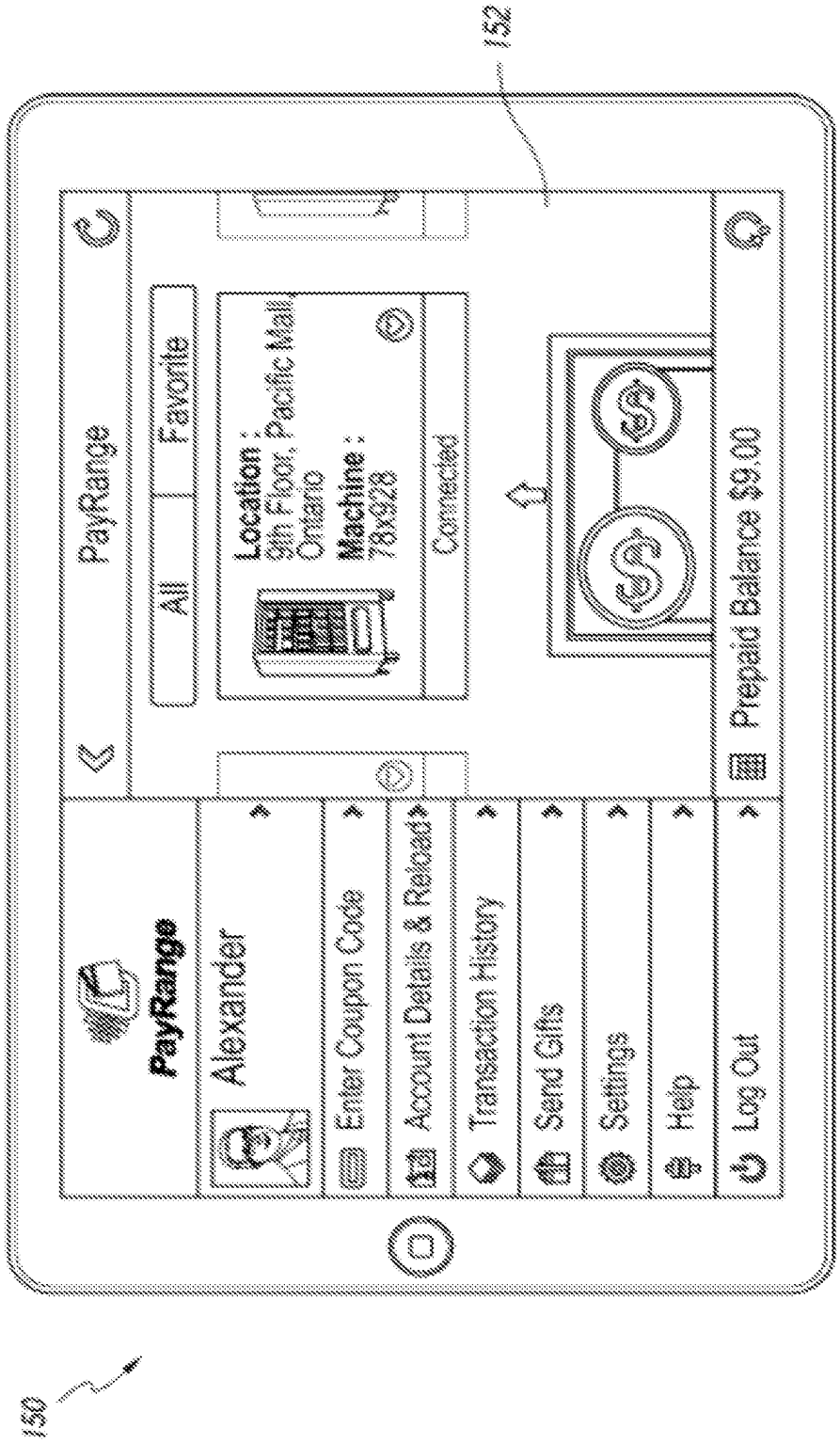

150
152
PayRange
Alexander
Enter Coupon Code
Account Details & Reload
Transaction History
Send Gifts
Settings
Help
Log Out
PayRange
All
Favorite
Location :
9th Floor, Pacific Mall
Ontario
Machine :
78x928
Connected
Prepaid Balance $9.00

Figure 10C

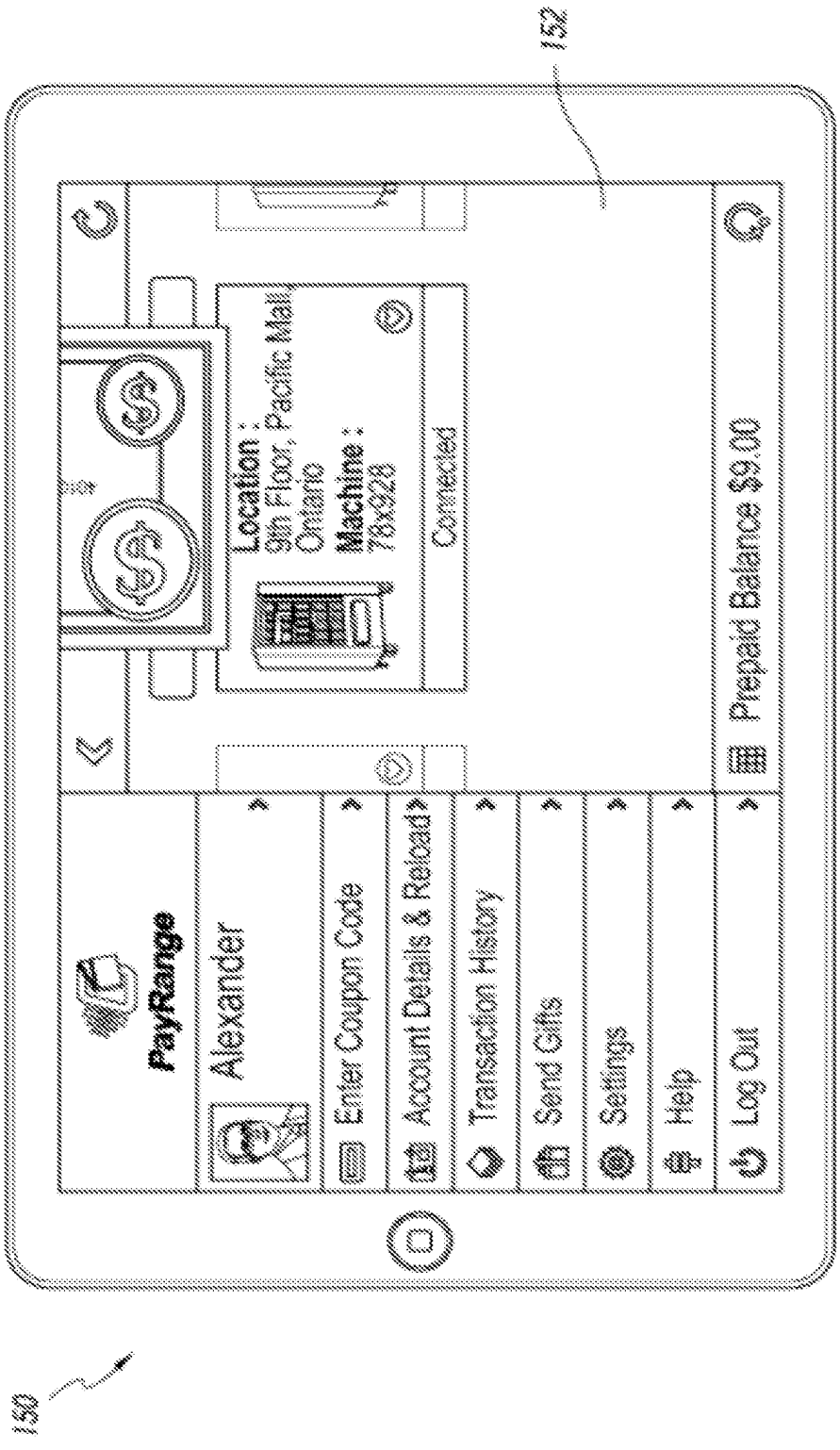

150
152
PayRange
Alexander
Enter Coupon Code
Account Details & Reload
Transaction History
Send Gifts
Settings
Help
Log Out
Location :
9th Floor, Pacific Mall
Ontario
Machine :
78x928
Connected
Prepaid Balance $9.00

Figure 10D

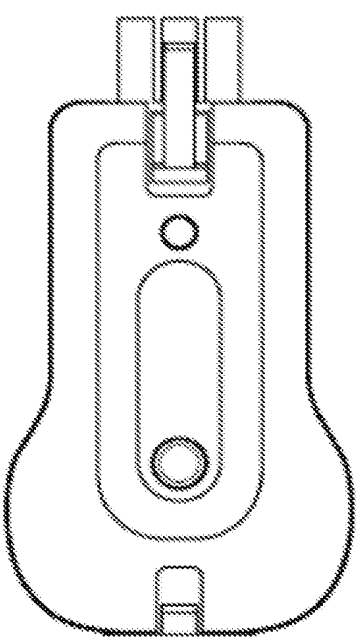


Figure 12

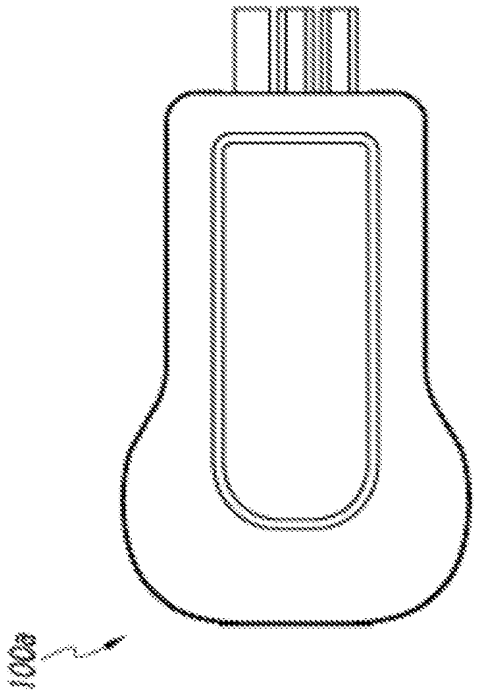


Figure 13

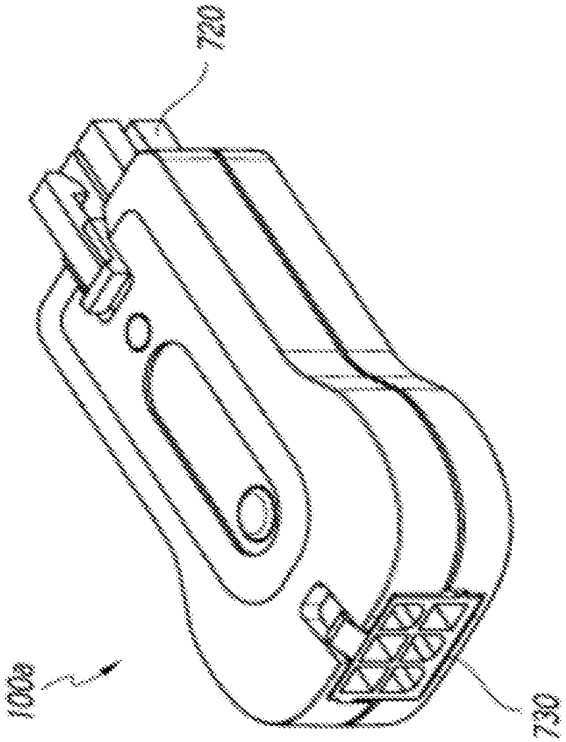


Figure 11

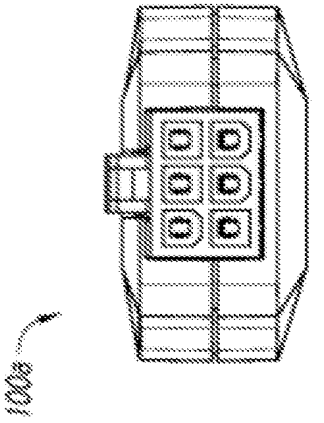


Figure 16

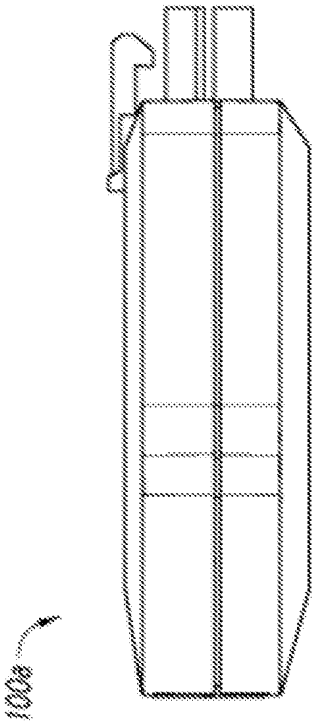


Figure 14

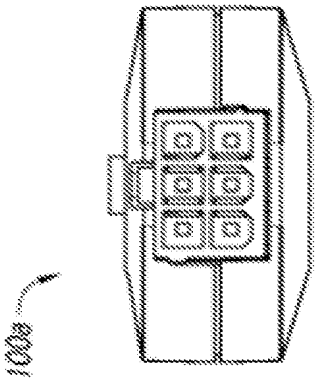


Figure 15

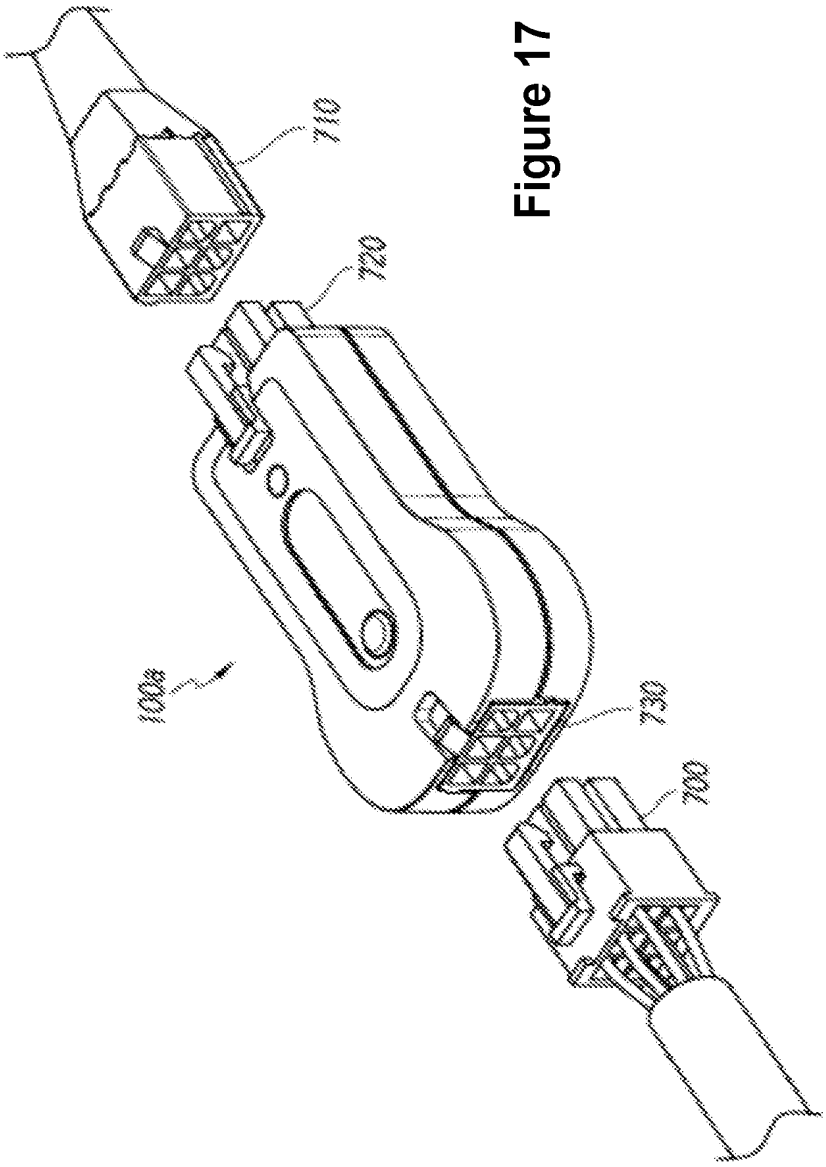


Figure 17

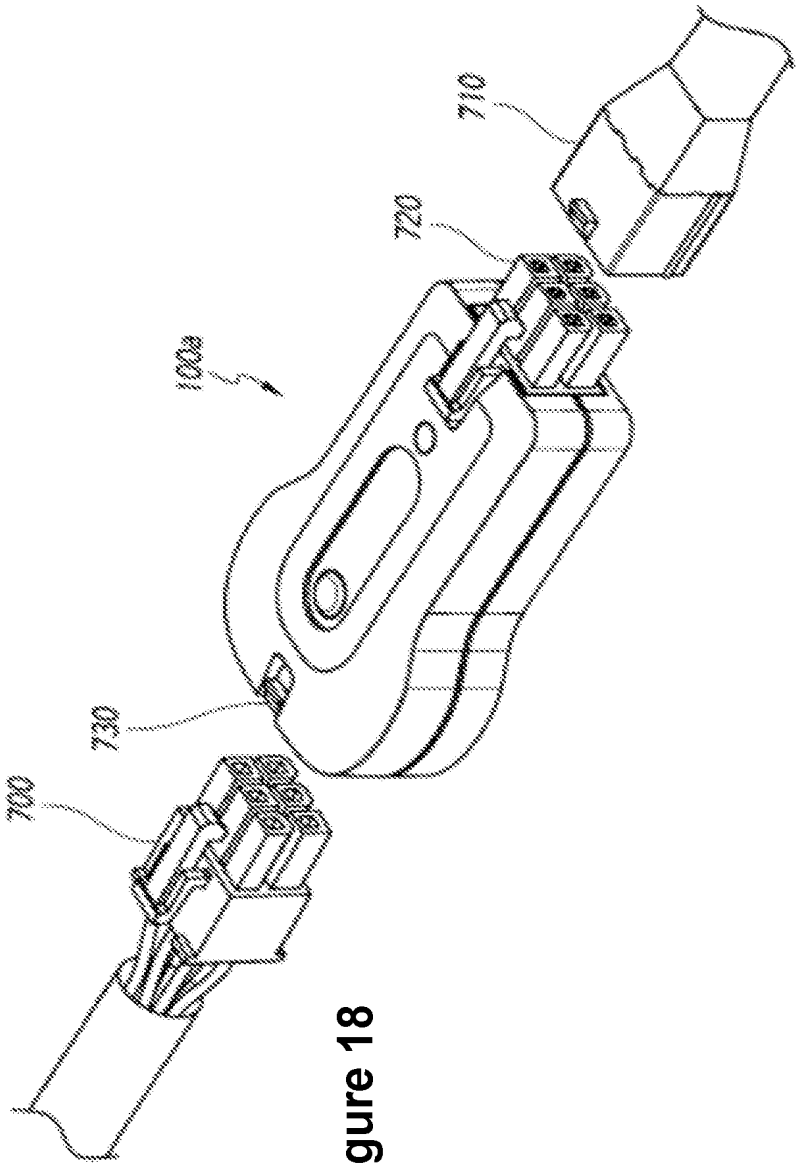


Figure 18

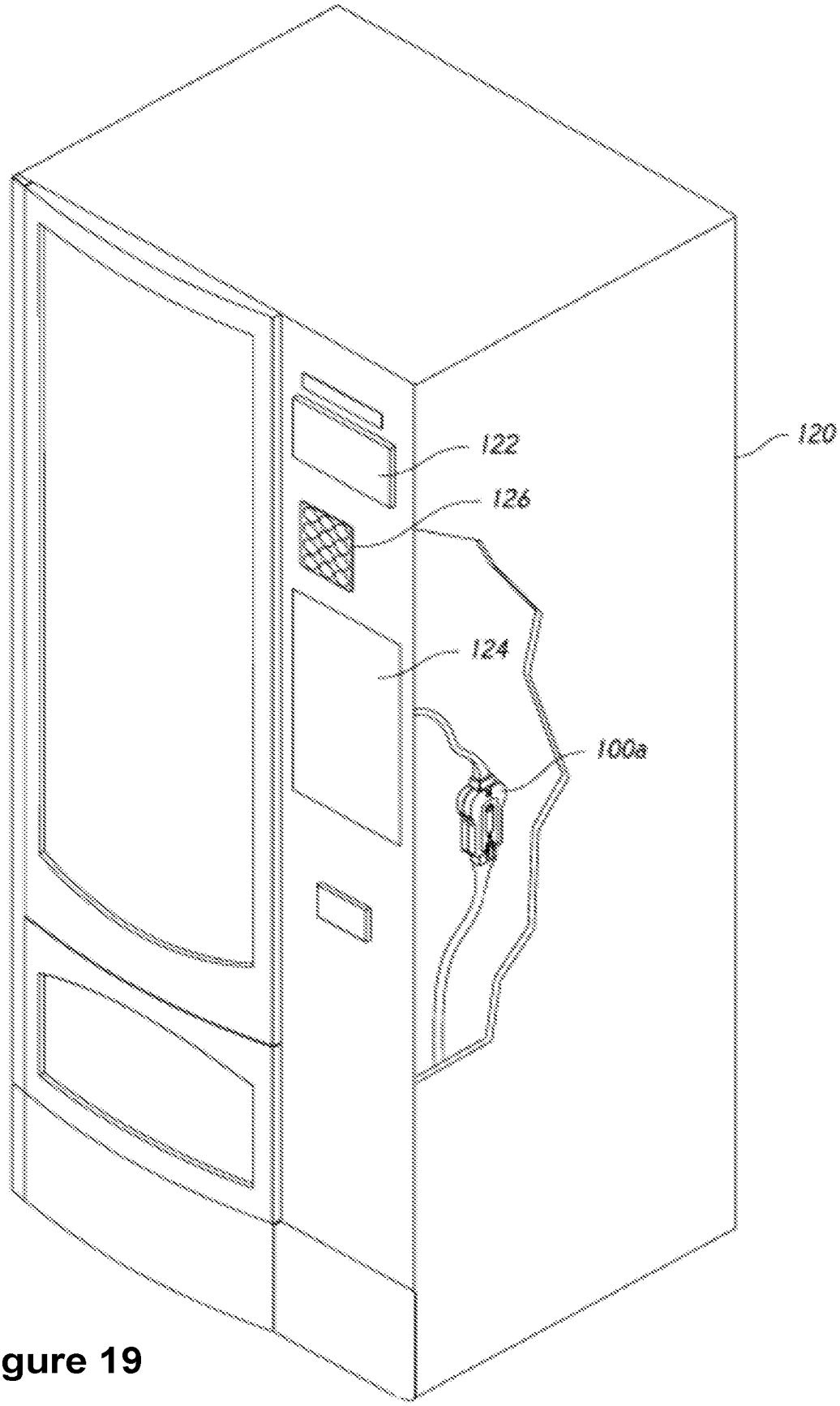


Figure 19

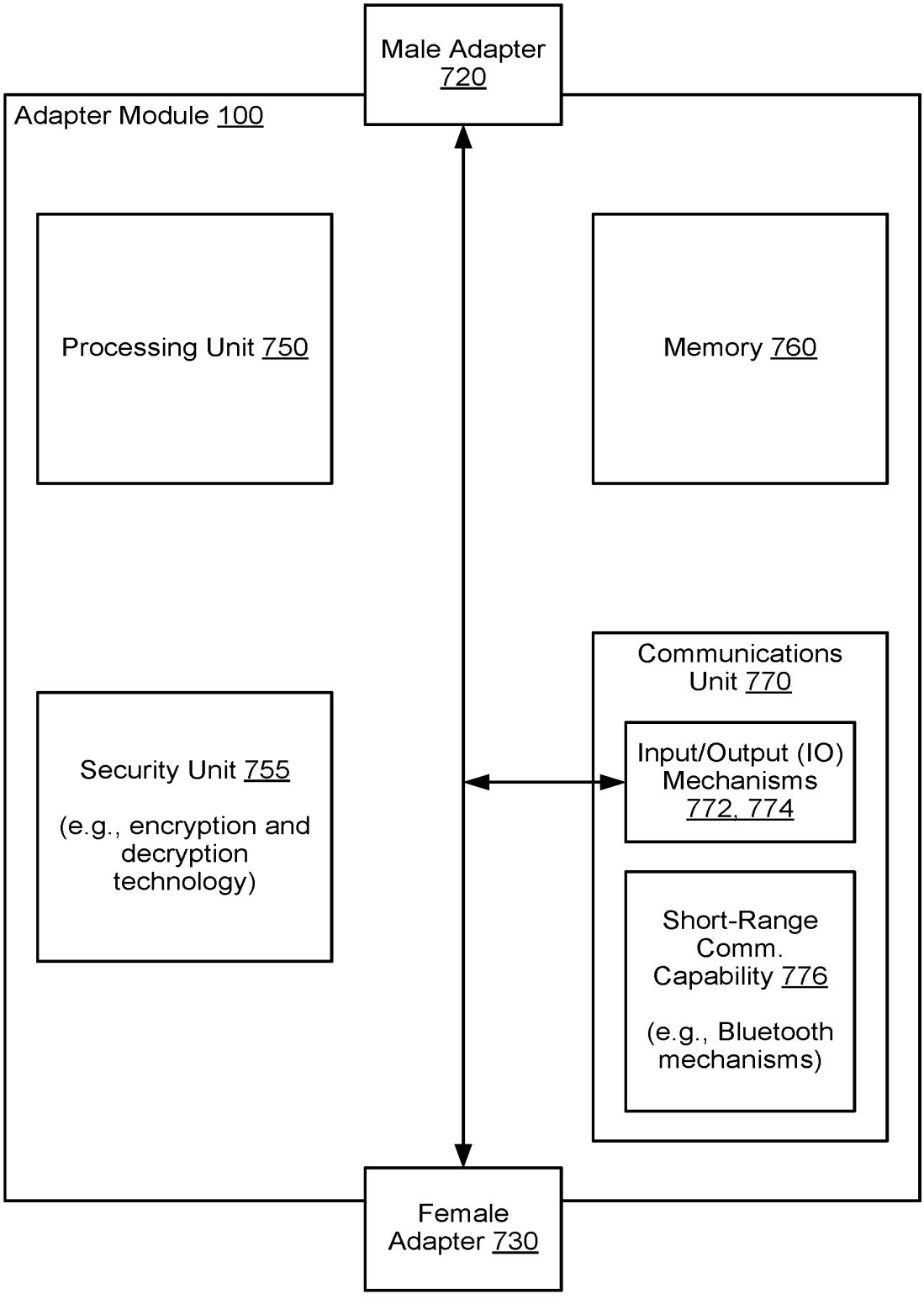

Male Adapter
720
Adapter Module 100
Processing Unit 750
Memory 760
Communications
Unit 770
Input/Output (IO)
Mechanisms
772, 774
Security Unit 755
(e.g., encryption and
decryption
technology)
Short-Range
Comm.
Capability 776
(e.g., Bluetooth
mechanisms)
Female
Adapter 730

Figure 20

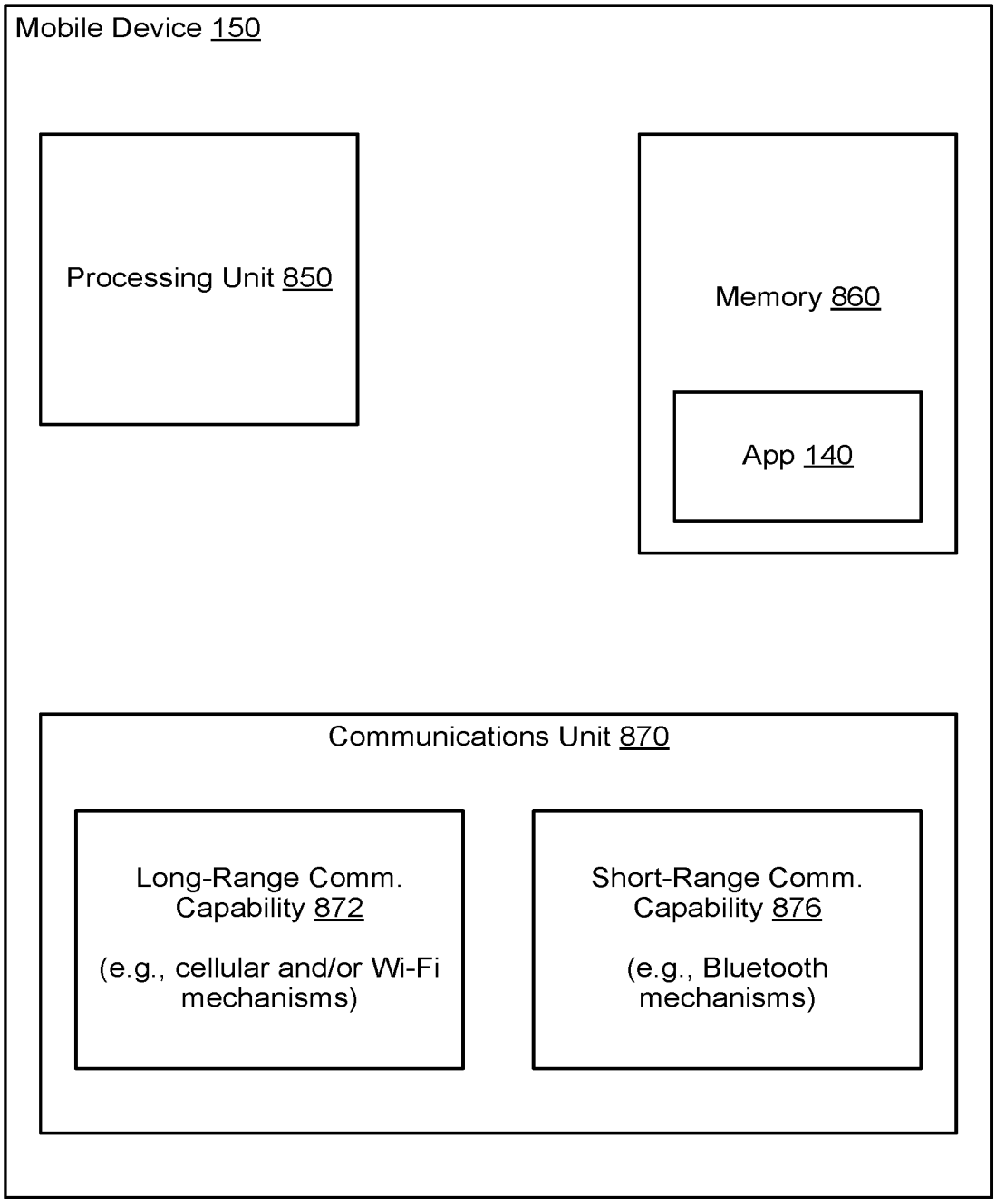

Mobile Device 150
Processing Unit 850
Memory 860
App 140
Communications Unit 870
Long-Range Comm. Capability 872
(e.g., cellular and/or Wi-Fi mechanisms)
Short-Range Comm. Capability 876
(e.g., Bluetooth mechanisms)

Figure 21

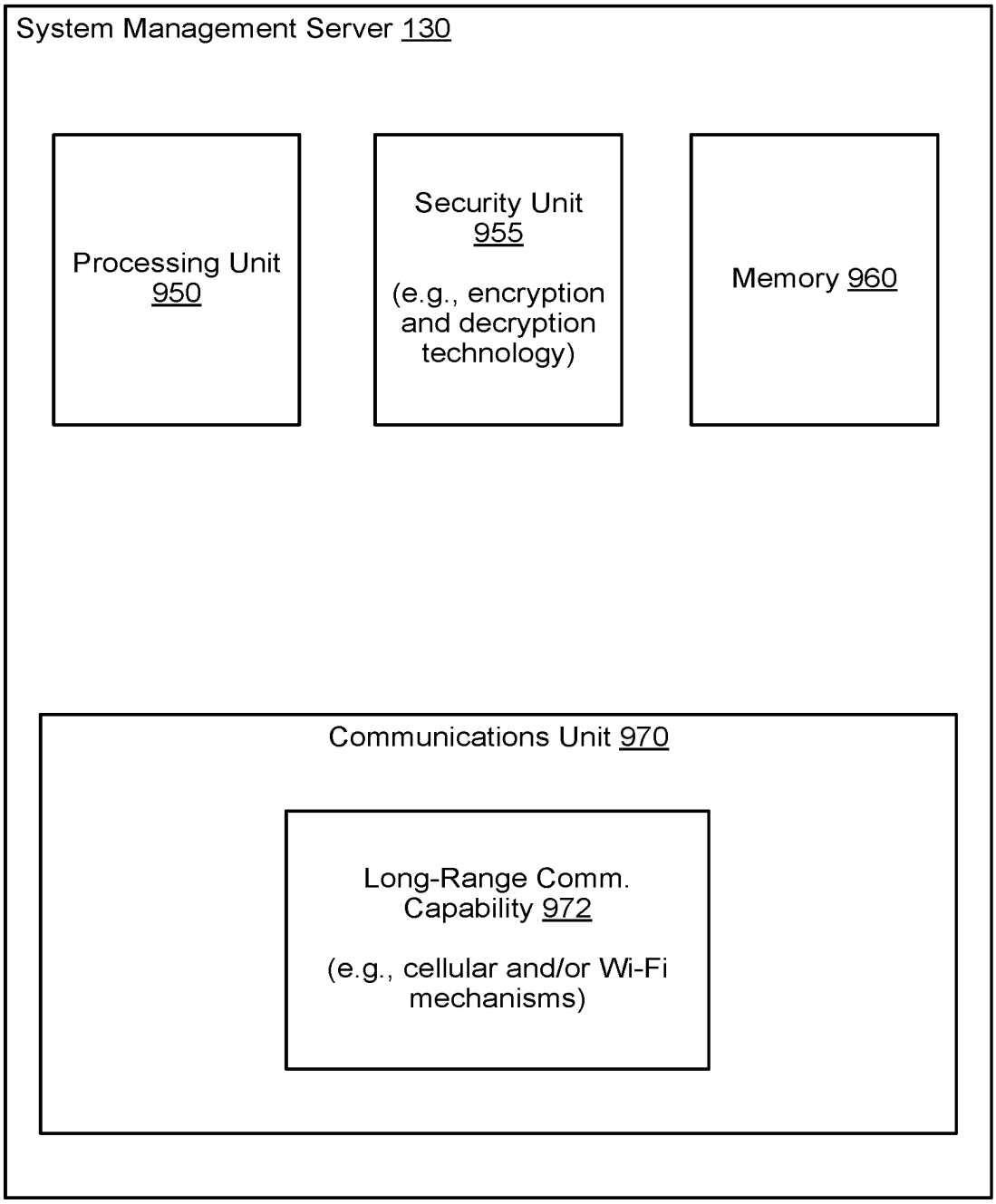

System Management Server 130
Processing Unit 950
Security Unit 955
(e.g., encryption and decryption technology)
Memory 960
Communications Unit 970
Long-Range Comm. Capability 972
(e.g., cellular and/or Wi-Fi mechanisms)

Figure 22

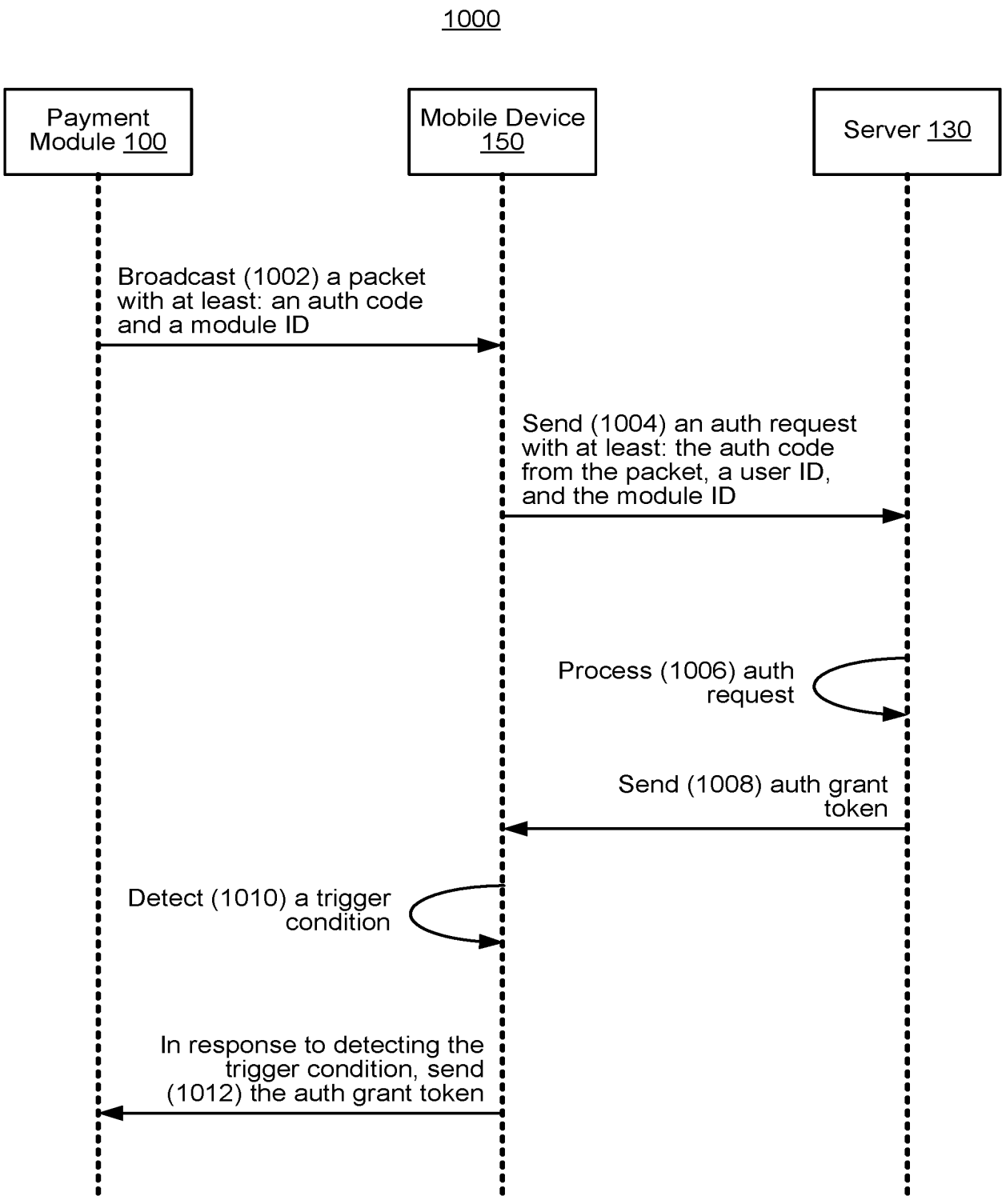

1000
Payment Module 100
Mobile Device 150
Server 130
Broadcast (1002) a packet with at least: an auth code and a module ID
Send (1004) an auth request with at least: the auth code from the packet, a user ID, and the module ID
Process (1006) auth request
Send (1008) auth grant token
Detect (1010) a trigger condition
In response to detecting the trigger condition, send (1012) the auth grant token

Figure 23

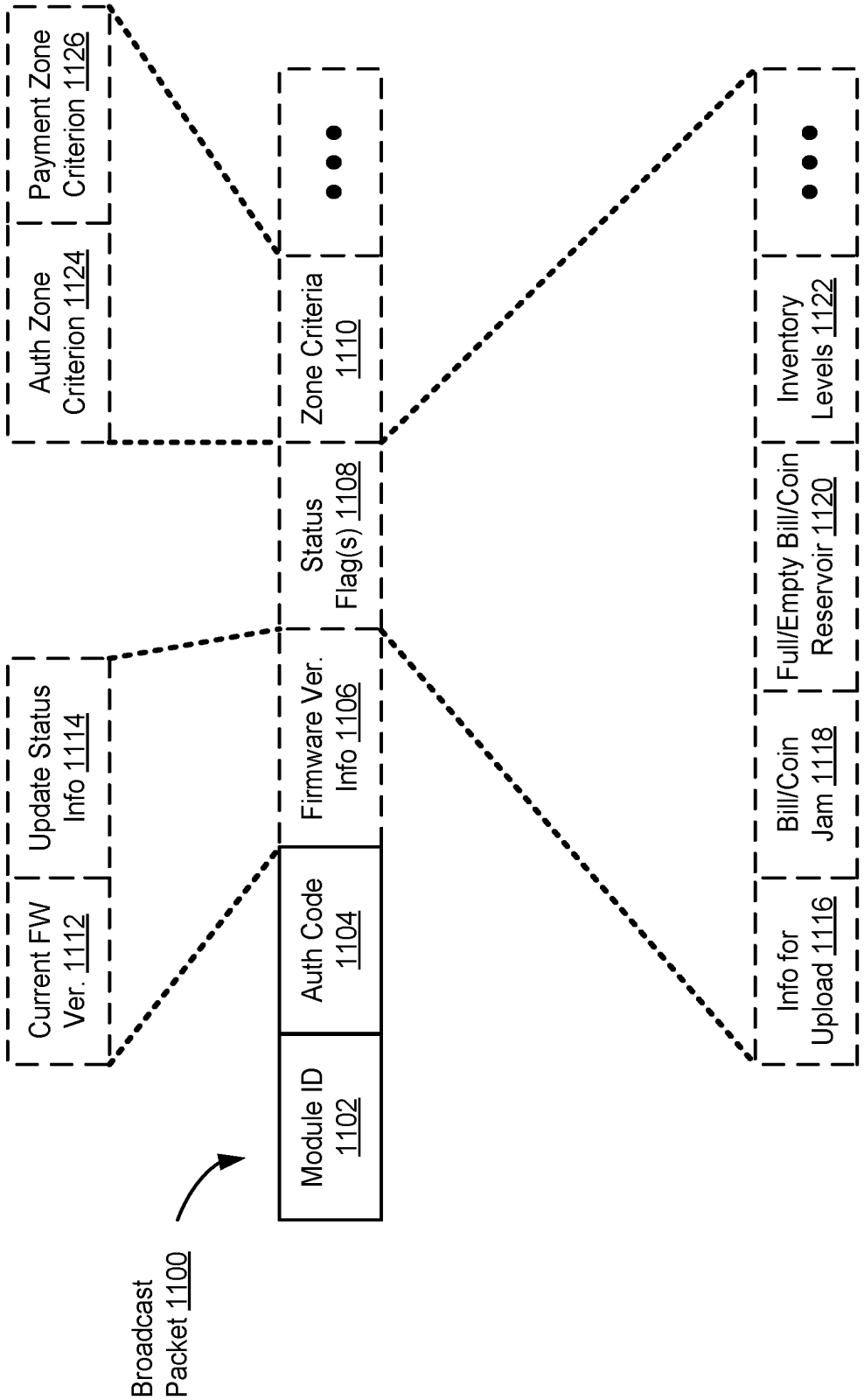

Broadcast Packet 1100
Module ID 1102
Auth Code 1104
Firmware Ver. Info 1106
Status Flag(s) 1108
Zone Criteria 1110
Current FW Ver. 1112
Update Status Info 1114
Auth Zone Criterion 1124
Payment Zone Criterion 1126
Info for Upload 1116
Bill/Coin Jam 1118
Full/Empty Bill/Coin Reservoir 1120
Inventory Levels 1122

Figure 24A

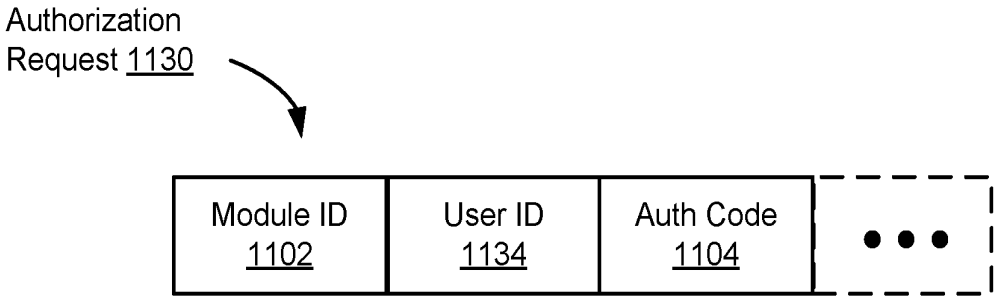


Figure 24B

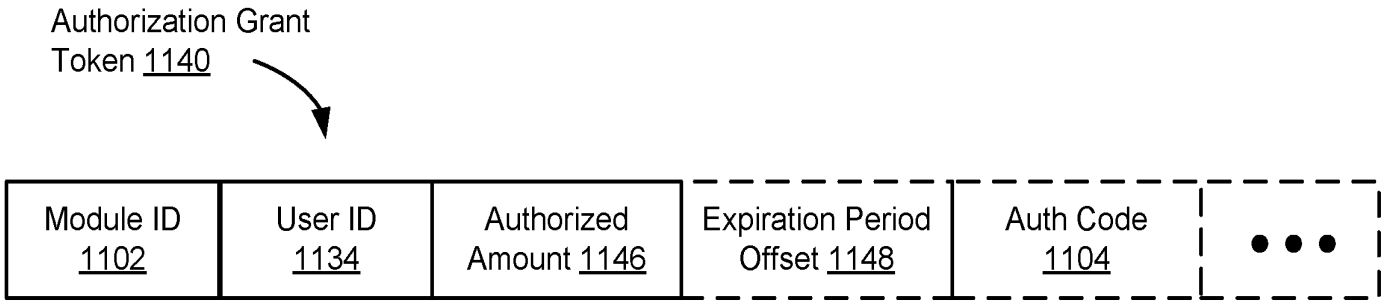


Figure 24C

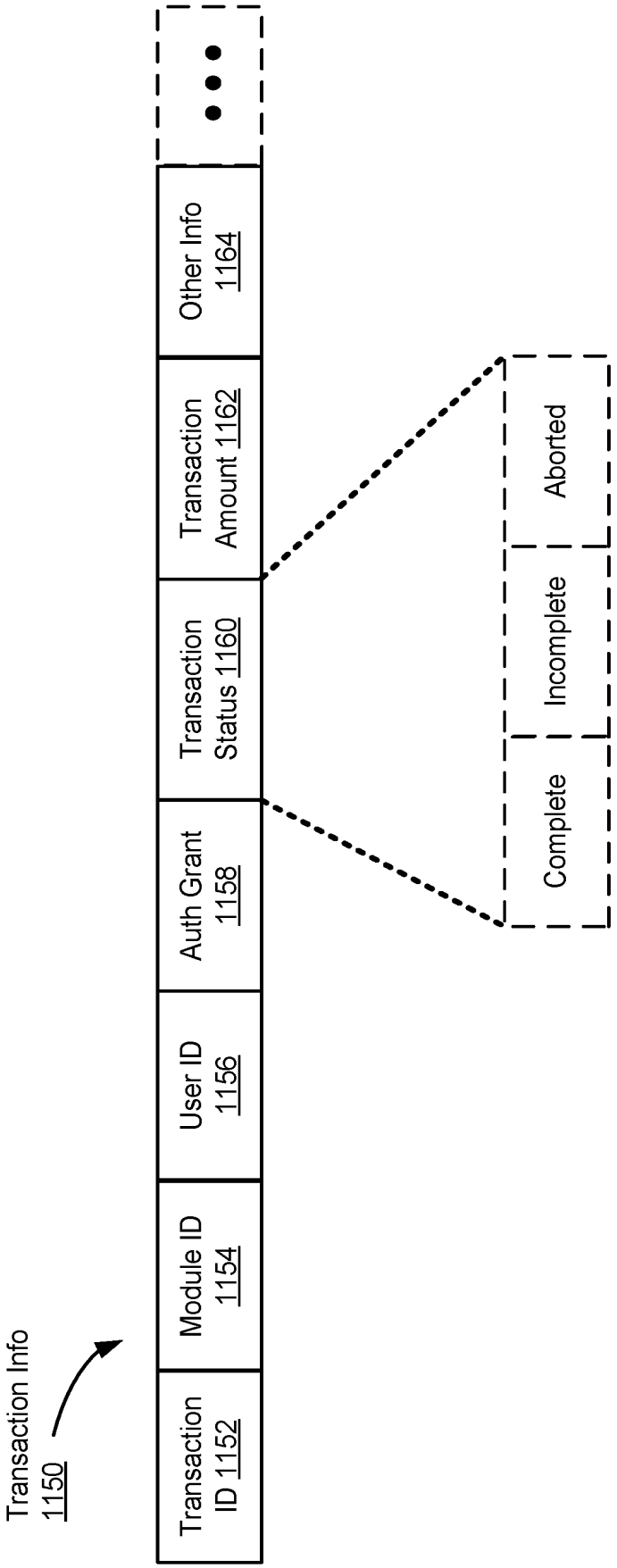

Transaction Info 1150
Transaction ID 1152
Module ID 1154
User ID 1156
Auth Grant 1158
Transaction Status 1160
Transaction Amount 1162
Other Info 1164
Complete
Incomplete
Aborted

Figure 24D

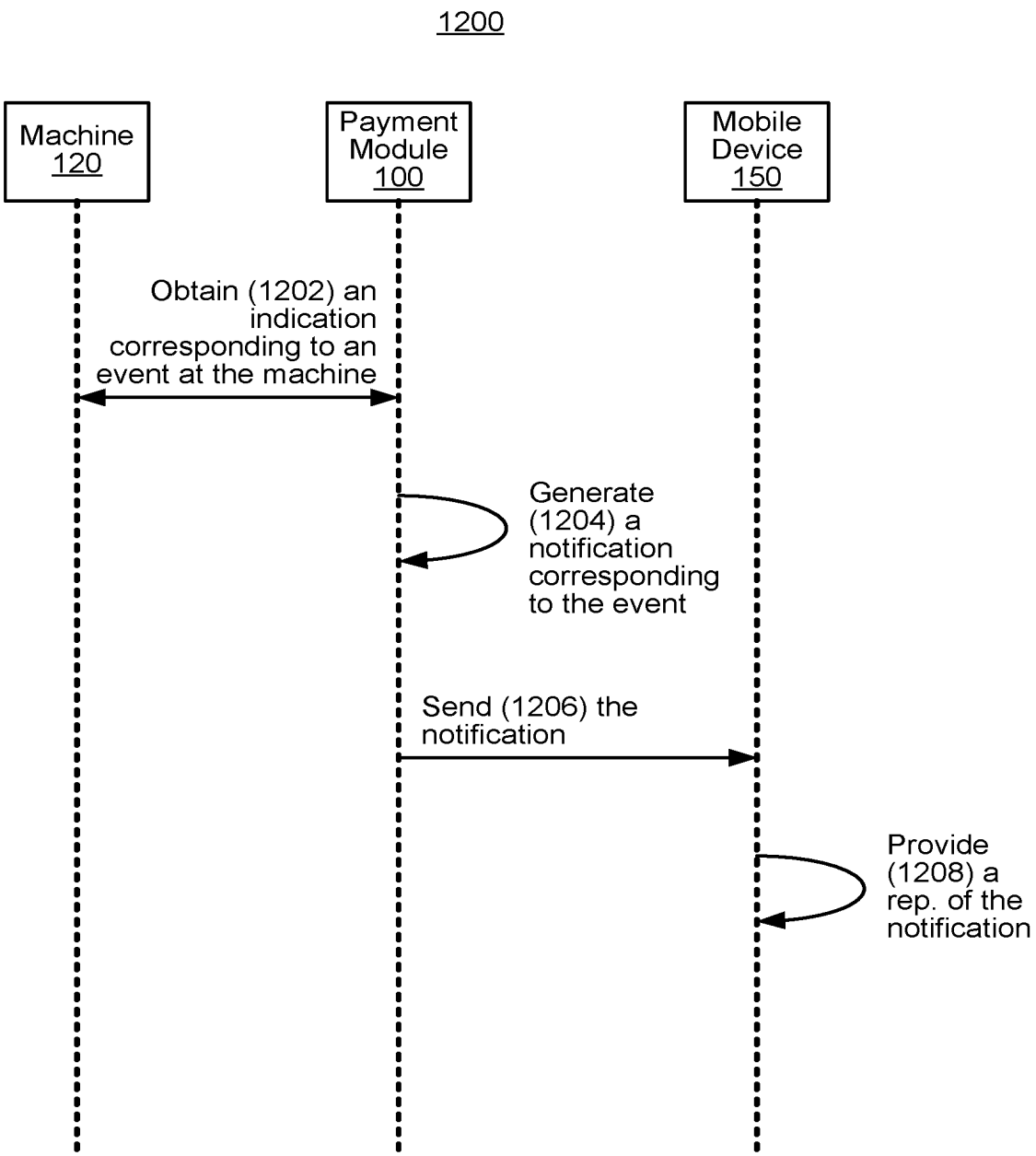

1200
Machine 120
Payment Module 100
Mobile Device 150
Obtain (1202) an indication corresponding to an event at the machine
Generate (1204) a notification corresponding to the event
Send (1206) the notification
Provide (1208) a rep. of the notification

Figure 25A

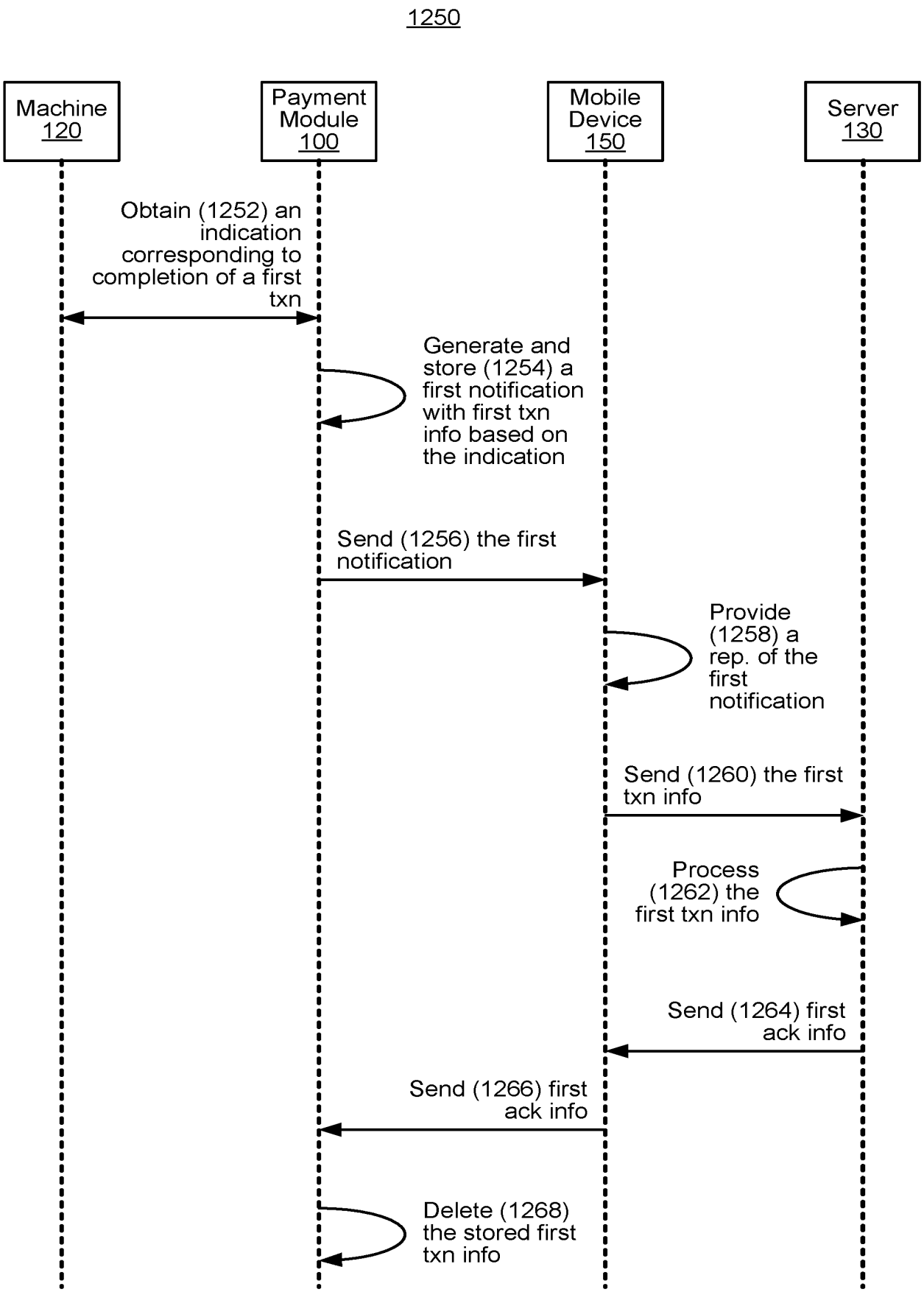

1250
Machine 120
Payment Module 100
Mobile Device 150
Server 130
Obtain (1252) an indication corresponding to completion of a first txn
Generate and store (1254) a first notification with first txn info based on the indication
Send (1256) the first notification
Provide (1258) a rep. of the first notification
Send (1260) the first txn info
Process (1262) the first txn info
Send (1264) first ack info
Send (1266) first ack info
Delete (1268) the stored first txn info

Figure 25B

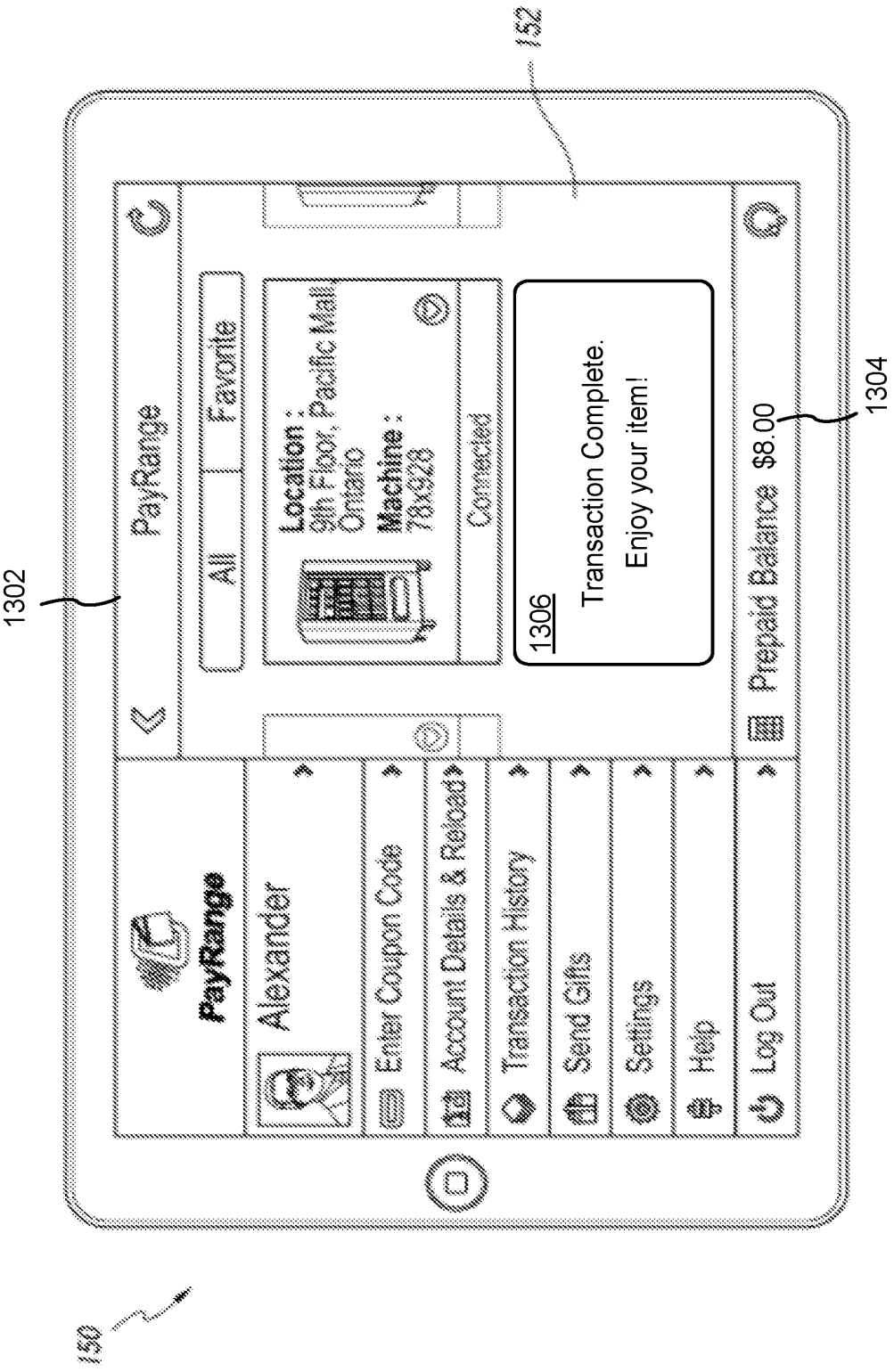

150
1302
152
1304
1306
PayRange
Alexander
Enter Coupon Code
Account Details & Reload
Transaction History
Send Gifts
Settings
Help
Log Out
PayRange
All
Favorite
Location :
9th Floor, Pacific Mall
Ontario
Machine :
78x928
Connected
Transaction Complete.
Enjoy your item!
Prepaid Balance $8.00

Figure 26A

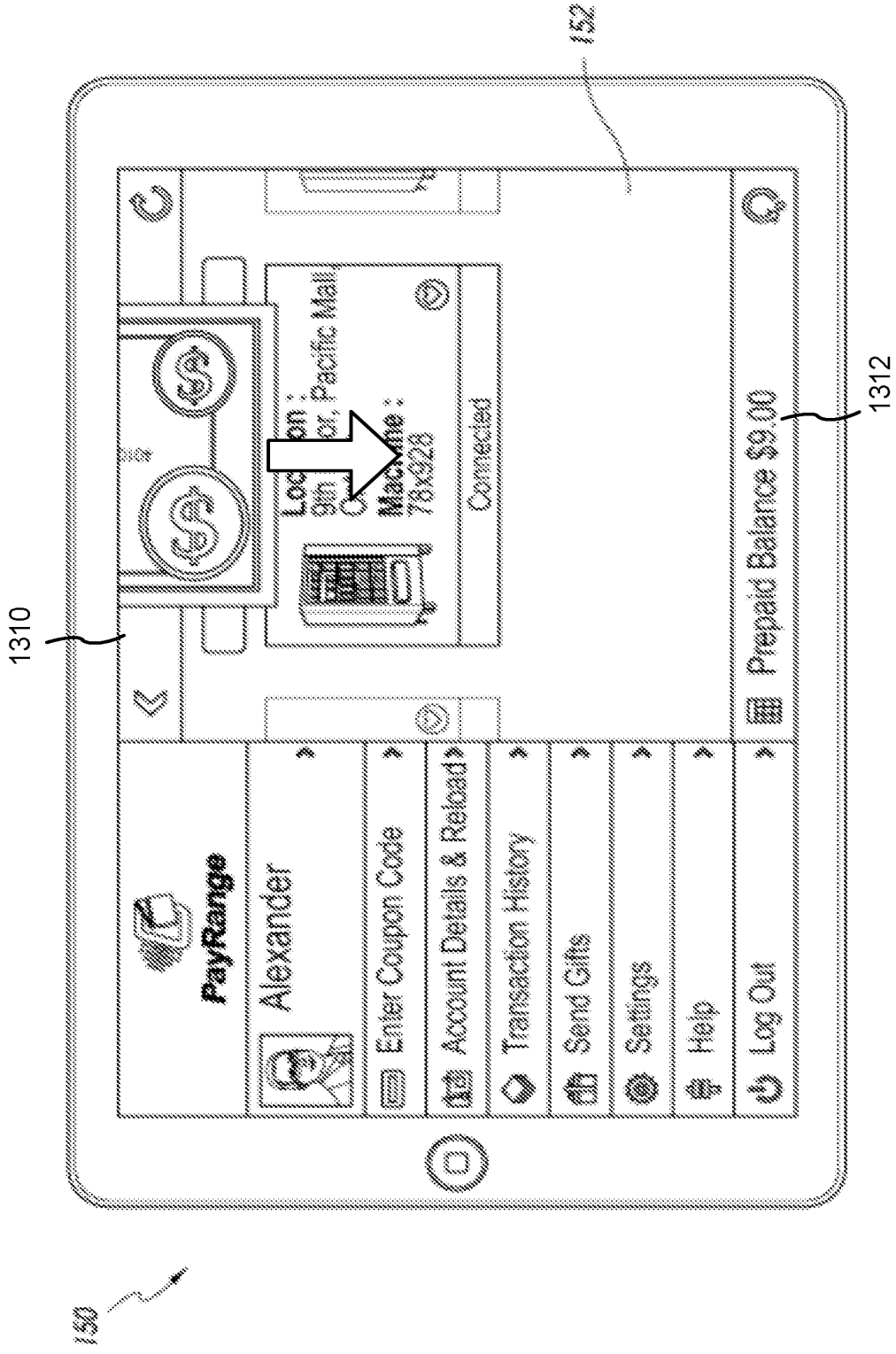

150
152
1310
1312
PayRange
Alexander
Enter Coupon Code
Account Details & Reload
Transaction History
Send Gifts
Settings
Help
Log Out
Prepaid Balance $9.00
Connected

Figure 26B

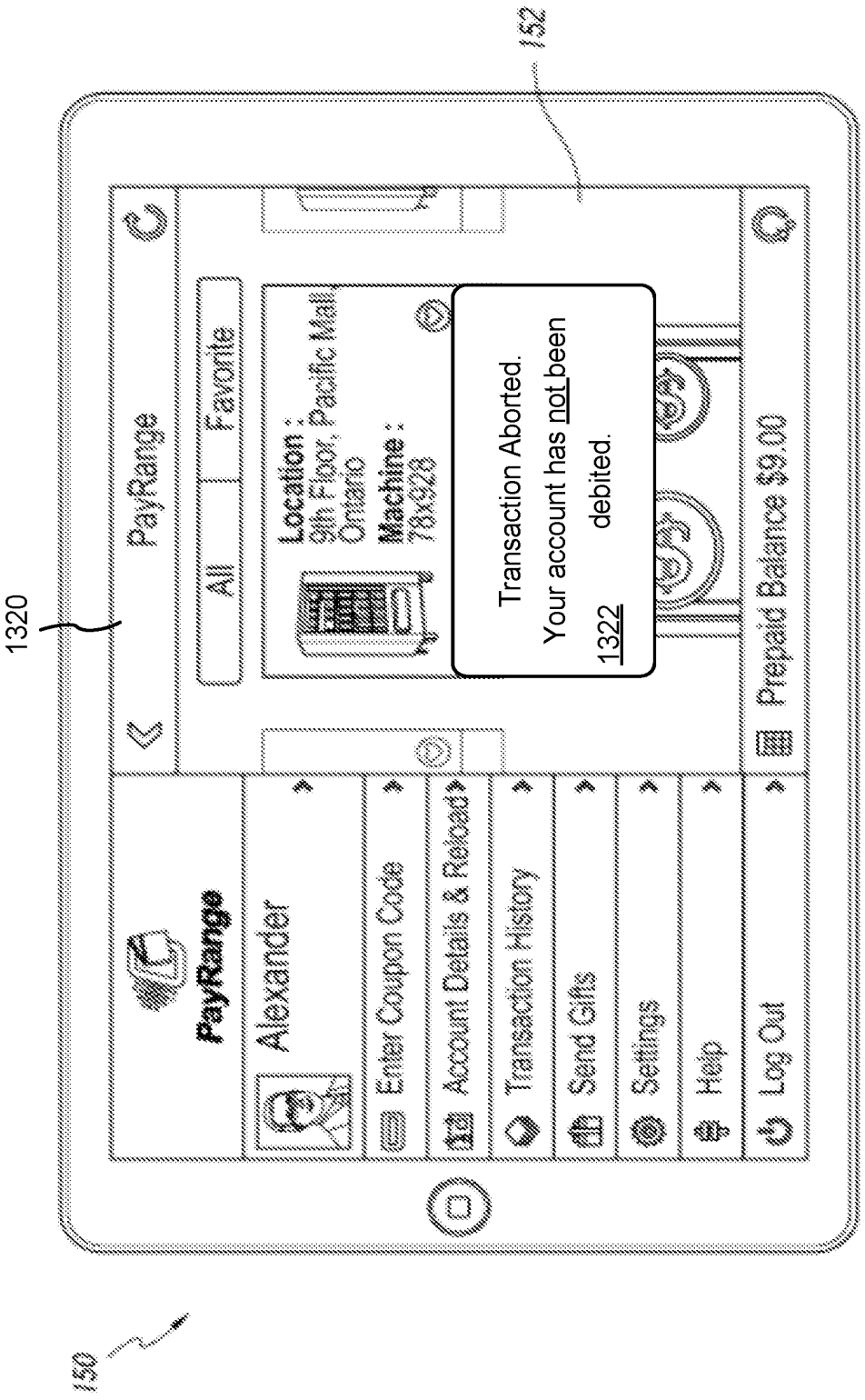

150
1320
152
PayRange
PayRange
Alexander
Enter Coupon Code
Account Details & Reload
Transaction History
Send Gifts
Settings
Help
Log Out
All
Favorite
Location :
9th Floor, Pacific Mall
Ontario
Machine :
78x928
Transaction Aborted.
Your account has not been
debited.
1322
Prepaid Balance $9.00

Figure 26C

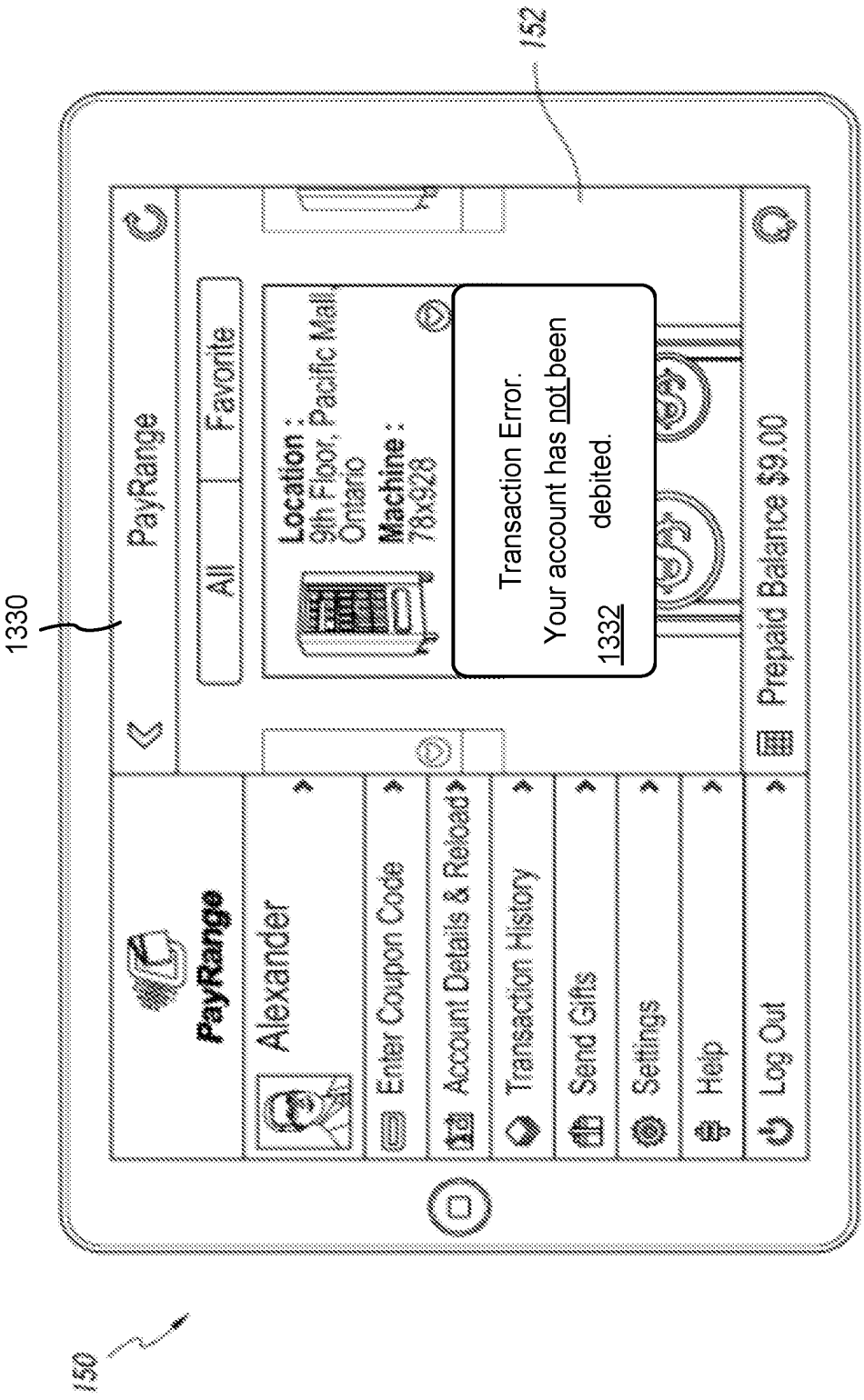

150
1330
152
PayRange
Alexander
Enter Coupon Code
Account Details & Reload
Transaction History
Send Gifts
Settings
Help
Log Out
All
Favorite
Location :
9th Floor, Pacific Mall
Ontario
Machine :
78x928
Transaction Error.
Your account has not been
debited.
1332
Prepaid Balance $9.00

Figure 26D

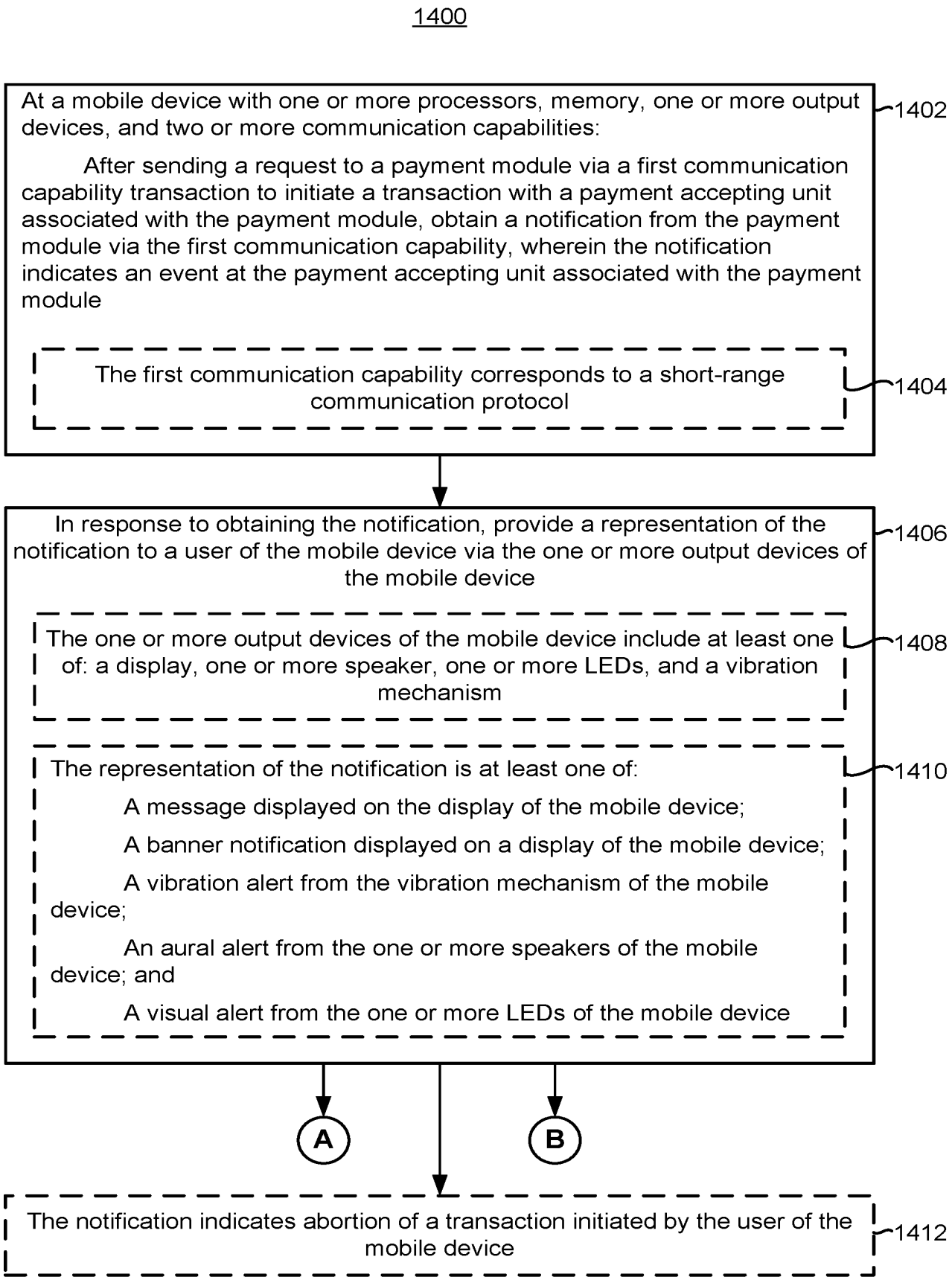

1400
At a mobile device with one or more processors, memory, one or more output devices, and two or more communication capabilities:
After sending a request to a payment module via a first communication capability transaction to initiate a transaction with a payment accepting unit associated with the payment module, obtain a notification from the payment module via the first communication capability, wherein the notification indicates an event at the payment accepting unit associated with the payment module
1402
The first communication capability corresponds to a short-range communication protocol
1404
In response to obtaining the notification, provide a representation of the notification to a user of the mobile device via the one or more output devices of the mobile device
1406
The one or more output devices of the mobile device include at least one of: a display, one or more speaker, one or more LEDs, and a vibration mechanism
1408
The representation of the notification is at least one of:
A message displayed on the display of the mobile device;
A banner notification displayed on a display of the mobile device;
A vibration alert from the vibration mechanism of the mobile device;
An aural alert from the one or more speakers of the mobile device; and
A visual alert from the one or more LEDs of the mobile device
1410
A
B
The notification indicates abortion of a transaction initiated by the user of the mobile device
1412

Figure 27A

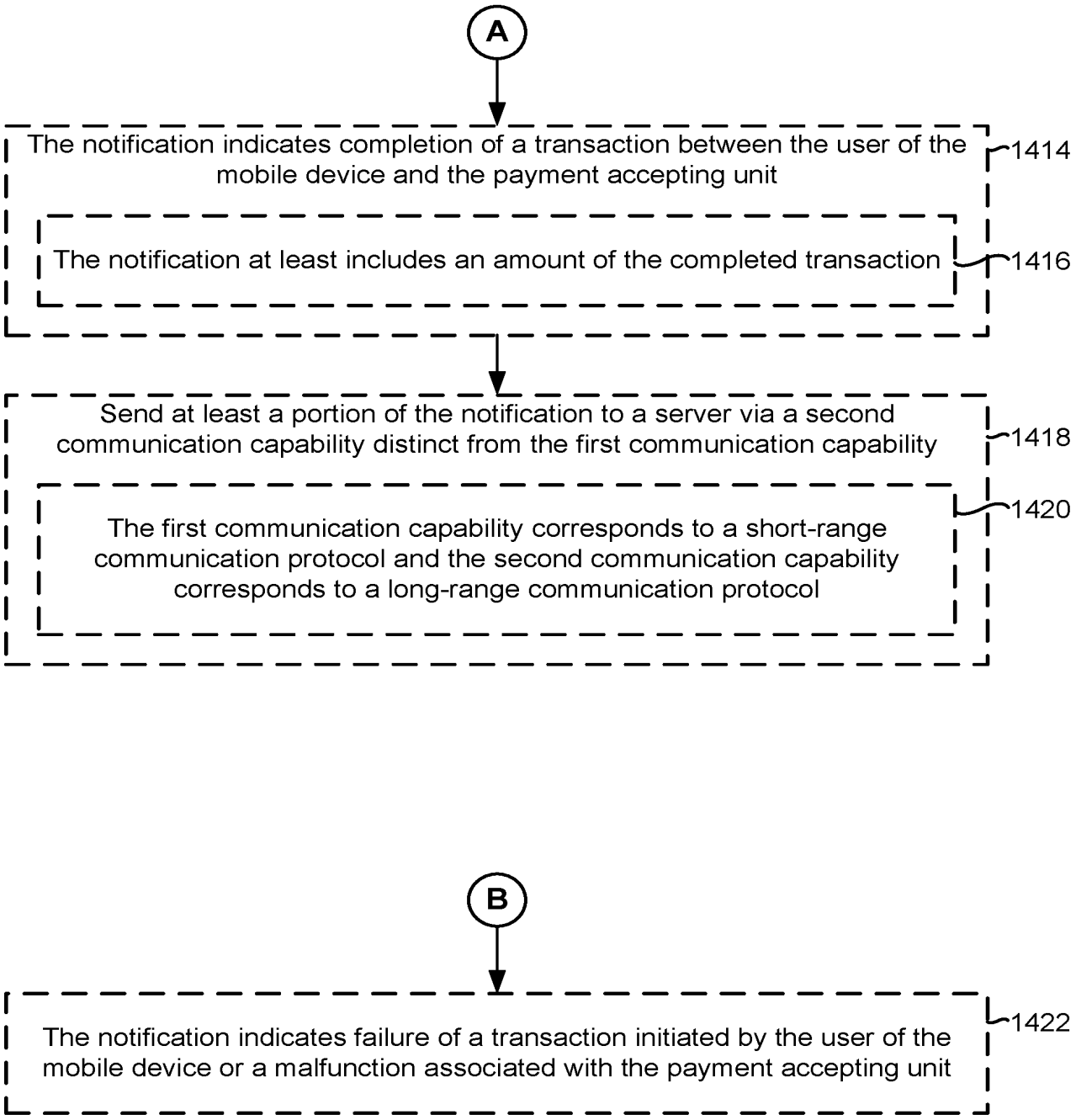

A
The notification indicates completion of a transaction between the user of the mobile device and the payment accepting unit
1414
The notification at least includes an amount of the completed transaction
1416
Send at least a portion of the notification to a server via a second communication capability distinct from the first communication capability
1418
The first communication capability corresponds to a short-range communication protocol and the second communication capability corresponds to a long-range communication protocol
1420
B
The notification indicates failure of a transaction initiated by the user of the mobile device or a malfunction associated with the payment accepting unit
1422

Figure 27B

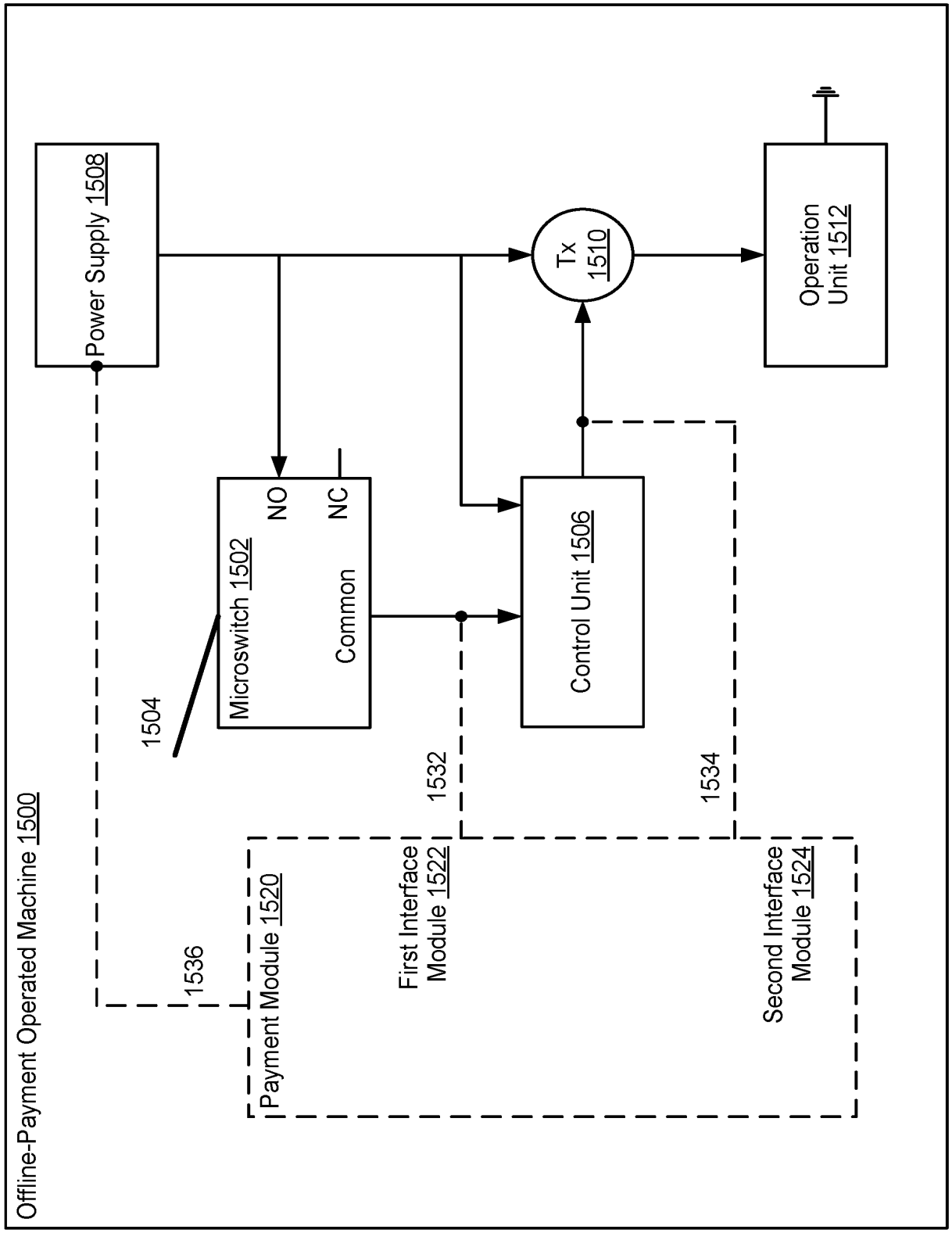

Offline-Payment Operated Machine 1500
Power Supply 1508
Tx 1510
Operation Unit 1512
Microswitch 1502
NO
NC
Common
1504
Control Unit 1506
1532
1534
1536
Payment Module 1520
First Interface Module 1522
Second Interface Module 1524

Figure 28A

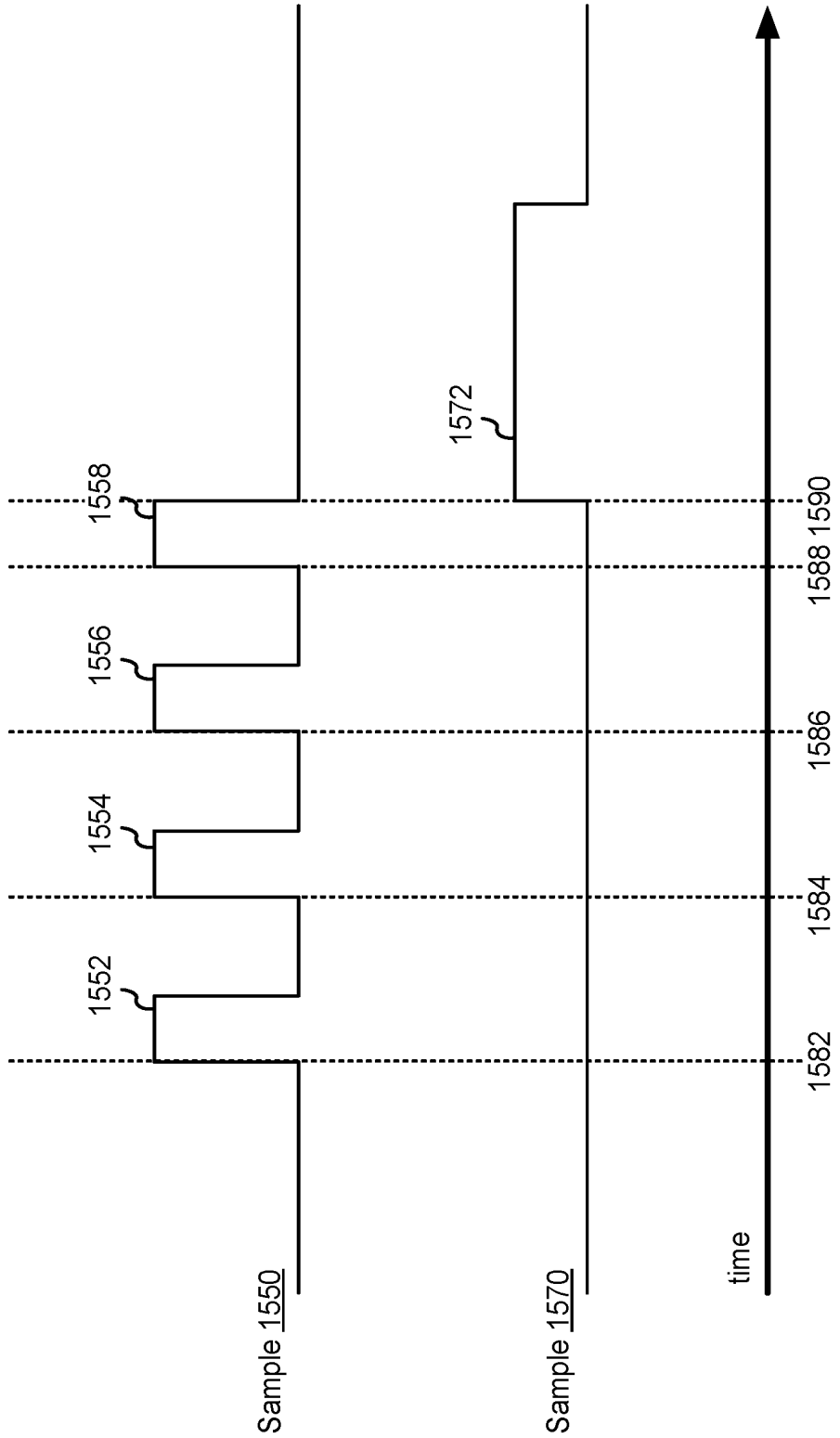

Sample 1550
Sample 1570
time
1552
1554
1556
1558
1572
1582
1584
1586
1588
1590

Figure 28B

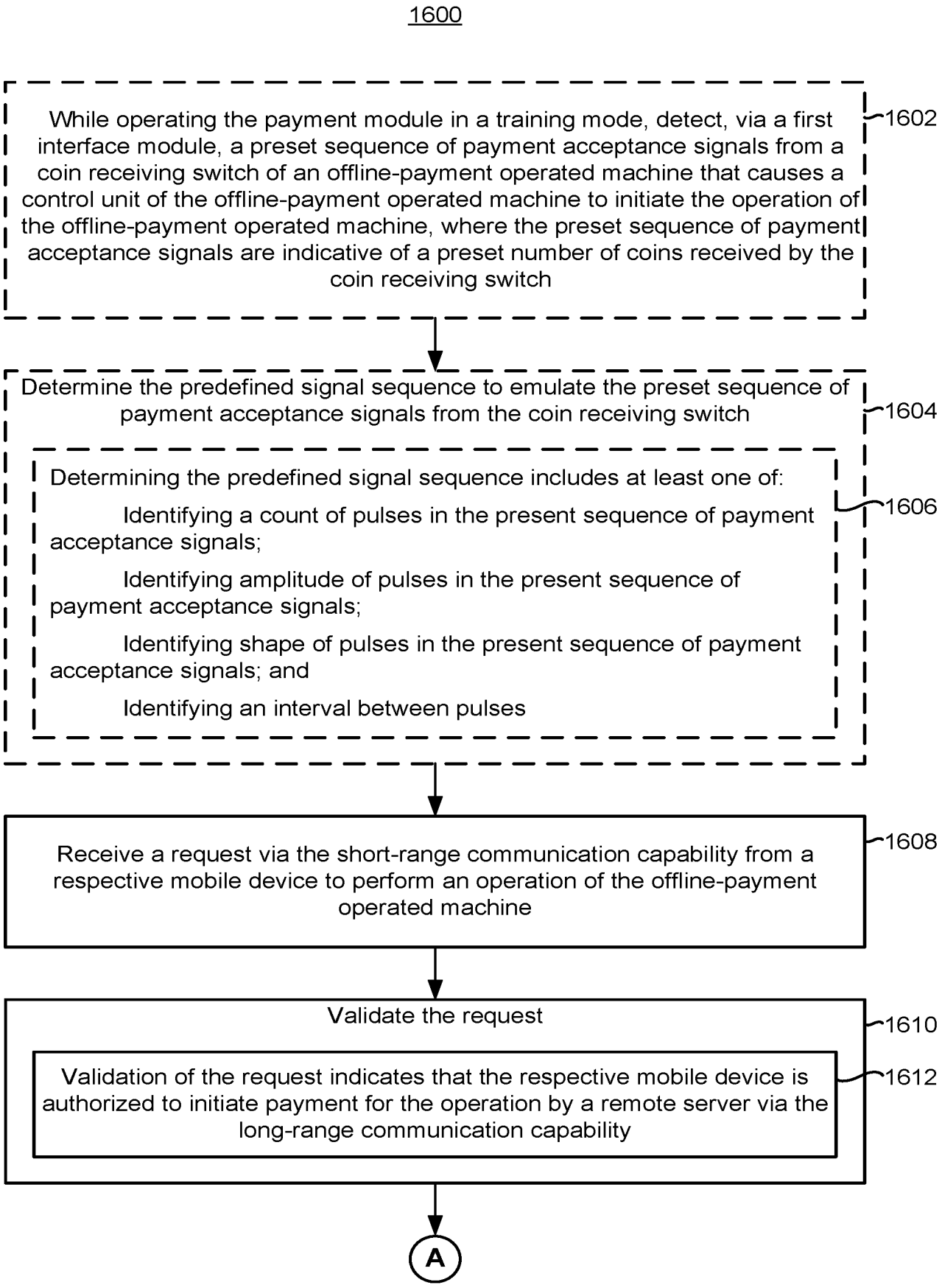

1600
While operating the payment module in a training mode, detect, via a first interface module, a preset sequence of payment acceptance signals from a coin receiving switch of an offline-payment operated machine that causes a control unit of the offline-payment operated machine to initiate the operation of the offline-payment operated machine, where the preset sequence of payment acceptance signals are indicative of a preset number of coins received by the coin receiving switch
1602
Determine the predefined signal sequence to emulate the preset sequence of payment acceptance signals from the coin receiving switch
1604
Determining the predefined signal sequence includes at least one of:
Identifying a count of pulses in the present sequence of payment acceptance signals;
Identifying amplitude of pulses in the present sequence of payment acceptance signals;
Identifying shape of pulses in the present sequence of payment acceptance signals; and
Identifying an interval between pulses
1606
Receive a request via the short-range communication capability from a respective mobile device to perform an operation of the offline-payment operated machine
1608
Validate the request
1610
Validation of the request indicates that the respective mobile device is authorized to initiate payment for the operation by a remote server via the long-range communication capability
1612
A

Figure 29A

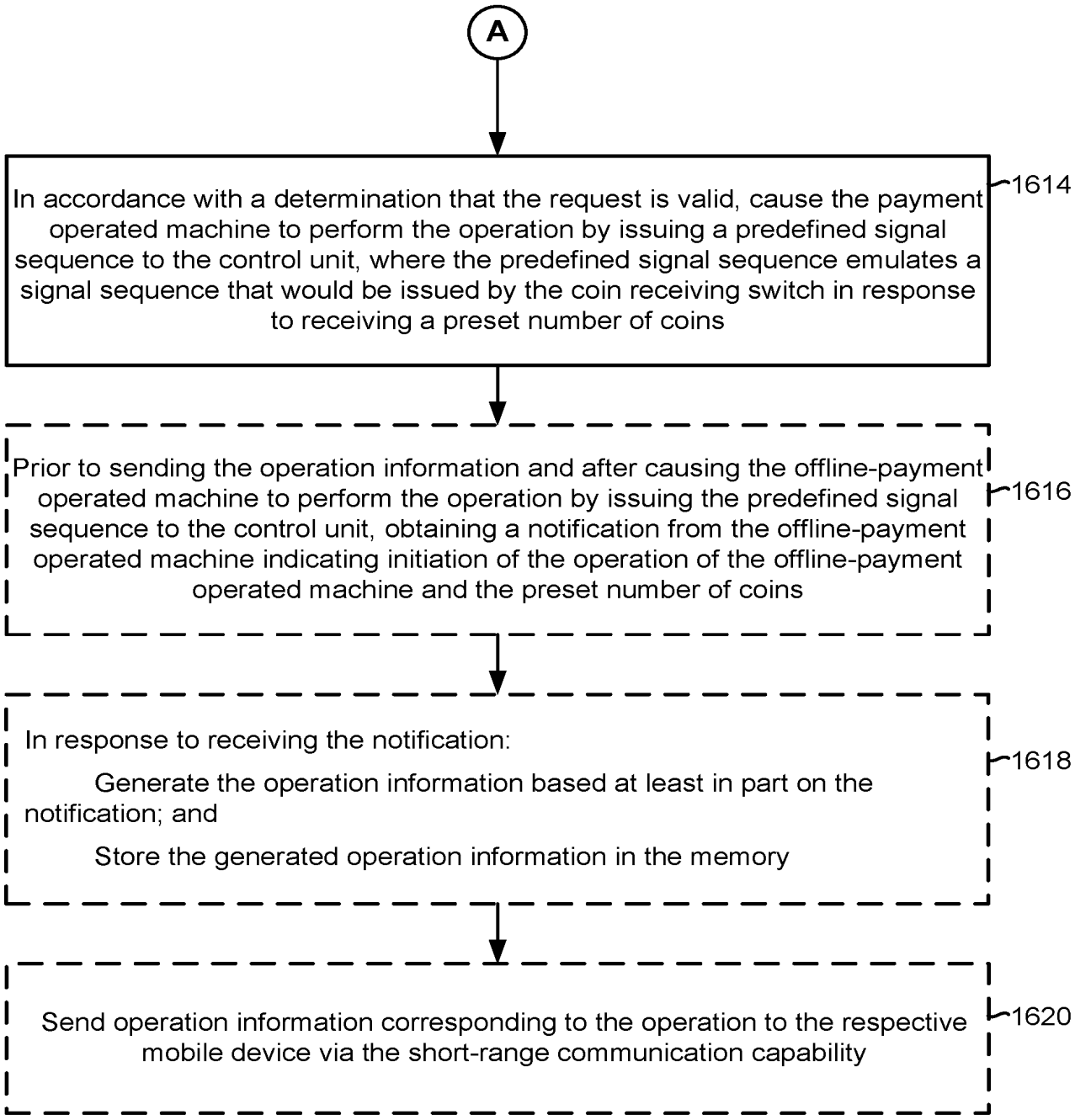

A
In accordance with a determination that the request is valid, cause the payment operated machine to perform the operation by issuing a predefined signal sequence to the control unit, where the predefined signal sequence emulates a signal sequence that would be issued by the coin receiving switch in response to receiving a preset number of coins
1614
Prior to sending the operation information and after causing the offline-payment operated machine to perform the operation by issuing the predefined signal sequence to the control unit, obtaining a notification from the offline-payment operated machine indicating initiation of the operation of the offline-payment operated machine and the preset number of coins
1616
In response to receiving the notification:
Generate the operation information based at least in part on the notification; and
Store the generated operation information in the memory
1618
Send operation information corresponding to the operation to the respective mobile device via the short-range communication capability
1620

Figure 29B

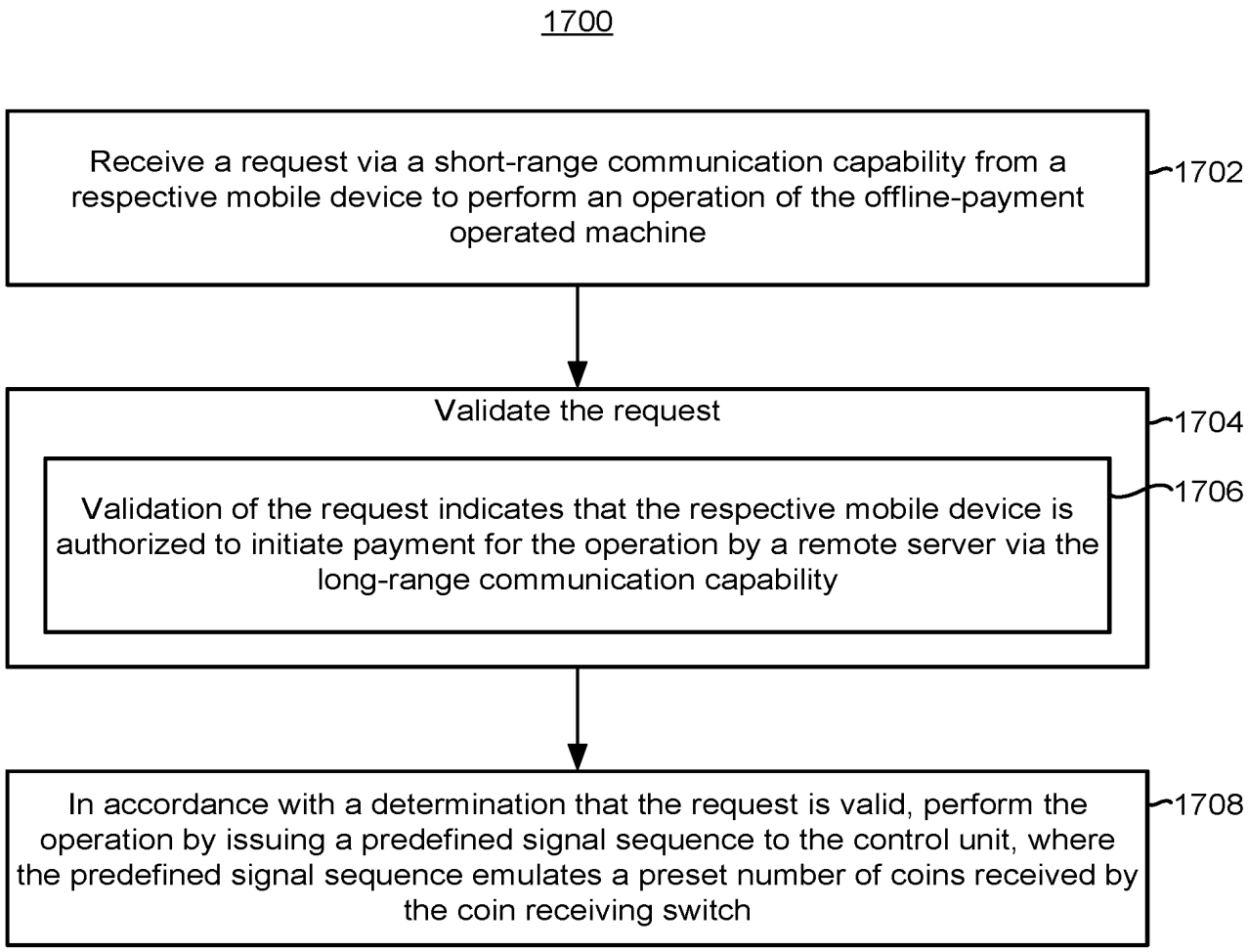

1700
Receive a request via a short-range communication capability from a respective mobile device to perform an operation of the offline-payment operated machine
1702
Validate the request
1704
Validation of the request indicates that the respective mobile device is authorized to initiate payment for the operation by a remote server via the long-range communication capability
1706
In accordance with a determination that the request is valid, perform the operation by issuing a predefined signal sequence to the control unit, where the predefined signal sequence emulates a preset number of coins received by the coin receiving switch
1708

Figure 30

Electronic Acknowledgement Receipt

EFS ID:	41626311
Application Number:	17147305
International Application Number:	
Confirmation Number:	8393
Title of Invention:	METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS
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:	104402-5046-US
Receipt Date:	12-JAN-2021
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Application Type:	Utility under 35 USC 111(a)

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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	104402-5046-US_Transmittal.pdf	159105 55018d77c12587250bbdfbfbb85b8a9f56aaee4f	no	1

Warnings:

Information:					
2		104402-5046-US_Specification.pdf	287565 0599224f4f58fba282bb30f8ddf5cefed50848bc	yes	69
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Specification		1	67	
	Claims		68	68	
	Abstract		69	69	
Warnings:					
Information:					
3	Drawings-only black and white line drawings	104402-5046-US_Figures.pdf	6627034 49dbaec0f2258584702ee87790a4a98a57819f41	no	45
Warnings:					
Information:					
4	Oath or Declaration filed	104402-5046-US_ExecutedDeclaration.pdf	63512 a6294402c7c13388a098015b2367d7da3fae8cdc	no	1
Warnings:					
Information:					
5	Application Data Sheet	104402-5046-US_ADS.pdf	107191 2e73672d54eeafb6f23ef7d93d35745993556e37	no	7
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
6	Assignee showing of ownership per 37 CFR 3.73	104402-5046-US_373C.pdf	106460 da88e70ba39ca8bb3ab7b2c8dc354fb1c9d1b2b6	no	1
Warnings:					
Information:					

7	Power of Attorney	PAYRANGE_POA_373c.pdf	134105 b582636fe21578c00bac318cf732886478d051a6	no	1

Warnings:	
Information:	
Total Files Size (in bytes):	7484972

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.

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	**METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS**

As the below named inventor, I hereby declare that:

This declaration is directed to:

- ☐ The attached application, or
- ☒ United States application or PCT international application number 14/458,199 filed on August 12, 2014

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

I acknowledge the duty to disclose information known to me to be material to patentability as defined by 37 CFR 1.56.

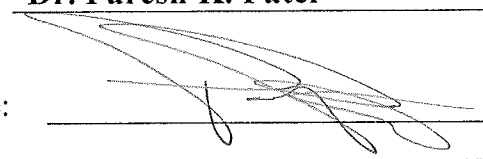
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: **Dr. Paresh K. Patel** Date: 10/16/2014

Signature: 

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE UNITED STATES PATENT AND TRADEMARK OFFICE

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

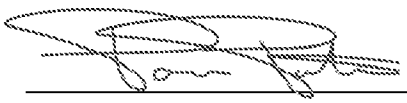
I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

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.

Assignee Name and Address: PAYRANGE INC.
9600 NE Cascades Pkwy, Suite 280
Portland, OR 97220

SIGNATURE of Assignee of Record

The undersigned whose signature and title is supplied below is authorized to act on behalf of the assignee.

Signature 

Name Paresh K. Patel, Ph.D., MBA Date February 9, 2018

Title CEO, PayRange Inc. Telephone (855) 856-6398

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.

Electronically filed January 12, 2021

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:	January 12, 2021	Examiner:	To be assigned
For:	*METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS*	Attorney Docket No.:	104402-5046-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 November 21, 2014 at Reel 034236, Frame 0376, or for which a copy thereof is attached.

The undersigned is authorized to act on behalf of the assignee.

Date: January 12, 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

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

PRIORITY CLAIM

[0001] The present application is a continuation of U.S. Patent Application No. 15/603,400, filed May 23, 2017 and set to issue as U.S. Patent No. 10,891,614 on January 12, 2021, which is a continuation of U.S. Patent Application No. 14/458,199, filed August 12, 2014 and issued as U.S. Patent No. 9,659,296 on May 23, 2017, which is a continuation-in-part of U.S. Patent Application Number 14/456,683, filed August 11, 2014 and issued as U.S. Patent No. 9,256,873 on February 9, 2016, which is a continuation of U.S. Patent Application Number 14/335,762, filed July 18, 2014 and issued as U.S. Patent No. 9,547,859 on January 17, 2017, which is a continuation of U.S. Patent Application Number 14/214,644, filed March 14, 2014 and issued as U.S. Patent No. 8,856,045 on October 7, 2014, which claims priority to U.S. Provisional Patent Application Number 61/917,936, filed December 18, 2013. U.S. Patent Application Number 14/214,644, filed March 14, 2014, is also a continuation-in-part of U.S. Design Patent Application Number 29/477,025, filed December 18, 2013 and issued as U.S. Design Patent No. D755,183 on May 3, 2016. The present application is based on and claims priority to these applications, the disclosures of which are hereby expressly incorporated herein by reference.

FIELD OF THE INVENTION

[0002] The present application relates to the field of payment processing systems, and in particular, to a mobile-device-to-machine payment processing system over a non-persistent network connection.

BACKGROUND OF THE INVENTION

[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/she desires, (3) insert payment (e.g., coins, bills, or payment cards), and (4) input his/her 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. 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.

SUMMARY

[0007] Disclosed herein is a payment processing system or, more specifically, a mobile-device-to-machine payment processing system over a non-persistent network connection with hands-free mode and manual mode (sometimes also herein called "swipe" or "swipe-to-pay" mode).

[0008] In some implementations, a method of presenting representations of payment accepting unit events is performed at a device (e.g., the mobile device 150, Figures 5 and 21)

with one or more processors, memory, one or more output devices, and two or more communication capabilities. After sending a request to a payment module (e.g., the adapter module 100, Figures 5 and 20), via a first communication capability (e.g., a short-range communication technology/protocol such as BLE), to initiate a transaction with a payment accepting unit (e.g., the payment accepting unit 120, Figures 5 and 19) (sometimes also herein called "machine 120") associated with the payment module, the method includes obtaining a notification from the payment module via the first communication capability, where the notification indicates an event at the payment accepting unit associated with the payment module. In response to obtaining the notification, the method includes providing a representation of the notification to a user of the mobile device via the one or more output devices of the mobile device (e.g., a message displayed on a display of the mobile device, a vibration produced by a vibration mechanism of the mobile device, an aural alert produced by a speaker of the mobile device, and/or the like).

[0009] In some implementations, a method of retrofitting an offline-payment operated machine to accept electronic payments is performed at a payment module (e.g., the adapter module 100, Figures 5 and 20) with one or more processors, memory, a short-range communication capability (e.g., a short-range communication technology/protocol such as BLE), and a first interface module configured to couple the payment module with a control unit of an offline-payment operated machine (e.g., the payment accepting unit 120, Figures 5 and 19) (sometimes also herein called "machine 120"). The method includes receiving a transaction request via the short-range communication capability from a respective mobile device to perform a transaction with the offline-payment operated machine. The method includes validating the transaction request, where validation of the transaction request indicates that the respective mobile device is authorized to initiate payment for the transaction by a remote server (e.g., the server 130, Figures 5 and 22) via the long-range communication capability (e.g., the long-range communication technology/protocol such as GSM, CDMA, or Wi-Fi). In accordance with a determination that the transaction request is valid, the method includes causing the offline-payment operated machine to perform the requested transaction by issuing a signal to perform the transaction to the control unit of the offline-payment operated machine via the first interface module.

[0010] In some implementations, a device (e.g., the machine 120, (Figures 5 and 19), the adapter module 100 (Figures 5 and 20), the mobile device 150 (Figures 5 and 21), the server 130 (Figures 5 and 22), or a combination thereof) includes one or more processors and memory storing one or more programs for execution by the one or more processors, the one or more programs include instructions for performing, or controlling performance of, the operations of any of the methods described herein. In some implementations, a non-transitory computer readable storage medium storing one or more programs, the one or more programs comprising instructions, which, when executed by a device (e.g., the machine 120, (Figures 5 and 19), the adapter module 100 (Figures 5 and 20), the mobile device 150 (Figures 5 and 21), the server 130 (Figures 5 and 22), or a combination thereof) with one or more processors, cause the computer system to perform, or control performance of, the operations of any of the methods described herein. In some implementations, a device (e.g., the machine 120, (Figures 5 and 19), the adapter module 100 (Figures 5 and 20), the mobile device 150 (Figures 5 and 21), the server 130 (Figures 5 and 22), or a combination thereof) includes means for performing, or controlling performance of, the operations of any of the methods described herein.

[0011] 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 DRAWINGS

[0012] Figure 1 is a schematic diagram that shows three zones: a "communication zone" (e.g., Bluetooth range), an "authorization zone," and a "payment zone" in accordance with some implementations.

[0013] Figure 2 is a schematic diagram that shows the three zones of Figure 1 with multiple users therein in accordance with some implementations.

[0014] Figure 3 is a table that illustrates the hands-free credit or alert user principle in accordance with some implementations.

[0015] Figure 4 is a flow chart showing the logging received signal strength indicator (RSSI) information in accordance with some implementations.

[0016] Figure 5 is a block schematic that shows elements of the payment processing system including, but not limited to, the adapter module, the machine, the mobile device, and servers, as well as communications therebetween in accordance with some implementations.

[0017] Figure 6 is a block schematic that shows three areas of encryption used (each is bi-directional) between the adapter module, the machine, the mobile device, and/or servers in accordance with some implementations.

[0018] Figure 7 is a block diagram that shows communications, messaging, vending sequence, and purchase flow between the adapter module, the mobile device, and a system management server in accordance with some implementations.

[0019] Figure 8A is a schematic process flow diagram that shows additional elements and features of the payment processing system (e.g., communications, messaging, vending sequence, and purchase flow) when the user enters the "communication zone" (e.g., Bluetooth range) in accordance with some implementations.

[0020] Figure 8B is a schematic process flow diagram that shows additional elements and features of the payment processing system (e.g., communications, messaging, vending sequence, and purchase flow) when the user enters the "authorization zone" in accordance with some implementations.

[0021] Figure 8C is a schematic process flow diagram that shows additional elements and features of the payment processing system (e.g., communications, messaging, vending sequence, and purchase flow) when the user enters the "payment zone" and, in particular, detailing a hands-free mode embodiment and a swipe mode embodiment in accordance with some implementations.

[0022] Figure 8D is a schematic process flow diagram that shows additional elements and features of the payment processing system (e.g., communications, messaging, vending sequence, and purchase flow) in a vending transaction including a loop for multiple transactions in accordance with some implementations.

[0023] Figure 8E is a schematic process flow diagram that shows additional elements and features of the payment processing system (e.g., communications, messaging, vending sequence, and purchase flow) in the login mode in accordance with some implementations.

[0024] Figure 8F is a schematic process flow diagram that shows additional elements and features of the payment processing system (e.g., communications, messaging, vending sequence, and purchase flow) during boot-up of the adapter module in accordance with some implementations.

[0025] Figure 8G is a schematic process flow diagram that shows additional elements and features of the payment processing system (e.g., communications, messaging, vending sequence, and purchase flow) during an account check/update process in accordance with some implementations.

[0026] Figures 9A-9E are flow charts that show example steps and features of the payment processing system (e.g., communications, messaging, vending sequence, and purchase flow) in accordance with some implementations.

[0027] Figures 10A-10D show a mobile device with a graphical representation of a mobile application shown thereon, the mobile application being used as part of the mobile-device-to-machine payment processing system in accordance with some implementations.

[0028] Figure 11 is a perspective view of the in-line dongle adapter module in accordance with some implementations.

[0029] Figure 12 is a front plan view of the in-line dongle adapter module of Figure 11 in accordance with some implementations.

[0030] Figure 13 is a back plan view of the in-line dongle adapter module of Figure 11 in accordance with some implementations.

[0031] Figure 14 is a side view of the in-line dongle adapter module of Figure 11 in accordance with some implementations.

[0032] Figure 15 is a first end view of a connector receptacle of the in-line dongle adapter module of Figure 11 in accordance with some implementations.

[0033] Figure 16 is a second end view of a connector receptacle of the in-line dongle adapter module of Figure 11 in accordance with some implementations.

[0034] Figure 17 is a perspective view taken from the first end of the in-line dongle adapter module of Figure 11, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for illustrative purposes in accordance with some implementations.

[0035] Figure 18 is a perspective view taken from the second end of the in-line dongle adapter module of Figure 11, the connectors and cables between which the in-line dongle adapter module is inserted being shown in broken lines for illustrative purposes in accordance with some implementations.

[0036] Figure 19 is a perspective view of the in-line dongle adapter module of Figure 11 within a vending machine in accordance with some implementations.

[0037] Figure 20 is a block diagram of an adapter module in accordance with some implementations.

[0038] Figure 21 is a block diagram of a mobile device in accordance with some implementations.

[0039] Figure 22 is a block diagram of a server in accordance with some implementations.

[0040] Figure 23 is a schematic flow diagram of a process for authenticating a user to perform a transaction in the payment processing system in accordance with some implementations.

[0041] Figure 24A is a block diagram of a packet of information broadcast by the payment module (sometimes also herein called the "adapter module") in accordance with some implementations.

[0042] Figure 24B is a block diagram of an authorization request in accordance with some implementations.

[0043] Figure 24C is a block diagram of an authorization grant token in accordance with some implementations.

[0044] Figure 24D is a block diagram of transaction information generated by the payment module in accordance with some implementations.

[0045] Figure 25A illustrates a schematic flow diagram of a process for providing a representation of a machine event at a mobile device in accordance with some implementations

[0046] Figure 25B is a schematic flow diagram of a process for processing acknowledgment information in the payment processing system in accordance with some implementations.

[0047] Figures 26A-26D illustrate example user interfaces for providing a representation of a machine event at a mobile device in accordance with some implementations.

[0048] Figures 27A-27B illustrate a flowchart diagram of a method of presenting representations of payment accepting unit events in accordance with some implementations.

[0049] Figure 28A illustrates a block diagram of an offline-payment operated machine in accordance with some implementations.

[0050] Figure 28B illustrates signals sampled by the payment module in accordance with some implementations.

[0051] Figures 29A-29B illustrate a flowchart diagram of a method 1600 of retrofitting an offline-payment operated machine to accept electronic payments in accordance with some implementations.

[0052] Figure 30 illustrates a flowchart diagram of a method of enabling a payment operated machine to accept electronic payments in accordance with some implementations.

[0053] Like reference numerals refer to corresponding parts throughout the several views of the drawings.

DETAILED DESCRIPTION OF THE INVENTION

[0054] Disclosed herein is a payment processing system or, more specifically, a mobile-device-to-machine payment processing system for processing transactions over a non-persistent network connection. The mobile-device-to-machine payment processing system disclosed herein focuses on the unattended retail space (e.g., a payment accepting unit 120, sometimes also herein called a "machine 120"). More specifically, the mobile-device-to-machine payment processing

system disclosed herein allows 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).

[0055] The mobile-device-to-machine payment processing system 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.

[0056] 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 (sometimes also herein called "payment 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 120 (e.g., a vending machine) (sometimes also herein called 'the machine 120"). 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 (e.g., 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).

[0057] 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 network connection is available, cashless payments is not possible. In addition to using a mobile device 150 as an intermediary between the payment accepting units 120 and the server 130, the mobile-device-to-machine payment processing system described herein minimizes (i.e., the manual mode) or eliminates (i.e., the hands-free mode) user interaction with the mobile device 150. Further, in some implementations, the mobile-device-to-machine payment processing system described herein facilitates the acceptance of cashless payments without requiring any network connection near the payment accepting unit 120. In some implementations, when the mobile-device-to-machine payment processing system described herein is located in a remote location where network connection is unavailable, the mobile-device-to-machine payment processing system, therefore, can still accept cashless payments.

[0058] Manual (Swipe-to-Pay) Mode: Using a "swipe-to-pay" feature (or just "swipe") refers to a user's action implemented on his/her mobile device 150 where he/she quickly brushes his/her finger (or other pre-determined interaction) on the mobile device's touch screen 152 (Figures 10A-10D) or other input devices 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 (Figure 19) 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.

[0059] 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 frequently used vending machine at a user's work or school). From the user's perspective, he/she would approach the favorite payment accepting unit 120 and notice that the display 122, 124 (Figure 19) of the payment accepting unit 120 shows funds available, he/she 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 Figure 19), and he/she would retrieve 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 "arm's-length" distance (e.g., 3 to 5 feet) of the payment accepting unit 120, the user could observe the transferred funds on the display 122, 124 (Figure 19) of the payment accepting unit 120. The transaction is completed just as if cash was inserted into the payment accepting unit 120 with the user inputting his/her 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. Figure 3 details when the hands-free mode would be available.

[0060] Multiple Vending Transactions (Multi-Vend): Both the manual and hands-free modes could be used multiple times in sequence (implemented, for example, as a loop) so that a user may make multiple purchases. After making his/her first selection and receiving his product (or service), the user would observe that additional funds were available on the display 122, 124 (Figure 19) on the payment accepting unit 120. He/she could make another selection (or multiple selections) and receive additional product(s) (or service(s)). More specifically, the display 122, 124 (Figure 19) 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 user walks away, the system clears (e.g., returns unused funds to the application 140 on the mobile device 150).

[0061] The features described above, alone or in combination with other features described herein will revolutionize the hundred billion dollar automated retail industry. The 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 processing system

described herein, operators of machines 120 can increase frequency of visits by purchasers and items sold with each visit.

[0062] The mobile-device-to-machine payment processing system described herein may be implemented as an apparatus, system, and/or method for enabling payments to a machine 120 via a mobile device 150. The mobile-device-to-machine payment processing system may be better understood with reference to the drawings, but the shown mobile-device-to-machine payment processing system is not intended to be of a limiting nature.

DEFINITIONS

[0063] Before describing the mobile-device-to-machine payment processing system 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.

[0064] Adapter Module 100: As shown in Figures 1 and 2, the adapter module 100 (sometimes also herein called the "payment module 100") is a physical device that is installed in a machine 120 (a payment accepting unit 120). The shown 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. Figure 20 shows components associated with the adapter module 100. As shown in Figure 20, the communications unit 770 of the adapter module 100 includes short-range communication capability 776 (e.g., Bluetooth mechanisms).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.

[0065] 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 the 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 communications passed between the adapter module 100 and the server 130 secured and safe from hacking. 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 (e.g., the application 140) running on it. The term "app" is used broadly to include any software program(s) capable of implementing the features described herein. Figures 10A-10D show user interfaces for the application 140 displayed by the mobile device 150. 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. Figure 21 shows 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.

[0066] Payment accepting unit 120 (or Machine 120): A payment accepting unit 120 (or the 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.

[0067] 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" or "long-range communication protocol" (e.g., hardwired, telephone network technology, cellular technology (e.g., GSM, CDMA, or the like), Wi-Fi 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" or "short-range communication protocol" (e.g., Bluetooth (such as Bluetooth 4.0, Bluetooth Smart, Bluetooth Low Energy (BLE)), near-field communication (NFC), Ultra Wideband (UWB), radio frequency identification (RFID), infrared wireless, induction wireless, or any wired or wireless technology that could be used to communicate a small distance (approximately a hundred feet or closer) that is known or yet to be discovered). Therefore, neither the adapter module 100 nor the payment accepting unit 120 requires a traditional persistent long-range wireless network connection. The 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, Wi-Fi technology could be replaced with another long-range communication technology.

[0068] Server: A server is the host processing server that may be operated by the company running the payment processing 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 Figure 22, 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 in Figure 22, the communications unit 970 of the server 130 includes long-range communication capability 972 (e.g., cellular technology and/or Wi-Fi mechanisms). The server 130 also includes a security unit 955 for encrypting and decrypting messages. The server 130 receives an authorization request (sometimes also herein called an "AuthRequest") from the adapter module 100 (via a mobile device 150) and, if funds are available, returns an authorization grant (sometimes also herein called an "AuthGrant" or an "authorization grant token") for funds. Figure 22 shows 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.

[0069] Advertise Presence: Each adapter module 100 advertises its presence by broadcasting signals (advertising broadcast signals) to mobile devices in the zones 102, 104, 106. Each adapter module 100 can listen to other adapter modules' advertisements.

[0070] 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 and an authentication 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 "arm's-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. A mathematical computation (i.e., 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.

[0071] In-Range Heuristics: A mathematical computation that determines the RSSI threshold to determine when a user is in the authorization zone 104 and/or the payment zone 102. This computation can take into consideration numerous historical data points as well as transaction specific information such as which the 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 payment processing system continues to improve itself based on additional data points.

[0072] 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 a 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 (Figure 20) with security technology (e.g., encryption and decryption means) 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 130.

[0073] Authorization Grant Token ("AuthGrant"): This is a "message" (also referred to as a communication or transmissions) encrypted by the security unit 955 (Figure 22) with security technology (e.g., encryption and decryption means) of the server 130 with the unique private key corresponding to the adapter module 100. The secured authorization grant (e.g., the encrypted authorization grant) is passed from the server 130 to the adapter module 100 via the

mobile device 150 in the form of a message. The mobile device 150, however, is not able to decrypt and/or 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 pre-determined 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 payment processing 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."

[0074] 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.

[0075] The mobile-device-to-machine payment processing system 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 the processing unit 750 in Figure 20, the processing unit 850 in Figure 21, and the processing unit 950 in Figure 22). 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 processing system (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, the mobile device 150, and the 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 the memory 760 in Figure 20, the memory 860 in Figure 21, and the memory 960 in Figure 22) 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 payment processing system (e.g., the adapter module 100, the mobile device 150, the payment accepting unit 120, hardware systems and subsystems, and memory) would be used as appropriate to facilitate controls and communications.

[0076] 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.

[0077] 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., GSM, CDMA, Wi-Fi, or the like) 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. The 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 (i.e., asymmetric cryptography), 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 communications unit 770 (shown in Figure 20) 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 communications unit 870 (shown in Figure 21) of the mobile device 150 includes mechanisms for both long-range communications (shown as the long-range communication capability 872 such as cellular and/or Wi-Fi mechanisms) for communicating with the server 130 and short-range communications (shown as the short-range communication capability 876 such as Bluetooth mechanisms) for communicating with the adapter module 100.

[0078] 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."

[0079] 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 (Figure 19), a touch screen display 124 (Figure 19), a key pad 126 (Figure 19), buttons 126 (Figure 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.

SYSTEM OVERVIEW

[0080] Figures 5, 6, and 7 together show major components of the mobile-device-to-machine payment system and the interactions there-between.

[0081] 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 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., Wi-Fi 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.

[0082] 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 the 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.

[0083] Figure 7 shows specific communications and messaging with a 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 schematic flow diagrams (Figures 8A-8G) and the flow charts (Figures 9A-9E).

[0084] It should be noted that Figures 5, 6, and 7 are examples, and are meant 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 examples, and 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

[0085] Figures 11-18 show views of adapter module 100a (referred to generally as adapter module 100). Adapter module 100 is a relatively low cost hardware component that is pre-configured to work with the industry standard 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).

[0086] The shown 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 Figures 17-18). The adapter module 100a in Figures 11 and 17-18 has a male adapter 720 and a female adapter 730. The adapter module 100a 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 Figure 19. 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 processing system 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 MODE

[0087] 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 Figure 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 Figure 19) associated with the payment accepting unit 120, and he would retrieve his dispensed services or products.

[0088] 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.

[0089] 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.

[0090] Figure 3 is a table that shows 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. Figure 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 an example. 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." Figures 10A-10D all show these tabs. Unlike the other columns in Figure 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.)

[0091] 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.

[0092] An example of a hands-free, multiple-vend scenario where a balance is displayed by the payment accepting unit 120, follows: The user has $5.00 in his/her virtual wallet as that is the amount that has been authorized (the AuthGrant being stored on the mobile device 150). The user 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 the short-range communication capability) 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 the short-range communication capability) to the virtual wallet. But since the 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 that he/she 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/she sees the wallet balance of $2.00 on the display 122, 124 of the payment accepting unit 120. The user decides that he/she does not wish to purchase anything else and simply walks away. As he/she walks out of the payment zone 102, the credit is cleared from the machine 120, but he/she is left with the knowledge that his wallet balance is $2.00 even though he/she 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

[0093] As shown in Figures 1-2, 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 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.

[0094] Bluetooth Range 106 (sometimes also herein called the "communication zone"): The outermost range is the Bluetooth range 106 (shown in Figures 1-2). 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).

[0095] Authorization Zone 104: The middle region is the authorization zone 104 (shown in Figures 1-2). 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 (Figure 5) with SSL protection (Figure 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 Wi-Fi or cellular connection (Figure 5) with SSL protection (Figure 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.

[0096] An authorization occurs in preparation for when the user enters the payment zone 102 (shown in Figures 1-2). 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).

[0097] 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.

[0098] In the payment zone 102, the payment can be triggered automatically if the payment processing system has and is in hands-free mode. In such instances, the mobile device 150 is running the application 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 (Figure 6) to ensure data integrity. As shown in Figure 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.

[0099] 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.

[00100] Self-Calibrating Zone Threshold: A key, but optional feature, of the payment processing 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 arm's-length from the payment accepting unit 120 (by necessity the user is arm's-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 arm's-length from the payment accepting unit 120.

[00101] Figure 4 shows a simplified set of steps involved when users enter the payment zone 102. Specifically, Figure 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.

[00102] 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).

[00103] 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.

[00104] 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.

[00105] 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 processing system does 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 -68 db, the mobile-device-to-machine payment processing system may add a safety margin of -5 db, and establish the threshold at -73 db. So when a user's phone is communicating with the adapter module 100 at an RSSI of -73 db or better, the mobile-

device-to-machine payment processing system 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.

[00106] 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

[00107] The mobile-device-to-machine payment processing system described herein uses a mobile device's 150 short-range communication technology (e.g., Bluetooth mechanisms) (shown as short-range communication capability 876 in Figure 21) and a mobile device's 150 long-range communications technology (e.g., cellular and/or Wi-Fi mechanisms) (shown as long-range communication capability 872 in Figure 21). The short-range communication capability 876 communicates with the adapter module's 100 short-range communication technology (e.g., Bluetooth mechanisms) (shown as short-range communication capability 776 in Figure 20). The long-range communication capability 872 communicates with the server's 130 long-range communications technology (e.g., cellular and/or Wi-Fi mechanisms) (shown as long-range communication capability 972 in Figure 22). 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 Wi-Fi coverage within the payment zone 102.

[00108] One option if there is no cellular or Wi-Fi coverage within the payment zone 102 is to determine whether there is cellular or Wi-Fi 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 Wi-Fi 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 Wi-Fi 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 Wi-Fi coverage again.

[00109] Another option if there is no cellular or Wi-Fi 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 Wi-Fi 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 Wi-Fi 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 Wi-Fi 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 Wi-Fi 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. In some implementations, the mobile-device-to-machine payment processing systems described herein is located in a remote location where no signal is available, therefore, can accept cashless payments.

[00110] As an example of a situation in which there might be no cellular or Wi-Fi 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 Wi-Fi 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 such as bikes, kayaks, or basketballs). 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.

[00111] One subtle but powerful component of the payment processing system described herein is that it requires a long-range communication capability (e.g., an Internet or cellular 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, the long-range communication capability (e.g., an Internet or cellular 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

[00112] As shown in Figure 2, in one practical scenario, multiple users are in the zones 102, 104, 106. As shown in Figure 2, 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. In some implementations, the mobile-device-to-machine payment processing system manages and resolves issues pertaining to multiple users.

[00113] Users 4 and 7 are within the Bluetooth range 106 and the 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.

[00114] The adapter module 100 begins to log users as the users (and their respective mobile devices 150) enter the authorization zone 104 (shown in Figure 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.

[00115] 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.

[00116] One optional 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 (e.g., in a first-come-first-serve manner). 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.

[00117] 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

[00118] 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. In some implementations, the mobile-device-to-machine payment processing system described herein allows 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.

[00119] 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.

[00120] 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).

[00121] 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 Figures 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

[00122] Figure 7, Figures 8A-8G, and 9A-9E (as well as other figures) can be used to understand a detailed scenario of the mobile-device-to-machine payment processing system described herein. A 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.

[00123] Prior to vending transactions, a user downloads a mobile application 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.

[00124] 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.

[00125] 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 Figure 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.

[00126] Figures 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 application 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., GSM, CDMA, Wi-Fi, or the like) (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 identifier (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 130, 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).

[00127] 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).

[00128] Figures 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 Authorization 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).

[00129] Figures 8D, 9C, and 9D generally show the transaction process. As shown in Figure 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.

[00130] Figures 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 Figure 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).

[00131] Figure 8E is a schematic flow diagram of an example login process. Figure 8F is a schematic flow diagram of an example boot-up process. Figure 8G is a schematic flow diagram of an example account check/update process.

[00132] Several of the figures are flow charts (e.g., Figures 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.

ADDITIONAL IMPLEMENTATIONS

[00133] Figure 23 illustrates a schematic flow diagram of a process 1000 of authenticating a user to perform a transaction in the payment processing system in accordance with some implementations. In some implementations, the payment processing system includes one or more payment modules 100 (e.g., each associated with a respective payment accepting unit 120 such an automatic retailing machine for dispensing goods and/or services), one or more mobile devices 150 (e.g., each executing the application 140 for the payment processing system either as a foreground or background process), and the server 130. The server 130 manages the payment processing system and, in some cases, is associated with an entity that supplies, operates, and/or manufactures the one or more payment modules 100. For brevity, the process 1000 will be described with respect to a respective payment module 100 and a respective mobile device 150 in the payment processing system.

[00134] The payment module 100 broadcasts (1002), via a short-range communication capability (e.g., BLE), a packet of information (sometimes also herein called "advertised information"). The packet of information at least includes an authorization code and an identifier associated with the payment module 100 (module ID). In some implementations, the packet of information further includes a firmware version of the payment module 100 and one or more status flags corresponding to one or more states of the payment module 100 and/or the payment accepting unit 120. The information included in the packet broadcast by the payment module 100 is further discussed below with reference to Figure 24A.

[00135] In some implementations, the payment module 100 sends out a unique authorization code every X seconds (e.g., 100 ms, 200 ms, 500 ms, etc.). In some implementations, the unique authorization codes are randomly or pseudo-randomly generated numbers. In some implementations, the payment module 100 stores broadcasted authorization codes until a received authorization grant token matches one of the stored authorization codes. In some implementations, the payment module 100 stores broadcasted authorization codes for a predetermined amount of time (e.g., Y minutes) after which time an authorization code expires and is deleted. In some implementations, the authorization code is encrypted with a shared secret key known by the server 130 but unique to the payment module 100. In some implementations, the payment module 100 initializes a random number and then the authorization codes are

sequential counts from this random number. In such implementations, the payment module 100 stores the earliest valid (unexpired) counter without a need to store every valid authorization code. In some implementations, the authentication code included in the broadcast packet of information is a hash value of the randomly or pseudo-randomly generated number or the sequential number.

[00136] The mobile device 150 receives the broadcasted packet of information, and the mobile device 150 sends (1004), via a long-range communication capability (e.g., GSM, CDMA, Wi-Fi, or the like), an authorization request to the server 130. For example, an application 140 that is associated with the payment processing system is executing as a foreground or background process on the mobile device 150. In this example, the application 140 receives the broadcasted packet of information when the mobile device 150 is within the communication zone of the payment module 100 (i.e., BLE range) and either automatically sends the authorization request to the server 130 or sends the authorization request to the server 130 when the mobile device 150 is within the authorization zone of the payment module 100. In some implementations, the broadcasted packet of information includes a baseline authorization zone threshold (i.e., an authorization zone criterion) indicating a baseline RSSI that the mobile device 150 (or the application 140) is required to observe before being within the authorization zone of the payment module 100. In some implementations, the mobile device 150 (or the application 140) offsets the baseline authorization zone threshold based on the strength and/or reception of the short-range communication capability (e.g., BLE radio/transceiver) of the mobile device 150. In some implementations, the authorization request at least includes the authorization code which was included in the broadcasted packet of information, an identifier associated with the user of the mobile device 150 or the user account under which the user of the mobile device 150 is logged into the application 140 (user ID), and the identifier associated with the payment module 100 (module ID). In some implementations, the authentication code included in authorization request is the hash value in cleartext. The authorization request is further discussed below with reference to Figure 24B.

[00137] After receiving the authorization request, the server 130 processes (1006) the authorization request. In some implementations, the server 130 decrypts the authorization code included in the authorization request with the shared secret key corresponding to the payment module 100. In some implementations, the server 130 determines whether the user associated

with the user ID in the authorization request has sufficient funds in his/her account for the payment processing system to perform a transaction at the machine 120 that is associated with the payment module 100 corresponding to the module ID in the authorization request.

[00138] The server 130 sends (1008), via a long-range communication capability (e.g., GSM, CDMA, Wi-Fi, or the like), an authorization grant token to the mobile device 150. In some implementations, the server 130 does not send the authorization grant token if the authorization code in the authorization request cannot be decrypted with the shared secret key corresponding to the payment module 100 (e.g., the authorization code is corrupted or hacked). In some implementations, the server 130 does not send the authorization grant token if the user associated with the user ID in the authorization request does not have sufficient funds in his/her account. In some implementations, in addition to the authorization grant token, the server 130 sends a message directly to the mobile device 150 which is not encrypted with the shared secret key corresponding to the payment module 100. After receiving the message, the mobile device 150 displays an appropriate message to the user such as insufficient balance or declined authorization. In some implementations, the server 130 sends an authorization grant token for an amount equal to zero; in which case, the payment module 100 interprets this as a declined or failed authorization which can result for any number of reasons including, but not limited to, insufficient balance or credit.

[00139] The mobile device 150 receives the authorization grant token, and, subsequently, the mobile device 150 detects (1010) a trigger condition. In some implementations, the mobile device 150 (or the application 140) detects the trigger condition via the hand-free mode (e.g., upon entrance into the payment zone of the payment module 100) or manual mode (e.g., interacting with the user interface of the application 140 to initiate a transaction with the payment accepting unit associated with the payment module 100).

[00140] In some implementations, unused authorization grants (e.g., if there was no trigger condition or it expired) are canceled by the mobile device 150 by sending a cancellation message to the server 130 corresponding to the unused authorization grant. In some implementations, the server 130 denies or limits the number of authorization grants sent to the mobile device 150 until it has received transaction information or cancellation of authorization outstanding authorization grants sent to the mobile device 150.

[00141] In response to detecting the trigger condition, the mobile device 150 sends (1012), via a short-range communication capability (e.g., BLE), the authorization grant token to the payment module 100. Subsequently, the machine 120 displays credit to the user (e.g., via one of the displays 122 or 124 shown in Figure 19) and the user interacts with the input mechanisms of the machine 120 (e.g., via the buttons 126 or a touch screen display 124 shown in Figure 19) to purchase products and/or services.

[00142] Figure 24A illustrates a block diagram of a packet 1100 of information broadcast by the payment module 100 (e.g., in step 1002 of the process 1000 in Figure 23) in accordance with some implementations. In some implementations, the packet 1100 at least includes: module ID 1102 and authorization code 1104. In some implementations, the packet 110 additional includes: a firmware version 1106 and one or more status flags 1108.

[00143] In some implementations, the module ID 1102 is a unique identifier corresponding to the payment module 100 (sometimes also herein called the "adapter module 100") that broadcast the packet 1100.

[00144] In some implementations, the authorization code 1104 is a hash value in cleartext. In some implementations, the payment module 100 randomly or pseudo-randomly generates a number or determines a sequential number (*See* step 1002 of process 1000 in Figure 23) and performs a predetermined hash function (e.g., SHA-256) on the number to produce the hash value as the authorization code 1104. In some implementations, the authorization code 1104 is a unique code that is encrypted with a secret encryption key corresponding to the payment module 100. The secret encryption key is shared with the server 130, which enables the server 130 to decrypt the authorization code 1104 and encrypt the authorization grant token but not the mobile device 150. In some implementations, the encryption between server 130 and payment module 100 is accomplished by two pairs of public/private keys.

[00145] In some implementations, the firmware version information 1106 identifies a current firmware version 1112 of the payment module 100. In some implementations, the firmware version information 1106 also includes update status information 1114 indicating one or more packets received by the payment module 100 to update the firmware or one or more packets needed by the payment module 100 to update the firmware. In some implementations, the one or more status flags 1108 indicate a state of the payment module 100 and/or the payment

accepting unit 120 associated with the payment module 100. In some implementations, the one or more status flags 1108 indicate a state of the payment module 100 such upload information indicator 1116 indicating that that the payment module 100 has information to be uploaded to the server 130 (e.g., transaction information for one or more interrupted transactions). In some implementations, upload information indicator 1116 triggers the mobile device 150 to connect to payment module 100 immediately (e.g., if it has interrupted transaction information to be uploaded to the server 130). In some implementations, the one or more status flags 1108 indicate a state of the payment accepting unit 120 including one or more of an error indicator 1118 (e.g., indicating that a bill and/or coin acceptor of the payment accepting unit 120 is experiencing a jam, error code, or malfunction), a currency level indicator 1120 (e.g., indicating that the level of the bill and/or coin acceptor reservoir of the payment accepting unit 120 is full or empty), and/or inventory level(s) indicator 1122 (e.g., indicating that one or more products of the payment accepting unit 120. In some implementations, the one or more status flags 1108 are error codes issued by payment accepting unit 120 over the MDB.

[00146] In some implementations, the zone criteria information 1110 specifies an authorization zone criterion 1124 (e.g., a baseline authorization zone threshold indicating a baseline RSSI that the mobile device 150 (or the application 140) is required to observe before being within the authorization zone of the payment module 100) and/or a payment zone criterion 1126 (e.g., a baseline payment zone threshold indicating a baseline RSSI that the mobile device 150 (or the application 140) is required to observe before being within the payment zone of the payment module 100). In some implementations, the baseline authorization zone threshold and the baseline payment zone threshold are default values determined by the server 130 or stored as variables by the application 140, in which case the authorization zone criterion 1124 and payment zone criterion 1126 are offsets to compensate for the strength and/or reception of the short-range communication capability (e.g., BLE radio/transceiver) of the payment module 100. Alternatively, zone criteria information 1110 includes a spread between the baseline authorization zone threshold and the baseline payment zone threshold. Thus, the mobile device 150 (or the application 140) determines the baseline authorization zone threshold and the baseline payment zone threshold based on the spread value and a default value for either the baseline authorization zone threshold or the baseline payment zone threshold. For example, the spread indicates -10 db and the default baseline payment zone threshold is -90 db; thus, the

baseline authorization zone threshold is -80 db. Continuing with this example, after determining the baseline authorization zone threshold and the baseline payment zone threshold, the mobile device 150 (or the application 140) may further adjust the authorization zone threshold and/or the payment zone threshold based on the strength and/or reception of its short-range communication capability (i.e., BLE radio/transceiver).

[00147] Figure 24B is a block diagram of an authorization request 1130 sent by the mobile device 150 to the server 130 (e.g., in step 1004 of the process 1000 in Figure 23) in accordance with some implementations. In some implementations, the authorization request 1130 at least includes: a module ID 1102, a user ID 1134, and an authorization code 1104.

[00148] In some implementations, the module ID 1102 is a unique identifier corresponding to the payment module 100 that broadcast the 1100 that included the authorization code 1104.

[00149] In some implementations, the user ID 1134 is an identifier associated with the user of the mobile device 150 sending the authorization request 1130 to the server 130. In some implementations, the user ID 1134 is associated with the user account under which the user of the mobile device 150 is logged into the application 140.

[00150] In some implementations, the authorization code 1130 includes the authorization code 1104 included in the packet 1100 of information that was broadcast by the payment module 100.

[00151] Figure 24C is a block diagram of an authorization grant token 1140 sent by the server 130 to the mobile device 150 (e.g., in step 1008 of the process 1000 in Figure 23) in accordance with some implementations. In some implementations, in accordance with a determination that the authorization code 1136 included in the authorization request 1130 from the mobile device 150 is valid and that the user associated with the mobile device 150 has sufficient funds in his/her account for the payment processing system, the server 130 generates the authorization grant token 1140. In some implementations, the authorization grant token 1140 at least includes: a module ID 1102, a user ID 1134, an authorized amount 1146, (optionally) an expiration period offset 1148, and (optionally) the authorization code 1104.

[00152] In some implementations, the module ID 1102 is a unique identifier corresponding to the payment module 100 that broadcast the packet 1100 that included the authorization code 1104.

[00153] In some implementations, the user ID 1134 is an identifier associated with the user of the mobile device 150 that sent the authorization request 1130 to the server 130.

[00154] In some implementations, the authorized amount 1146 indicates a maximum amount for which the user of the mobile device 150 is authorized for a transaction using the authorization grant token 1140. For example, the authorized amount 1146 is predefined by the user of the mobile device 150 or by the server 130 based on a daily limit or based on the user's total account balance or based on a risk profile of the user correspond to the user ID 1134.

[00155] In some implementations, the expiration period 1148 offset indicates an offset to the amount of time that the payment module 100 holds the authorization grant token 1140 valid for initiation of a transaction with the machine 120 associated with the payment module 100. For example, the expiration period offset 1148 depends on the history and credit of the user of mobile device 150 or a period predefined by the user of mobile device 150.

[00156] In some implementations, the authorization grant token 1140 further includes the authorization code 1104 that was included in the authorization request 1130. In some implementations, when the authorization code 1104 is the hash value, the server 130 encrypts the authorization grant token 1140 including the hashed value with the shared secret encryption key associated with payment module 100. Subsequently, when mobile device 150 sends the authorization grant token 1140 to payment module 100 after detecting a trigger condition, the payment module 100 decrypts the authorization grant token 1140 using the secret key known only to server 130 and payment module 100 (which authenticates the message and the authorization grant), and then matches the hash value included in the decrypted authorization grant token 1140 to previously broadcast valid (unexpired) hash values (i.e., auth codes) to determine validity of the (which was known only by payment module 100).

[00157] Figure 24D illustrates a block diagram of transaction information 1150 generated by the payment module 100 (e.g., in step 1254 of the process 1250 in Figure 25B) in accordance with some implementations. In some implementations, the transaction information 1150 includes: a transaction ID 1152 for the respective transaction, a module ID 1154, a user ID 1156,

(optionally) the authorization code 1158, transaction status information 1160, the transaction amount 1162, and other information 1164.

[00158] In some implementations, the transaction ID 1152 is a unique identifier corresponding to the respective transaction. In some implementations, the transaction ID 1152 is encoded based on or associated with the time and/or date on which and the location at which the respective transaction took place.

[00159] In some implementations, the module ID 1154 is a unique identifier corresponding to the payment module 100 that performed the respective transaction.

[00160] In some implementations, the user ID 1156 is an identifier associated with the user of the mobile device 150 that initiated the respective transaction.

[00161] In some implementations, the authorization code 1158 corresponds to the original authorization code (e.g., auth code 1104, Figures 24 A-24C) and/or authorization grant token (e.g., auth grant token 1140, Figure 24C) that was used to initiate the respective transaction. In some implementations, the authorization code 1156 is encrypted with a unique encryption key corresponding to the payment module 100.

[00162] In some implementations, the transaction status information 1160 includes an indication whether the respective transaction was completed, not-completed, or aborted. For example, the respective transaction is incomplete if a jam occurred at the payment accepting unit 120 and the user did not receive the product associated with the respective transaction. For example, if the user walks away from the payment accepting unit 120 after money was credited for the respective transaction, the respective transaction is aborted. In another example, if respective transaction times out after a predetermined time period because the user failed to select a product at the payment accepting unit 120, the respective transaction is aborted. In another example, if the user actuates a bill or coin return mechanism of the payment accepting unit 120, the respective transaction is aborted.

[00163] In some implementations, the transaction amount 1162 indicates the amount of the respective transaction or the amount of each of multiple transactions (e.g., in a multi-vend scenario). In some implementations, the transaction amount 1162 is encrypted with a unique encryption key corresponding to the payment module 100.

[00164] In some implementations, the other information 1164 includes other information related to the respective transaction such as the items dispensed by the payment accepting unit 120 and the type of transaction (e.g., coins, bills, credit card, manual mode, hands-free mode, etc.). In some implementations, the other information 1164 includes other information related to the payment module 100 and/or the payment accepting unit 120 associated with the payment module 100. For example, the other information 1164 includes a verification request to the server 130 in order to implement new firmware. In another example, the other information 1164 includes transaction information from one or more previous interrupted transactions. In another example, the other information 1164 includes transaction information for one or more transactions paid via bills and/or coins. In another example, the other information 1164 includes inventory information as to one or more products of the payment accepting unit 120.

[00165] Figure 25A illustrates a schematic flow diagram of a process 1200 for providing a representation of a machine event at a mobile device in accordance with some implementations. In some implementations, the payment processing system includes one or more payment modules 100 (e.g., each associated with a respective payment accepting unit 120 such an automatic retailing machine for dispensing goods and/or services), one or more mobile devices 150 (e.g., each executing the application 140 for the payment processing system either as a foreground or background process), and the server 130. The server 130 manages the payment processing system and, in some cases, supplies, operates, and/or manufactures the one or more payment modules 100. For brevity, the process 1200 will be described with respect to a respective payment module 100 associated with a respective payment accepting unit 120 (sometimes also herein called the "machine 120") and a respective mobile device 150 in the payment processing system.

[00166] In some implementations, the process 1200 occurs after the mobile device 150 sends the AuthGrant in Figure 8C. In some implementations, the process 1200 occurs after the mobile device 150 sends the authorization grant to the payment module 100 in operation 1012 of process 1000 in Figure 23.

[00167] The payment module 100 obtains (1202) an indication corresponding to an event at the machine 120. For example, after the process 1000 in Figure 23, the user of the mobile device 150 selects a product to purchase from the machine 120 by interacting with one or more

input mechanisms of the machine 120 (e.g., buttons 126 or a touch screen display 124 shown in Figure 19), and the machine 120 dispenses the selected product. Continuing with this example, after the product is dispensed, the transaction is complete and the payment module 100 obtains an indication from the machine of the completed transaction. In some implementations, the indication includes the amount of the transaction and (optionally) machine status information associated with the machine 120 such as inventory information as to one or more products of the payment accepting unit 120 and/or the like. In some implementations, the indication includes status information indicating that the transaction was aborted (e.g., via actuation of a coin return mechanism at the machine 120) or that there was an error with the transaction (e.g., a vending jam or other malfunction with the machine 120).

[00168] After obtaining the indication corresponding to completion of the first transaction, the payment module 100 generates (1204) a notification corresponding to the event at the machine 120.

[00169] The payment module 100 sends (1206), via a short-range communication capability (e.g., BLE), the notification to the mobile device 150. In some embodiments, in addition to the notification corresponding to the event at machine 120, the payment module 100 sends a promotion or advertisement to the mobile device 150 that is targeted to the user of the mobile device 150 based on the transaction or the user ID included in the AuthGrant or authorization grant token that initiated the transaction. In some embodiments, in addition to the notification corresponding to the event at machine 120, the payment module 100 sends a pseudo randomly selected promotion or advertisement to the mobile device 150 that is selected from a set of promotions or advertisements stored by the payment module 100. For example, the promotion is a coupon for a free soda following the purchase of ten sodas from the machine 120 by the user of the mobile device 150. For example, the promotion is a random 50% off coupon or free soda coupon. For example, the transaction corresponds to a vended soda and the advertisement corresponds to a new soda from the same company that produces the vended soda.

[00170] The mobile device 150 provides (1208) a representation of the notification. For example, in Figure 26A, the mobile device 150 displays user interface 1302 on touch screen 152 with a message 1306 that indicates that the first transaction is complete. For example, in Figure 26C, the mobile device 150 displays user interface 1320 on touch screen 152 with a message

1322 that indicates that the transaction was aborted. For example, in Figure 26D, the mobile device 150 displays user interface 1330 on touch screen 152 with a message 1332 that indicates that there was an error with the transaction. For example, the mobile device 150 also displays a representation of the promotion of advertisement on the user interface for the application 140.

[00171] Figure 25B illustrates a schematic flow diagram of a process 1250 for processing acknowledgement information in accordance with some implementations. In some implementations, the payment processing system includes one or more payment modules 100 (e.g., each associated with a respective payment accepting unit 120 such an automatic retailing machine for dispensing goods and/or services), one or more mobile devices 150 (e.g., each executing the application 140 for the payment processing system either as a foreground or background process), and the server 130. The server 130 manages the payment processing system and, in some cases, supplies, operates, and/or manufactures the one or more payment modules 100. For brevity, the process 1250 will be described with respect to a respective payment module 100 associated with a respective payment accepting unit 120 (machine 120) and a respective mobile device 150 in the payment processing system.

[00172] In some implementations, the process 1250 occurs after the mobile device 150 sends the AuthGrant in Figure 8C. In some implementations, the process 1250 occurs after the mobile device 150 sends the authorization grant to the payment module 100 in operation 1012 of process 1000 in Figure 23.

[00173] The payment module 100 obtains (1252) an indication corresponding to completion of a first transaction from the machine 120. For example, after the process 1000 in Figure 23, the user of the mobile device 150 selects a product to purchase from the machine 120 by interacting with one or more input mechanisms of the machine 120 (e.g., buttons 126 or a touch screen display 124 shown in Figure 19), and the machine 120 dispenses the selected product. Continuing with this example, after the product is dispensed, the transaction is complete and the payment module 100 obtains an indication from the machine of the completed transaction. In some implementations, the indication includes the amount of the transaction and (optionally) machine status information associated with the machine 120 such as inventory information as to one or more products of the payment accepting unit 120 and/or the like.

[00174] After obtaining the indication corresponding to completion of the first transaction, the payment module 100 generates (1254) a first notification with first transaction information based on the indication, and the payment module 100 stores the first transaction information. In some implementations, the first transaction information includes a transaction ID for the first transaction, a module ID corresponding to payment module 100, a user ID corresponding to the mobile device 150, transaction status information indicating that the first transaction is complete, and the transaction amount indicated by the indication. In some implementations, the payment module 100 retains the authorization code included in the original broadcasted packet and/or the authorization grant token and includes the authorization code in the first transaction information. In some implementations, the authorization code is encrypted with a secret key corresponding to the payment module 100, which is shared with the server 130 but not the mobile device 150. In some implementations, the first transaction information further includes other information such as the machine status information included in the first notification or transaction information corresponding to previous interrupted transaction(s). See Figure 24D and the accompanying text for further discussion regarding transaction information 1150.

[00175] The payment module 100 sends (1256), via a short-range communication capability (e.g., BLE), the first notification with first transaction information to the mobile device 150. In some embodiments, in addition to first transaction information corresponding to completion of the first transaction at machine 120, the first notification includes a promotion or advertisement to the mobile device 150 that is targeted to the user of the mobile device 150 based on the transaction or the user ID included in the AuthGrant or authorization grant token that initiated the transaction. In some embodiments, in addition to first transaction information corresponding to completion of the first transaction at machine 120, the first notification includes a pseudo randomly selected promotion or advertisement to the mobile device 150 that is selected from a set of promotions or advertisements stored by the payment module 100. For example, the promotion is a coupon for a free soda following the purchase of ten sodas from the machine 120 by the user of the mobile device 150. For example, the promotion is a random 50% off coupon or free soda coupon. For example, the transaction corresponds to a vended soda and the advertisement corresponds to a new soda from the same company that produces the vended soda.

[00176] The mobile device 150 provides (1258) a representation of the first notification. For example, in Figure 26A, the mobile device 150 displays user interface 1302 on touch screen

152 with a message 1306 that indicates that the first transaction is complete. For example, the mobile device 150 also displays a representation of the promotion of advertisement on the user interface for the application 140.

[00177] The mobile device 150 sends (1260), via a long-range communication capability (e.g., GSM, CDMA, Wi-Fi, or the like), the first transaction information to the server 130.

[00178] The server 130 processes (1262) the first transaction information. For example, the server 130 debits the account of the user associated with the user ID in the first transaction information in the amount indicated by the first transaction information.

[00179] The server 130 sends (1264), via a long-range communication capability (e.g., GSM, CDMA, Wi-Fi, or the like), first acknowledgment information to the mobile device 150. In some implementations, the first acknowledgment information acknowledges that the server 130 received the first transaction information. In some implementations, the first acknowledgment information includes the user ID, the module ID, the transaction ID, and (optionally) the authorization grant included in the transaction information (e.g., auth grant 1158, Figure 24D).

[00180] After receiving the first acknowledgement information, the mobile device 150 sends (1266), via a short-range communication capability (e.g., BLE), the first acknowledgment information to the payment module 100.

[00181] After receiving the first acknowledgment information, the payment module 100 deletes (1268) the stored first transaction information.

[00182] Attention is now directed towards implementations of user interfaces and associated processes that may be implemented on the mobile device 150 with zero or more speakers, zero or more microphones, and a display. For example, the display is a touch screen (sometimes also herein called a "touch screen display") enabled to receive one or more contacts and display information (e.g., media content, websites and web pages thereof, user interface for the application 140, and/or user interfaces for applications). Figures 26A-26D illustrate example user interfaces for providing a representation of a machine event at a mobile device in accordance with some implementations.

[00183] Figures 26A-26D show user interfaces displayed on mobile device 150 (e.g., a mobile phone); however, one skilled in the art will appreciate that the user interfaces shown in Figures 26A-26D may be implemented on other similar computing devices. The user interfaces in Figures 26A-26D are used to illustrate the processes described herein, including the process described with respect to Figures 25A-25B and 27A-27B.

[00184] For example, a user of the mobile device 150 approaches a machine 120 (e.g., vending machine 78x928 as shown in Figures 10A-10D) and executes application 140 on the mobile device 150 so as to perform an electronic transaction with the machine 120. For example, with reference to Figures 10C-10D, the user of the mobile device 150 initiates a transaction with the machine 120 (e.g., vending machine 78x928) by performing a swipe gesture at a location corresponding to the representation of the dollar bill (e.g., a substantially vertical swipe gesture from a location corresponding to the representation of the dollar bill to the top edge of the mobile device 150).

[00185] Figure 26A illustrates the mobile device 150 displaying a user interface 1302 of the application 140 on touch screen 152 after the user of the mobile device 150 initiates and performs a transaction with the machine 120. In Figure 26A, the user interface 1302 includes prepaid balance 1304 which indicates that $1.00 has been deducted from the prepaid balance after performing a transaction with the machine 120 as compared to the prepaid balance in Figure 10C-10D (i.e., $9.00 in Figures 10C-10D and $8.00 in Figure 26A). In Figure 26A, the user interface 1302 also includes a message 1306 indicating that the transaction with the machine 120 is complete.

[00186] Figure 26B illustrates the mobile device 150 displaying a user interface 1310 of the application 140 on touch screen 152 after the user of the mobile device 150 initiates a transaction with the machine 120 and an error with the transaction occurs or the transaction is aborted. In Figure 26B, the user interface 1310 shows the representation of the dollar bill sliding onto the touch screen 152 (e.g., in a substantially top to bottom manner). In Figure 26B, the interface 1310 includes prepaid balance 1312 which indicates that no money has been deducted from the prepaid balance after performing a transaction with the machine 120 as compared to the prepaid balance in Figure 10C-10D (i.e., $9.00 in Figures 10C-10D and $9.00 in Figure 26B).

[00187] Figure 26C illustrates the mobile device 150 displaying a user interface 1320 of the application 140 on touch screen 152 after the representation of the dollar bill slides onto the touch screen 152 in Figure 26B due to the transaction being aborted. For example, the user aborts the transaction by actuating a coin return mechanism of the machine 120. In another example, the user aborts the transaction by selection an abort affordance on the interface of the application 140 (not shown). In Figure 26C, the user interface 1320 includes a message 1322 indicating that the transaction with the machine 120 was aborted and that the user's account was not debited for the aborted transaction.

[00188] Figure 26D illustrates the mobile device 150 displaying a user interface 1330 of the application 140 on touch screen 152 after the representation of the dollar bill slides onto the touch screen 152 in Figure 26B due to the occurrence of an error with the transaction. For example, a malfunction with the machine 120 (e.g., a vending jam or stuck item) causes the error to occur. In Figure 26D, the user interface 1330 is associated with the application 140 executed on the mobile device 150. In Figure 26D, the user interface 1330 includes a message 1332 indicating that an error occurred during the transaction with the machine 120 and that the user's account was not debited for the transaction.

[00189] Figures 27A-27B illustrate a flowchart diagram of a method 1400 of presenting representations of payment accepting unit events in accordance with some implementations. In some implementations, the method 1400 is performed by a device with one or more processors, memory, one or more output devices, and two or more communication capabilities. For example, in some implementations, the method 1400 is performed by the mobile device 150 (Figures 5 and 21) or a component thereof (e.g., the application 140). In some implementations, the method 1400 is governed by instructions that are stored in a non-transitory computer readable storage medium (e.g., the memory 860, Figure 21) and the instructions are executed by one or more processors (e.g., the processing unit 850, Figure 21) of the device. Optional operations are indicated by dashed lines (e.g., boxes with dashed-line borders).

[00190] After sending a request to a payment module via a first communication capability transaction to initiate a transaction with a payment accepting unit (e.g., an offline-payment operated machine such as a vending machine or kiosk) associated with the payment module, the mobile device obtains (1402) a notification from the payment module via the first

communication capability, where the notification indicates an event at the payment accepting unit associated with the payment module. In some implementations, method 1400 occurs after the mobile device 150 sends the AuthGrant in Figure 8C. In some implementations, method 1400 occurs after the mobile device 150 sends the authorization grant to the payment module 100 in operation 1012 of process 1000 in Figure 23. Operation 1206 of Figure 25A, for example, shows the mobile device 150 receiving a notification sent by the payment module 100 (e.g., the adapter module 100, Figures 5 and 20) sent via the first communication capability (e.g., a short-range communication technology/protocol such as BLE). The notification indicates an event at the payment accepting unit (e.g., the payment accepting unit 120, Figures 5 and 19) (sometimes also herein called "machine 120") associated with the payment module 100.

[00191] In some implementations, the first communication capability corresponds (1404) to a short-range communication protocol. As described above, the short-range communication protocols include BLE, NFC, and/or other protocols utilizing non-persistent communication channels.

[00192] In response to obtaining the notification, the mobile device provides (1406) a representation of the notification to a user of the mobile device via the one or more output devices of the mobile device. For example, in Figure 26A, the mobile device 150 displays user interface 1302 on touch screen 152 with a message 1306 that indicates that the first transaction is complete. For example, in Figure 26C, the mobile device 150 displays user interface 1320 on touch screen 152 with a message 1322 that indicates that the transaction was aborted. For example, in Figure 26D, the mobile device 150 displays user interface 1330 on touch screen 152 with a message 1332 that indicates that there was an error with the transaction.

[00193] In some implementations, the one or more output devices of the mobile device include (1408) at least one of: a display, one or more speakers, one or more LEDs, and a vibration mechanism. For example, the mobile device 150 includes one or more of a display (e.g., the touch screen 152, Figures 10A-10D), one or more speakers, one or more LEDs, and a vibration mechanism.

[00194] In some implementations, the representation of the notification is at least one of (1410): a message displayed on the display of the mobile device; a banner notification displayed on a display of the mobile device; a vibration alert from the vibration mechanism of the mobile

device; an aural alert from the one or more speakers of the mobile device; and a visual alert from the one or more LEDs of the mobile device. For example, in Figures 26B-26D, the representation of the notification includes messages 1306, 1322, and 1332 displayed on the touch screen 152 of the mobile device 150. In another example, the representation of the notification is a predefined sequence of vibrations provided by the vibration mechanism of the mobile device 150. In another example, the representation of the notification is a predefined sequence of tones provided by the one or more speakers of the mobile device 150. In another example, the representation of the notification is a predefined sequence of blinking LEDs of the mobile device 150.

[00195] In some implementations, the notification indicates (1412) abortion of a transaction initiated by the user of the mobile device. In Figure 26C, for example, the user interface 1320 includes the message 1322 indicating that the transaction has been aborted. For example, the user aborts the transaction by actuating a coin return mechanism of the machine 120. In another example, the user aborts the transaction by selection an abort affordance on the interface of the application 140 (not shown).

[00196] In some implementations, the notification indicates (1414) completion of a transaction between the user of the mobile device and the payment accepting unit. In Figure 26A, for example, the user interface 1302 includes the message 1306 indicating that completion of the transaction with the machine 120 initiated by the user of the mobile device 150.

[00197] In some implementations, the notification indicating completion of the transaction at least includes (1416) an amount of the completed transaction. In Figure 26A, for example, the user interface 1302 includes prepaid balance 1304 which indicates that $1.00 has been deducted from the prepaid balance after performing a transaction with the machine 120 as compared to the prepaid balance in Figure 10C-10D (i.e., $9.00 in Figures 10C-10D and $8.00 in Figure 26A).

[00198] In some implementations, the mobile device sends (1418) at least a portion of the notification to a server via a second communication capability distinct from the first communication capability. Operation 1260 of Figure 25B, for example, shows the mobile device 150 sending first transaction information to the server 130 for a completed transaction via the second communication capability (e.g., a long-range communication protocols such as Wi-Fi, CDMA, GSM, and/or the like). For example, the first transaction information at least includes the amount of the first completed transaction.

[00199] In some implementations, the first communication capability corresponds (1420) to a short-range communication protocol and the second communication capability corresponds to a long-range communication protocol. For example, the first communication capability of the mobile device 150 is a radio/transceiver means for communicating via one or more short-range communication protocols such as BLE, NFC, and/or the like (i.e., a non-persistent communication channel). For example, the second communication capability of the mobile device 150 is a radio/transceiver means for communicating via one or more long-range communication protocols such as Wi-Fi, CDMA, GSM, and/or the like.

[00200] In some implementations, the notification indicates (1422) failure of a transaction initiated by the user of the mobile device or a malfunction associated with the payment accepting unit. In Figure 26D, for example, the user interface 1330 includes the message 1332 indicating that there was an error with the transaction. For example, the transaction fails due to a vending jam or other malfunction. In another example, the payment accepting unit experiences a malfunction due to an open door or the like. In some implementations, at least a portion of the failure/malfunction notification is sent to the sever 130 and an alert is subsequently sent to the operator of the payment accepting unit (e.g., the machine 120) by the server 130.

[00201] It should be understood that the particular order in which the operations in Figures 27A-27B have been described is merely for example purposes and is not intended to indicate that the described order is the only order in which the operations could be performed. One of ordinary skill in the art would recognize various ways to reorder the operations described herein. Additionally, it should be noted that details of other processes described herein with respect to other methods described herein are also applicable in an analogous manner to the method 1400 described above with respect to Figures 27A-27B.

[00202] Figure 28A illustrates a block diagram of an offline-payment operated machine 1500 in accordance with some implementations. For example, the offline-payment operated machine 1500 (e.g., a form of the machine 120) is an electro-mechanical machine capable of accepting currency (e.g., coins), which is not connected to any networks (e.g., telephone, cellular, or Wi-Fi). For example, the offline-payment operated machine 1500 is a washer or dryer at a laundromat, a parking meter, a car wash payment kiosk, or other offline-payment operated machine that dispenses goods and/or services.

[00203] In Figure 28A, the offline-payment operated machine 1500 includes a microswitch 1502, a control unit 1506, a power supply 1508, a transistor 1510, and an operation unit 1512. The components of the offline-payment operated machine 1500 in Figure 28A are examples and one of skill in the art will appreciate that various other components may be included in or excluded from the offline-payment operated machine 1500.

[00204] In Figure 28A, the microswitch 1502 is a leveraged microswitch with lever 1504. For example, the microswitch 1502 is a CHERRY BRAND™ microswitch with a normally open terminal ("NO"), a normally closed terminal ("NC"), and a common terminal. For example, the lever 1504 is incorporated into a coin slot of the offline-payment operated machine 1500 and is depressed whenever a coin slides down the coin slot into a coin reservoir of the offline-payment operated machine 1500 (not shown). For example, when the lever 1504 is depressed and the microswitch 1502 is wired in the NO configuration as shown in Figure 28A, the switch is closed. Continuing with this example, when the switch is closed, control unit 1506 receives a pulse (i.e., a payment acceptance signal) from the common terminal of the microswitch 1502 indicating depression of the lever 1504 from the reception of a US quarter (i.e., $0.25) or coin of another value.

[00205] In some implementations, when the control unit 1506 receives a preset sequence of payment acceptance signals indicative of a preset number of coins being received by the microswitch 1502, the control unit 1506 initiates the operation of the offline-payment operated machine 1500. For example, after receiving the preset sequence of payment acceptance signals (e.g., three pulses indicating reception of three US quarters), the control unit 1506 initiates operation of the offline-payment operated machine 1500 by applying current to the gate of the transistor 1510 which allows current to flow from the power supply 1508 to operation unit 1512. For example, the operation unit 1512 is a motor of a dryer which begins spinning once current flows from the power supply 1508.

[00206] In Figure 28A, payment module 1520 (e.g., a form of the adapter module 100, Figures 5 and 20) is configured to be installed in the offline-payment operated machine 1500 so as to retrofit the offline-payment operated machine 1500 to be able to accept electronic payments. In some implementations, the payment module 1520 includes all or some of the components included adapter module 100 in Figure 20 such as processing unit 750, memory 760,

a security unit 755, and a communications unit 770. In some implementations, the payment module 1520 also includes a first interface module 1522, a second interface module 1524, and a lead 1536 for drawing power from power supply 1508 of the offline-payment operated machine 1500.

[00207] In Figure 28A, the first interface module 1522 is configured to sample payment acceptance signals from the microswitch 1502 (e.g., a coin receiving switch) via lead 1532 of the offline-payment operated machine 1500. For example, the payment acceptance signals are indicative of a coin being received by the microswitch 1502 which depress lever 1504. In Figure 28A, the second interface module 1524 is configured to sample control signals from the control unit 1506 of the offline-payment operated machine 1500 via lead 1534 that initiate an operation of the offline-payment operated machine (e.g., the application of current to the gate of the transistor 1510) in response to receiving a preset sequence of payment acceptance signals from the microswitch 1502 (e.g., the coin receiving switch) indicative of the preset number of coins.

[00208] Figure 28B illustrates signals sampled by the payment module 1520 in accordance with some implementations. In Figure 28B, sample 1550 represents a preset sequence of payment acceptance signals sampled by the first interface module 1522 via lead 1532 that are sent from the microswitch 1502 to the control unit 1506. For example, the preset sequence of payment acceptance signals indicative of the preset number of coins include pulses (i.e., payment acceptance signals) 1552, 1554, 1556, and 1558. For example, the leading edges of pulses 1552, 1554, 1556, and 1558 at times 1582, 1584, 1586, and 1588 indicate reception of a coin by microswitch 1502 which causes the switch to close when wired in the NO configuration as shown in Figure 28A. In Figure 28B, sample 1570 represents a control signal sampled by the second interface module 1524 via lead 1534 that is sent from the control unit 1506 to transistor 1510. In Figure 28B, the sample 1570 includes a pulse 1572 that is sent from the control unit 1506 to transistor 1510 at time 1590 after receiving the preset sequence of payment acceptance signals from the microswitch 1502 (i.e., pulses 1552, 1554, 1556, and 1558).

[00209] Figures 29A-29B illustrate a flowchart diagram of a method of retrofitting an offline-payment operated machine to accept electronic payments in accordance with some implementations. In some implementations, the method 1600 is performed by a payment module with one or more processors and memory. In some implementations, the payment module also

includes a short-range communication capability corresponding to a short-range communication protocol (e.g., a non-persistent communication channel such as BLE, NFC, and/or the like), where the short-range communication capability is configured to communicate with one or more mobile devices, where each of the one or more mobile devices is configured with a complimentary short-range communication capability and a long-range communication capability corresponding to a long-range communication protocol (e.g., Wi-Fi, CDMA, GSM, and/or the like).

[00210] In some implementations, the payment module is coupled with an offline-payment operated machine (e.g., the payment accepting unit 120, Figures 5 and 19 (sometimes also herein called "machine 120"), or the offline-payment operated machine 1500, Figure 28A) such as dryer or washer in a laundromat, a parking meter, a car wash payment kiosk, or the like. In some implementations, the offline-payment operated machine includes a coin receiving switch (e.g., the microswitch 1502, Figure 28A) and a control unit (e.g., the control unit 1506, Figure 28A). In some implementations, the payment module further includes: (A) a first interface module (e.g., the first interface module 1522, Figure 28A) configured to sample payment acceptance signals from the coin receiving switch of the offline-payment operated machine, where the signals are indicative of a coin being received by the coin receiving switch; and (B) a second interface module (e.g., the second interface module 1524, Figure 28A) configured to sample control signals from the control unit of the offline-payment operated machine that initiate an operation of the offline-payment operated machine in response to receiving a preset sequence of payment acceptance signals from the coin receiving switch indicative of the preset number of coins. By sampling and storing these signals, the payment module 1520 is able to simulate operation of a respective coin receiving switch in response to receiving the correct/preset number of coins so as to trigger operation of the offline-payment operated machine in response to completion of an electronic payment.

[00211] For example, in some implementations, the method 1600 is performed by the adapter module 100 (Figures 5 and 20) or payment module 1520 (Figure 28A). In some implementations, the method 1600 is governed by instructions that are stored in a non-transitory computer readable storage medium (e.g., the memory 760, Figure 20) and the instructions are executed by one or more processors (e.g., the processing unit 750, Figure 20) of the payment module. Optional operations are indicated by dashed lines (e.g., boxes with dashed-line borders).

[00212] In some implementations, the payment module detects (1602), via the first interface module, a preset sequence of payment acceptance signals from the coin receiving switch that causes the control unit to initiate the operation of the offline-payment operated machine, where the preset sequence of payment acceptance signals are indicative of a preset number of coins received by the coin receiving switch. For example, with reference to Figures 28A-28B, the first interface module 1522 of the payment module 1520 samples payment acceptance signals via lead 1532 from the microswitch 1502 to the control unit 1506. For example, each of the payment acceptance signals is indicative of reception of a coin by the microswitch 1502. Continuing with this example, the second interface module 1524 of the payment module 1520 samples control signals via lead 1534 from the control unit 1506 to the transistor 1510. The payment module 1520 detects a preset sequence of payment acceptance signals from the microswitch 1502 that causes the control unit 1506 to apply a current to the gate of the transistor 1510 (e.g., the control signals). For example, the preset sequence of payment acceptance signals is indicative of a preset number of coins received by the microswitch 1502 to cause operation of the offline-payment operated machine 1500. For example, the application of current to the gate of the transistor 1510 allows current to flow from the power supply 1508 to the operation unit 1512 so that the operation. For example, the operation unit 1512 is a motor of a dryer which begins spinning once current flows from the power supply 1508.

[00213] In some implementations, the payment module determines (1604) the predefined signal sequence to emulate the preset sequence of payment acceptance signals from the coin receiving switch. In some implementations, after detecting the preset sequence of payment acceptance signals that causes the control unit 1506 to initiate the operation of the offline-payment operated machine 1500, the payment module 1520 determines a predefined signal sequence to emulate the preset sequence of payment acceptance signals. In some implementations, the money value associated with each pulse in the preset sequence of payment acceptance signals from the microswitch 1502, indicative of the preset number of coins to initiate the operation of the offline-payment operated machine 1500, is a default currency (e.g., USD) and amount (e.g., $0.25) set in the firmware of the payment module 1520. In some implementations, the money value associated with the each pulse in the preset sequence of payment acceptance signals from the microswitch 1502, indicative of the preset number of coins to initiate the operation of the offline-payment operated machine 1500, is set by the server 130

and can be changed remotely by using the mobile device 150 as a communications bridge to send information indicating the value of a pulse from the server 130 to the mobile device 150 via the second communication capability (e.g., GSM, CDMA, or Wi-Fi) and forwarding the information from the mobile device to the payment module 1520 via the first communication capability (e.g., BLE). For instance, in most cases, each pulse is US $0.25.

[00214] In some implementations, determining the predefined signal sequence includes (1606) at least one of: identifying a count of pulses in the present sequence of payment acceptance signals; identifying amplitude of pulses in the present sequence of payment acceptance signals; identifying shape of pulses in the present sequence of payment acceptance signals; and identifying an interval between pulses. In some implementations, after detecting the preset sequence of payment acceptance signals (e.g., the sample 1550, Figure 28B), the payment module 1520 determines a predefined signal sequence to emulate the preset sequence of payment acceptance signals by identifying a count of pulses in the preset sequence of payment acceptance signals, an interval between pulses in the preset sequence of payment acceptance signals, the shape of pulses in the preset sequence of payment acceptance signals, and an amplitude of pulses in the preset sequence of payment acceptance signals.

[00215] The payment module receives (1608) a request via the short-range communication capability from a respective mobile device to perform an operation of the offline-payment operated machine. For example, with reference to Figure 8C, the payment module 1520 (Figure 28A) receives the AuthGrant from the mobile device 150 via the short-range communication capability (e.g., BLE) indicating that the user of the mobile device 150 wishes to perform the operation of the offline-payment operated machine 1500 (Figure 28A). For example with reference to operation 1012 in Figure 23, the payment module 1520 (Figure 28A) receives an authorization grant token from the mobile device 150 via the short-range communication capability (e.g., BLE) indicating that the user of the mobile device 150 wishes to perform the operation of the offline-payment operated machine 1500 (Figure 28A).

[00216] The payment module validates (1610) the request. Validation of the request indicates (1612) that the respective mobile device is authorized to initiate payment for the operation by a remote server via the long-range communication capability. In some implementations, the payment module 1520 validates the request from the mobile device 150 by

determining whether the AuthGrant or the authorization grant token includes a valid authorization code.

[00217] In accordance with a determination that the request is valid, the payment module causes (1614) the payment operated machine to perform the operation by issuing a predefined signal sequence to the control unit, where the predefined signal sequence emulates a signal sequence that would be issued by the coin receiving switch in response to receiving a preset number of coins. For example, with reference to Figure 28B, the payment module 1520 issues a predefined signal sequence with first interface module 1522 to the control unit 1506 that emulates sample 1550 in Figure 28B. Continuing with this example, in response to receiving the predefined signal sequence from the payment module 1520 control unit 1506 causes initiation of the operation of the offline-payment operated machine 1500 by applying current to the gate of the transistor 1510 which allows current to flow from the power supply 1508 to operation unit 1512. In some implementations, the control unit 1506 causes initiation of the operation by setting a timer to an amount of time corresponding to the preset number of coins whereby current flows to the gate of the transistor 1510 for the set amount of time. For example, the preset number of coins is a number of a coins required to run the offline-payment operated machine 1500 by for a default amount of time and subsequent coins may be added to extend the amount of time that the offline-payment operated machine 1500 by will run. In some implementations, the preset number of coins is a number of a coins required to cause the offline-payment operated machine 1500 to dispense a purchased item, such as laundry detergent.

[00218] Alternatively, in some implementations, in accordance with a determination that the request is valid, the offline-payment operated machine 1500 displays credit to the user (e.g., via one of the displays 122 or 124 shown in Figure 19) and the user interacts with the input mechanisms of the offline-payment operated machine 1500 120 (e.g., via the buttons 126 or a touch screen display 124 shown in Figure 19) to perform the operation of the machine. For example, if the offline-payment operated machine 1500 is a dryer, the user of the mobile device 150 selects the appropriate spin cycle via input mechanisms of the dryer, and when the user of the mobile device 150 selects a start/run input mechanism of the dryer, control unit 1506 of the dryer causes initiation of the operation of the dryer (e.g., starting a motor that corresponds to operation unit 1512 in Figure 28A).

[00219] In some implementations, prior to sending the operation information and after causing the offline-payment operated machine to perform the operation by issuing the predefined signal sequence to the control unit, the payment module obtains (1616) a notification from the offline-payment operated machine indicating initiation of the operation of the offline-payment operated machine and the preset number of coins. For example, after issuing the preset signal sequence to control unit 1506, the payment module 1520 (Figure 28A) obtains a notification indicating that the control unit 1506 sent control signals to initiate operation of the offline-payment operated machine 1500 in response to receiving the predefined signal sequence. For example, the notification is obtained by the second interface module 1524 (e.g., the sample 1570, Figure 28B) sampling controls signals sent by control unit 1506 (e.g., application of current to the gate of the transistor 1510 which allows current to flow from the power supply 1508 to operation unit 1512).

[00220] In response to receiving the notification, the payment module (1618): generates the operation information based at least in part on the notification; and stores the generated operation information in the memory. For example, after obtaining the notification, the payment module 1520 (Figure 28A) generates operation information corresponding to performance of the operation and the preset number of coins associated with the predefined signal sequence (e.g., the amount required to initiate operation of the offline-payment operated machine 1500) and stores the operation information in memory local to the payment module 1520 (e.g., the memory 760, Figure 20).

[00221] In some implementations, the payment module sends (1620) operation information corresponding to the operation to the respective mobile device via the short-range communication capability. For example, after operation 1618, the payment module 1520 (Figure 28A) sends the operation information to the mobile device 150 via the first communication capability of the mobile device 150 such as a radio/transceiver means for communicating via one or more short-range communication protocols such as BLE, NFC, and/or the like (i.e., a non-persistent communication channel)

[00222] It should be understood that the particular order in which the operations in Figures 29A-29B have been described is merely for example purposes and is not intended to indicate that the described order is the only order in which the operations could be performed. One of

ordinary skill in the art would recognize various ways to reorder the operations described herein. Additionally, it should be noted that details of other processes described herein with respect to other methods described herein (e.g., the method 1700 in Figure 30) are also applicable in an analogous manner to the method 1600 described above with respect to Figures 29A-29B.

[00223] Figure 30 illustrates a flowchart diagram of a method 1700 of enabling a payment operated machine to accept electronic payments in accordance with some implementations. In some implementations, the method 1700 is performed by an offline-payment operated machine (e.g., the payment accepting unit 120, Figures 5 and 19 (sometimes also herein called "machine 120"), or the offline-payment operated machine 1500, Figure 28A) such as dryer or washer in a laundromat, a parking meter, a car wash payment kiosk, or the like.

[00224] In some implementations, the offline-payment operated machine includes a control unit (e.g., the control unit 1506, Figure 28A), memory, and a coin receiving switch (e.g., the microswitch 1502, Figure 28A). In some implementations, the offline-payment operated machine also includes a short-range communication capability corresponding to a short-range communication protocol (e.g., a non-persistent communication channel such as BLE, NFC, and/or the like), where the short-range communication capability is configured to communicate with one or more mobile devices, where each of the one or more mobile devices is configured with a complimentary short-range communication capability and a long-range communication capability corresponding to a long-range communication protocol (e.g., Wi-Fi, CDMA, GSM, and/or the like). For example, in some implementations, the method 1700 is performed by the machine 120, (Figures 5 and 19). In some implementations, the method 1700 is governed by instructions that are stored in a non-transitory computer readable storage medium and the instructions are executed by the control unit of the offline-payment operated machine.

[00225] The offline-payment operated machine receives (1702) a request via a short-range communication capability from a respective mobile device to perform an operation of the offline-payment operated machine. For example, with reference to Figure 8C, the payment module 1520 (Figure 28A) receives the AuthGrant from the mobile device 150 via the short-range communication capability (e.g., BLE) indicating that the user of the mobile device 150 wishes to perform the operation of the offline-payment operated machine 1500 (Figure 28A). For example with reference to operation 1012 in Figure 23, the payment module 1520 (Figure 28A)

receives an authorization grant token from the mobile device 150 via the short-range communication capability (e.g., BLE) indicating that the user of the mobile device 150 wishes to perform the operation of the offline-payment operated machine 1500 (Figure 28A).

[00226] The offline-payment operated machine validates (1704) the request. Validation of the request indicates (1706) that the respective mobile device is authorized to initiate payment for the operation by a remote server via the long-range communication capability. In some implementations, the payment module 1520 validates the request from the mobile device 150 by determining whether the AuthGrant or the authorization grant token includes a valid authorization code.

[00227] In accordance with a determination that the request is valid, the offline-payment operated machine performs (1708) the operation by issuing a predefined signal sequence to the control unit, where the predefined signal sequence emulates a preset number of coins received by the coin receiving switch. For example, in accordance with a determination that the request is valid, the offline-payment operated machine or a component thereof issues a predefined signal sequence to the control unit 1506 that emulates sample 1550 in Figure 28B. Continuing with this example, in response to receiving the predefined signal sequence from the payment module 1520, control unit 1506 causes initiation of the operation of the offline-payment operated machine 1500 by applying current to the gate of the transistor 1510 which allows current to flow from the power supply 1508 to operation unit 1512. In another example, in accordance with a determination that the request is valid, the control unit 1506 causes initiation of the operation of the offline-payment operated machine 1500 by applying current to the gate of the transistor 1510 which allows current to flow from the power supply 1508 to operation unit 1512.

[00228] It should be understood that the particular order in which the operations in Figure 30 have been described is merely for example purposes and is not intended to indicate that the described order is the only order in which the operations could be performed. One of ordinary skill in the art would recognize various ways to reorder the operations described herein. Additionally, it should be noted that details of other processes described herein with respect to other methods described herein (e.g., the method 1600 in Figures 29A-29B) are also applicable in an analogous manner to the method 1700 described above with respect to Figure 30.

MISCELLANEOUS

[00229] 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."

[00230] 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.

[00231] 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.

[00232] It is to be understood that the inventions, examples, and implementations described herein are not limited to particularly exemplified materials, methods, and/or structures. It is to be understood that the inventions, examples, and implementations described herein are to be considered preferred inventions, examples, and implementations whether specifically identified as such or not.

[00233] 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 implementations 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.

Petitioner Kiosoft Exhibit 1002
127

UTILITY PATENT APPLICATION TRANSMITTAL (Only for new nonprovisional applications under 37 CFR § 1.53(b))	Attorney Docket No.	104402-5046-US
	First Inventor	Dr. Paresh K. Patel
	Title	*Method and System for Presenting Representations of Payment Accepting Unit Events*
	Electronically filed	January 12, 2021

APPLICATION ELEMENTS *See MPEP Chapter 600 concerning utility patent application contents.*	*Address to*: **Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450**
1. ☐ Fee Transmittal Form *(with duplicate for fee processing)*	**ACCOMPANYING APPLICATION PARTS**
2. ☒ Applicant claims Small Entity status, see 37 C.F.R. § 1.27	9. ☐ Assignment Papers *(cover sheet & document(s))*
3. ☒ Specification [Total Pages 69]	Name of Assignee:
4. ☒ Drawing(s) *(35 USC § 113)* [Total Sheets 45]	10. ☒ 37 CFR § 3.73(c) Statement
5. ☒ Oath or Declaration [Total Pages 1]	a. ☒ Power of Attorney
a. ☐ Newly executed *(original or copy)*	11. ☐ English Translation Document *(if applicable)*
b. ☒ Copy from a prior application *(37 CFR § 1.63(d))*	12. ☐ Information Disclosure Statement and PTO-1449
6. ☒ Application Data Sheet, see 37 C.F.R. § 1.76	a. ☐ Copies of citations attached
7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program *(Appendix)*	13. ☐ Preliminary Amendment
☐ Landscape Table on CD	
8. ☐ Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all necessary)*	14. ☐ Return Receipt Postcard *(MPEP 503)*
a. ☐ Computer Readable Form (CRF)	15. ☐ Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
b. ☐ Specification Sequence Listing on	16. ☐ Non-Publication Request under 35 U.S.C. § 122 (b)(2)(B)(i)
i. ☐ CD-ROM or CD-R (2 copies); or	17. ☐ Other:
ii. ☐ Paper	
c. ☐ Statement verifying identity of above copies	

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	January 12, 2021
Name (Print/Type)	Douglas J. Crisman	Registration No. (Attorney/Agent)	39,951

UNITED STATES PATENT AND TRADEMARK OFFICE

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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
17/147,305	01/12/2021		0.00	104402-5046-US	1	1

CONFIRMATION NO. 8393

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

FILING RECEIPT



Date Mailed: 01/27/2021

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 15/603,400 05/23/2017 PAT 10891614
which is a CON of 14/458,199 08/12/2014 PAT 9659296
which is a CIP of 14/456,683 08/11/2014 PAT 9256873
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: 01/25/2021
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/147,305**
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 PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Preliminary Class

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.

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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.

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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).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/147,305	01/12/2021	Paresh K. Patel	104402-5046-US

CONFIRMATION NO. 8393

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

FORMALITIES LETTER

OC000000122880412

Date Mailed: 01/27/2021

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.)

- $ **80** basic filing fee.
- $ **80** surcharge.
- $ **350** search fee.
- $ **400** examination fee.
- $(**0**) previous unapplied payment amount.
- $ **910** 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
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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.

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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**.

/qnguyen/

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 17/147,305

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
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), (i), 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(i))	1 minus 20 =	*	x 50 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 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			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	830		TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	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))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
AMENDMENT B	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))									
	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.

Electronically filed May 27, 2021

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel	Confirmation No.:	8393
Serial No.:	17/147,305	Art Unit:	Not yet assigned
Filed:	January 12, 2021	Examiner:	Not yet assigned
For:	*Method and System for Presenting Representations of Payment Accepting Unit Events*	Atty. Docket No.:	104402-5046-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. 104402-5046-US).

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136

IN THE CLAIMS:

Rewrite the pending claims and add new claims as follows:

1. (Canceled)

2. (New) A method of executing payment accepting unit events, comprising:

at a mobile device with one or more processors, memory, one or more output devices including a display, and one or more radio transceivers:

detecting one or more payment accepting units in proximity to the mobile device, including detecting predefined radio transmissions broadcast by the one or more payment accepting units, wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services;

displaying a user interface of a mobile payment application on the display of the mobile device, the user interface being configured to display a visual indication of the one or more payment accepting units and accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units and (ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units;

establishing via the one or more radio transceivers a wireless connection between the mobile device and the available payment accepting unit of the one or more payment accepting units;

after establishing the wireless connection, enabling user interaction with the user interface of the mobile payment application to complete the transaction;

exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the transaction; and

in response to receiving the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.

3. (New) The method of claim 2, wherein the updated user interface of the mobile payment application includes at least one of:

a message displayed on the display of the mobile device;

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137

a banner notification displayed on a display of the mobile device; and/or

a visual alert from one or more LEDs of the mobile device.

4. (New) The method of claim 2, wherein the information indicates completion of the transaction between the user of the mobile device and the available payment accepting unit.

5. (New) The method of claim 3, wherein the mobile device includes a long-range transceiver and the information at least includes an amount of the completed transaction, and the method further comprises:

sending at least the amount of the completed transaction to a server via the long-range transceiver.

6. (New) The method of claim 2, wherein the information indicates abortion of the transaction initiated by the user of the mobile device.

7. (New) The method of claim 2, wherein the information indicates failure of the transaction initiated by the user of the mobile device or a malfunction associated with the available payment accepting unit.

8. (New) The method of claim 2, wherein the mobile device includes an accelerometer and the method further comprises:

based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit; and

in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless connection.

9. (New) The method of claim 2, wherein the information reflects a status of the transaction for a product stocked by the available payment accepting unit.

10. (New) The method of claim 2, further comprising:

in addition to exchanging the information, receiving, via the one or more radio transceivers, a coupon that is targeted to the user of the mobile device based on the transaction.

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138

11. (New) The method of claim 2, wherein the user interface of the mobile payment application presented after establishing via the wireless connection indicates that the wireless connection has been established with the available payment accepting unit.

12. (New) The method of claim 2, wherein the user interface of the mobile payment application presented after establishing via the wireless connection includes:

a visual representation of available payment accepting unit;

an indication of a prepared balance; and

an affordance that when slid, indicates the initiation of the transaction.

13. (New) The method of claim 12, wherein the affordance is slid in response to receiving a user input of swipe on the affordance displayed on the display of the mobile device.

14. (New) The method of claim 2, wherein the predefined radio transmissions are broadcasted by the one or more payment accepting units indicating status of the one or more payment accepting units.

15. (New) The method of claim 2, wherein the one or more payment operated machines include a laundromat washer or dryer, a vending machine, a parking meter, a toll booth, an arcade game, a kiosk, a photo booth, a toll booth, or a ticket dispensing machine

16. (New) A mobile device, comprising:

one or more radio transceivers;

one or more output devices including a display;

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:

detecting one or more payment accepting units in proximity to the mobile device, including detecting predefined radio transmissions broadcast by the one or more payment accepting units, wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services;

displaying a user interface of a mobile payment application on the display of the mobile device, the user interface being configured to display a visual indication of the one or

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139

more payment accepting units and accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units and (ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units;

establishing via the one or more radio transceivers a wireless connection between the mobile device and the available payment accepting unit of the one or more payment accepting units;

after establishing the wireless connection, enabling user interaction with the user interface of the mobile payment application to complete the transaction;

exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the transaction; and

in response to receiving the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.

17. (New) The mobile device of claim 16, wherein the one or more output devices of the mobile device include at least one of: one or more speakers, one or more light emitting diodes (LEDs), and a vibration mechanism.

18. (New) The mobile device of claim 16, wherein:

the mobile payment application on the mobile device is configured to communicate with a payment module coupled with an internal interface of the available payment accepting unit;

the mobile device sends a transmission to the payment module via the one or more radio transceivers of the mobile device in conjunction with the transaction;

the available payment accepting unit sends the transmission to the payment module in conjunction with the transaction; and

the mobile device obtains, via the one or more radio transceivers, the information from the payment module based on the transmission.

19. (New) The mobile device of claim 16, wherein:

the wireless connection is established via a first transceiver of the one or more transceivers;

Petitioner Kiosoft Exhibit 1002
140

the information is exchanged via a second transceiver of the one or more transceivers; and

the first transceiver is different from the second transceiver.

20. (New) The mobile device of claim 16, wherein the one or more payment accepting units further comprise one or more of: parking meters, toll booths, laundromat washers, laundromat dryers, arcade games, kiosks, photo booths, toll booths, and/or transit ticket dispensing machines.

21. (New) The mobile device of claim 16, wherein the wireless connection between the mobile device and the available payment accepting unit is a Bluetooth connection, a Bluetooth Smart connection, a Bluetooth Low Energy connection, a near-field communication connection, an Ultra Wideband connection, a radio frequency identification connection, an infrared wireless connection, and/or an induction wireless connection.

22. (New) The mobile device of claim 16, wherein the one or more payment operated machines include a laundromat washer or dryer, a vending machine, a parking meter, a toll booth, an arcade game, a kiosk, a photo booth, a toll booth, or a ticket dispensing machine

23. (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, one or more output devices including a display, and one or more radio transceivers, cause the mobile device to perform operations comprising:

detecting one or more payment accepting units in proximity to the mobile device, including detecting predefined radio transmissions broadcast by the one or more payment accepting units, wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services;

displaying a user interface of a mobile payment application on the display of the mobile device, the user interface being configured to display a visual indication of the one or more payment accepting units and accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units and (ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units;

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141

establishing via the one or more radio transceivers a wireless connection between the mobile device and the available payment accepting unit of the one or more payment accepting units;

after establishing the wireless connection, enabling user interaction with the user interface of the mobile payment application to complete the transaction;

exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the transaction; and

in response to receiving the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.

24. (New) The non-transitory computer readable storage medium of claim 23, wherein the updated user interface of the mobile payment application includes at least one of:

a message displayed on the display of the mobile device;

a banner notification displayed on a display of the mobile device; and/or

a visual alert from one or more LEDs of the mobile device.

25. (New) The non-transitory computer readable storage medium of claim 23, wherein the information indicates completion of the transaction between the user of the mobile device and the available payment accepting unit.

26. (New) The non-transitory computer readable storage medium of claim 25, wherein the information at least includes an amount of the completed transaction, and the instructions further cause the mobile device to send at least the amount of the completed transaction to a server.

27. (New) The non-transitory computer readable storage medium of claim 23, wherein the information indicates abortion of the transaction initiated by the user of the mobile device.

28. (New) The non-transitory computer readable storage medium of claim 23, wherein the information indicates failure of the transaction initiated by the user of the mobile device or a malfunction associated with the available payment accepting unit.

29. (New) The non-transitory computer readable storage medium of claim 23, wherein the one or more payment operated machines include a laundromat washer or dryer, a vending

Petitioner Kiosoft Exhibit 1002
142

machine, a parking meter, a toll booth, an arcade game, a kiosk, a photo booth, a toll booth, or a ticket dispensing machine.

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143

Electronic Acknowledgement Receipt

EFS ID:	42843123
Application Number:	17147305
International Application Number:	
Confirmation Number:	8393
Title of Invention:	METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS
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:	104402-5046-US
Receipt Date:	27-MAY-2021
Filing Date:	12-JAN-2021
Time Stamp:	20:15:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$1630
RAM confirmation Number	E20215QK15240100
Deposit Account	
Authorized User	

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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	104402-5046-US_ResponseToNTFMP_27-MAY-2021.pdf	138101 0ac1908c3ba393cb20a60bedb5da0863bb9056f9	no	2
Warnings:					
Information:					
2	Applicant Response to Pre-Exam Formalities Notice	104402-5046-US_CopyofNTFMP_27-JAN-2021.pdf	71453 2ca9110c08e8656f53bf6e6a63f8c4128756 24b0	no	2
Warnings:					
Information:					
3	Fee Worksheet (SB06)	104402-5046-US_FeeTransmittal.pdf	154461 7121ae78f9bf5f5a2983e07c81221f4a0343e 4ea	no	1
Warnings:					
Information:					
4	Preliminary Amendment	104402-5046-US_PreliminaryAmendment_27-MAY-2021.pdf	159765 0a5d7c7c40955cd586ab779c1a36d52c65e 96d6b	no	9
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	40516 bdc482fe9c310b3356cad6fde1be1ce7674 8da2a	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	564296		

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.

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
17/147,305	01/12/2021	Paresh K. Patel	104402-5046-US

CONFIRMATION NO. 8393

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

FORMALITIES LETTER

OC000000122880412

Date Mailed: 01/27/2021

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.)

- $ **80** basic filing fee.
- $ **80** surcharge.
- $ **350** search fee.
- $ **400** examination fee.
- $(**0**) previous unapplied payment amount.
- $ **910** 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**.

/qnguyen/

Electronically filed May 27, 2021

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel	Confirmation No.:	8393
Serial No.:	17/147,305	Art Unit:	Not yet assigned
Filed:	January 12, 2021	Examiner:	Not yet assigned
For:	*METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS*	Attorney Docket No:	104402-5046-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, January 27, 2021, 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 estimated to be $910. The Commissioner is hereby authorized to charge the required fees or credit any overpayments to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104402-5046-US).

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 January 27, 2021, be extended for a period of two (2) months from March, 27, 2021 to May 27, 2021. The Commissioner is hereby

authorized to charge any required fee(s) to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 104402-5046-US).

Respectfully submitted,

Date: May 27, 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

Claim Amendments

Claim 1 has been canceled. Claims 2-29 are new. No new matter has been added. After entry of this amendment, claims 2-29 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: May 27, 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

Petitioner Kiosoft Exhibit 1002
151

UTILITY PATENT APPLICATION FEE TRANSMITTAL *(Only for new nonprovisional applications under 37 CFR § 1.53(b))*	Attorney Docket No.	104402-5046-US
	First Inventor	Paresh K. Patel
	Title	METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS
	Electronically filed	May 27, 2021

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

BASIC FILING, SEARCH AND EXAMINATION FEES

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	28	- 20	8	$ 50 each	$400
Independent	3	- 3	0	$ 240 each	$ 0
			Multiple Dependency Fee If Applicable ($430)		$ 0

APPLICATION SIZE FEE (Specification and Drawings)

Total Sheets	Extra Sheets	No. of each add'l 50 or fraction thereof	Fee ($)
114 x .75- 100	0 / 50	0 (round up to whole no.) x $210	$ 0

Sub Total	$1230
Surcharge	$ 80
TOTAL FILING FEE	**$1310**

Please charge the total filing fee and any other additional fees to Morgan, Lewis & Bockius LLP Deposit Account 50-0310 (order no. 104402-5046-US).

Respectfully submitted,

/Douglas J. Crisman/

Date: May 27, 2021

Douglas J. Crisman 39,951 (Reg. No.)

MORGAN, LEWIS & BOCKIUS LLP
1400 Page Mill Road
Palo Alto, CA 94304
(650) 843-4000

DB2/ 40964695.1

Electronic Patent Application Fee Transmittal

Application Number:	17147305
Filing Date:	12-Jan-2021
Title of Invention:	METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS
First Named Inventor/Applicant Name:	Paresh K. Patel
Filer:	Douglas James Crisman/Linda Quintana
Attorney Docket Number:	104402-5046-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:				
CLAIMS IN EXCESS OF 20	2202	8	50	400
Miscellaneous-Filing:				
LATE FILING FEE FOR OATH OR DECLARATION	2051	1	80	80

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 2 months with $0 paid	2252	1	320	320
Miscellaneous:				
		Total in USD ($)		**1630**

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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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
17/147,305	01/12/2021		1310	104402-5046-US	28	3

CONFIRMATION NO. 8393

UPDATED FILING RECEIPT

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

OC000000125969139

Date Mailed: 06/01/2021

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 15/603,400 05/23/2017 PAT 10891614
which is a CON of 14/458,199 08/12/2014 PAT 9659296
which is a CIP of 14/456,683 08/11/2014 PAT 9256873
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: 01/25/2021
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/147,305**
Projected Publication Date: 09/09/2021
Non-Publication Request: No
Early Publication Request: No
**** SMALL ENTITY ****
Title

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Preliminary Class

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

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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 AssetsControl, 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).

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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: 17/147,305

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
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), (i), 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(i))	28 minus 20 =	* 8	x 50 =	400	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			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	1230		TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	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))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
AMENDMENT B	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))									
	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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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/147,305	01/12/2021	Paresh K. Patel	104402-5046-US

CONFIRMATION NO. 8393

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

PUBLICATION NOTICE

OC000000128292875

Title:METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Publication No.US-2021-0279725-A1
Publication Date:09/09/2021

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 Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 17, 2022	
				Application Number	17/147,305
				Filing Date	January 12, 2021
				First Named Inventor	Paresh K. Patel
				Art Unit	OPAP
				Examiner Name	Docket Central
Sheet	1	of	11	Attorney Docket Number	104402-5046-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
		2002/0016740 A1	02-07-2002	Ogasawara	
		2002/0164953 A1	11-07-2002	Curtis	
		2003/0089767 A1	05-15-2003	Kiyomatsu	
		2003/0110097 A1	06-12-2003	Lei	
		2003/0130902 A1	07-10-2003	Athwal	
		2003/0158891 A1	08-21-2003	Lei et al.	
		2003/0191811 A1	10-09-2003	Hashem	
		2003/0206542 A1	11-06-2003	Holder	
		2003/0236872 A1	12-25-2003	Atkinson	
		2004/0049454 A1	03-11-2004	Kanno et al.	
		2004/0117262 A1	06-17-2004	Berger et al.	
		2004/0133653 A1	07-08-2004	Defosse	
		2005/0043011 A1	02-24-2005	Murray	
		2005/0080510 A1	04-14-2005	Bates	
		2005/0101295 A1	05-12-2005	Rupp	
		2005/0177798 A1	08-11-2005	Thomson et al.	
		2005/0181804 A1	08-18-2005	Misikangas et al.	
		2005/0232421 A1	10-20-2005	Simons et al.	
		2005/0234776 A1	10-20-2005	Jacoves	
		2006/0052157 A1	03-09-2006	Walker et al.	
		2006/0123335 A1	06-08-2006	Sanchez et al.	
		2007/0050083 A1	03-01-2007	Signorelli et al.	
		2007/0186105 A1	08-09-2007	Bailey	
		2007/0187491 A1	08-16-2007	Godwin et al.	
		2007/0227856 A1	10-04-2007	Gopel	
		2007/0255653 A1	11-01-2007	Tumminaro	
		2008/0033880 A1	02-07-2008	Fiebiger et al.	
		2008/0126213 A1	05-29-2008	Robertson et al.	
		2008/0141033 A1	06-12-2008	Ginter et al.	
		2008/0154727 A1	06-26-2008	Carlson	
		2008/0154735 A1	06-26-2008	Carlson	
		2008/0163257 A1	07-03-2008	Carlson et al.	
		2008/0167017 A1	07-10-2008	Wentker et al.	
		2008/0167991 A1	07-10-2008	Carlson, et al.	
		2008/0183480 A1	07-31-2008	Carlson, et al.	
		2008/0201226 A1	08-21-2008	Carlson, et al.	
		2008/0208762 A1	08-28-2008	Arthur et al.	
		2008/0249658 A1	10-09-2008	Walker	
		2008/0254853 A1	10-16-2008	Wright et al.	

Examiner Signature		Date Considered	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 17, 2022	
				Application Number	17/147,305
				Filing Date	January 12, 2021
				First Named Inventor	Paresh K. Patel
				Art Unit	OPAP
				Examiner Name	Docket Central
Sheet	2	of	11	Attorney Docket Number	104402-5046-US

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				Filing Date	January 12, 2021
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		Patel, Notice of Allowance, US 14/335,762, 30MAR2015, 9 pgs
		Patel, Notice of Allowance, US 14/456,683, 08OCT2015, 15 pgs
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		Patel, Notice of Allowance, US 14/611,065, 26MAR2018, 18 pgs.
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		Patel, Notice of Allowance, US 15/406,492, 11MAR2020, 9 pgs
		Patel, Notice of Allowance, US 15/435,228, 12AUG2021, 9 pgs
		Patel, Notice of Allowance, US 15/603,400, 18DEC2019, 8 pgs
		Patel, Notice of Allowance, US 15/603,400, 18JUN2020, 5 pgs

Examiner Signature		Date Considered	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 17, 2022	
				Application Number	17/147,305
				Filing Date	January 12, 2021
				First Named Inventor	Paresh K. Patel
				Art Unit	OPAP
				Examiner Name	Docket Central
Sheet	10	of	11	Attorney Docket Number	104402-5046-US

		Patel, Notice of Allowance, US 15/878,352, 23OCT2020, 8 pgs
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		Patel, Notice of Allowance, US 16/748,727, 09MAY2022, 16 pgs
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		Patel, Office Action, US 14/335,762, 18SEP2015, 13 pgs.
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		Patel, Office Action, US 14/458,192, 23MAR2017, 26 pgs
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		PayRange Inc., Communication Pursuant to Article 94(3), EP 14828617.2, 19DEC2017, 6 pgs.
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		PayRange Inc., Communication Pursuant to Rules 161(1) and 162, EP 14828617.2, 21SEP2016, 2 pgs.
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Examiner Signature		Date Considered	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 17, 2022	
				Application Number	17/147,305
				Filing Date	January 12, 2021
				First Named Inventor	Paresh K. Patel
				Art Unit	OPAP
				Examiner Name	Docket Central
Sheet	11	of	11	Attorney Docket Number	104402-5046-US

		PayRange Inc., Communication under Rule 71(3) EPC, EP 14828617.2, 19NOV2020, 8 pgs
		PayRange Inc., Communication under Rule 71(3) EPC, EP 17708929.9, 12JUN2020, 5 pgs
		PayRange Inc., European Search Report, EP 20203134.1, 09FEB2021, 2 pgs
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		PayRange Inc., IPRP, PCT/US2017/018194, 21AUG2018, 17 pgs
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		PayRange Inc., ISR/WO, PCT/US2021/042632, 17NOV2021, 11 pgs
		PayRange Inc., Notice of Reasons for Rejection, JP 2017-527886, 29AUG2019, 10 pgs
		PayRange Inc., Notice of Reasons for Rejection, JP 2018-543707, 04SEP2020, 4 pgs
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		PayRange New Product Launch, posted at youtube.com 27JUN2015, © 2016 YouTube, LLC, [online], [site visited 02MAR2016]. Available from Internet, <URL: https://www.youtube.com/watch?v=NTvvV03XFeg., 1 pg.
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		Smart Vending Machine Demo at TechCrunch Disrupt 2013, posted at youtube.com 03DEC2013, © 2016 YouTube, LLC, [online], [site visited 02MAR2016]. Available from internet, ,URL: https://www.youtube.com/watch?v=XEz1H-gxLj8>
		Square Mobile Credit Card Processing for iPhone, iPod, iPad, posted at youtube.com, posting date 30APR2011, © 2016 YouTube, LLC, [online], [site visited 02MAR2016]. Available from internet, <URL: https://www.youtube.com/watch?v=v6sKb3CFSKw>

Examiner Signature		Date Considered	

Electronic Acknowledgement Receipt

EFS ID:	46426369
Application Number:	17147305
International Application Number:	
Confirmation Number:	8393
Title of Invention:	METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS
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:	104402-5046-US
Receipt Date:	17-AUG-2022
Filing Date:	12-JAN-2021
Time Stamp:	07:42:52
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	PayRange_NoticeReasonsRejection_JP2017527866_29AUG2019.pdf	393569 5e82350122a04638a4b5620c5e393573db574569	no	10

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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:	46426362
Application Number:	17147305
International Application Number:	
Confirmation Number:	8393
Title of Invention:	METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS
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:	104402-5046-US
Receipt Date:	17-AUG-2022
Filing Date:	12-JAN-2021
Time Stamp:	07:40:13
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

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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.

Electronic Acknowledgement Receipt

EFS ID:	46426352
Application Number:	17147305
International Application Number:	
Confirmation Number:	8393
Title of Invention:	METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS
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:	104402-5046-US
Receipt Date:	17-AUG-2022
Filing Date:	12-JAN-2021
Time Stamp:	07:35:15
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.)
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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:	46426343
Application Number:	17147305
International Application Number:	
Confirmation Number:	8393
Title of Invention:	METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS
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:	104402-5046-US
Receipt Date:	17-AUG-2022
Filing Date:	12-JAN-2021
Time Stamp:	07:29:12
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.)
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3	Foreign Reference	EP1571607A2.pdf	605193 318f239fa7451752c9f0abb596536e8ea0f61808	no	12
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Warnings:					
Information:					
5	Foreign Reference	JP2002183812A.pdf	714627 7b4d91f57e4e7521f65e53996734e415e64791aa	no	8
Warnings:					
Information:					
6	Foreign Reference	JP2003242401A.pdf	2168857 7e887a7fba37919d334565743e51620e6a72538f	no	21
Warnings:					
Information:					
7	Foreign Reference	JP2003323662A.pdf	961837 54ac6c472f2ed7c1faac7fd0e06f82859cd98a2f	no	10
Warnings:					

Information:					
8	Foreign Reference	JP2004252640A.pdf	1079102 478d04d80bf7d397576cf507ef8ee598504bc512	no	15
Warnings:					
Information:					
9	Foreign Reference	JP2005526325A.pdf	1076999 8c32bf720d1938bd4ed7a38ebc6eff1f4cc73295	no	17
Warnings:					
Information:					
10	Foreign Reference	JP2009259226A.pdf	521454 5c15af7481782832e644ea1538e3fb7a7edc3b2b	no	17
Warnings:					
Information:					
11	Foreign Reference	JP2012504273A.pdf	10123009 fff7463ee84805385f54f30d6d9ca1e5d778a377	no	117
Warnings:					
Information:					
12	Foreign Reference	WO2003098561A1.pdf	1252625 5eab6664adb604b78d81104047d19b712a615020	no	32
Warnings:					
Information:					
13	Foreign Reference	WO2007015610A1.pdf	1643789 4bbb497e82f87cc1b4b6b57cca875f189a8e14c4	no	28
Warnings:					
Information:					
14	Foreign Reference	WO2008083022A1.pdf	1264198 bf9486a3da5eb7f63c85280a9a5ed4e8cfa33b58	no	27
Warnings:					
Information:					

15	Foreign Reference	WO2008083025A2.pdf	1450358 573253cba7275038782d8a9ac3260500bcf3c70e	no	30
Warnings:					
Information:					
16	Foreign Reference	WO2008083078A1.pdf	1592721 9742e9f7d0b2a1ec7c34058dda645bf239d07443	no	31
Warnings:					
Information:					
17	Foreign Reference	WO2008083089A1.pdf	1609765 0eac6d4ac3c96df20d3946a9d14a8b4fbfa8ee31	no	31
Warnings:					
Information:					
18	Foreign Reference	WO2008083105A2.pdf	1697058 678d19fb02946c27b67b613f343ee96713f4e536	no	35
Warnings:					
Information:					
19	Foreign Reference	WO2008083115A1.pdf	1666218 0041083c3bf32a4d787e949a23603d483345fe93	no	35
Warnings:					
Information:					
20	Foreign Reference	WO2008083119A1.pdf	1433009 538f7381d3339584c7473b89a00fca097376be00	no	26
Warnings:					
Information:					
		Total Files Size (in bytes):	35058686		

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.

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 104402-5001WO	**FOR FURTHER ACTION**	See item 4 below
International application No. PCT/US2014/071284	International filing date *(day/month/year)* 18 December 2014 (18.12.2014)	Priority date *(day/month/year)* 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 44*bis*.3(c) and 93*bis*.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*bis* .2).

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

Form PCT/IB/373 (January 2004)

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.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2014/071284	18.12.2014	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 notifed 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:	Date of completion of this opinion	Authorized Officer
European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Fax: +31 70 340 - 3016	see form PCT/ISA/210	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 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	2-17, 19-26
	No:	Claims	1, 18
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-26
Industrial applicability (IA)	Yes:	Claims	1-26
	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 PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

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 *(day/month/year)* 29 January 2016 (29.01.2016)	Priority date *(day/month/year)* 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 44*bis*.3(c) and 93*bis*.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*bis* .2).

	Date of issuance of this report 01 August 2017 (01.08.2017)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Simin Baharlou e-mail: pct.team9@wipo.int

Form PCT/IB/373 (January 2004)

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.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2016/015763	29.01.2016	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
- ☐ 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 notifed 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:	Date of completion of this opinion	Authorized Officer
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Fax: +49 89 2399 - 4465	see form PCT/ISA/210	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	1-12
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-12
Industrial applicability (IA)	Yes:	Claims	1-12
	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 promotion 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 PRELIMINARY REPORT ON PATENTABILITY
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

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 *(day/month/year)* 30 January 2017 (30.01.2017)	Priority date *(day/month/year)* 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. 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 44*bis*.3(c) and 93*bis*.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*bis* .2).

	Date of issuance of this report 31 July 2018 (31.07.2018)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Athina Nickitas-Etienne e-mail: pct.team4@wipo.int

Form PCT/IB/373 (January 2004)

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.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2017/015676	30.01.2017	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 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 notifed 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:	Date of completion of this opinion	Authorized Officer
European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Fax: +31 70 340 - 3016	see form PCT/ISA/210	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))

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	1-20
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-20
Industrial applicability (IA)	Yes:	Claims	1-20
	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 44*bis*)

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 *(day/month/year)* 16 February 2017 (16.02.2017)	Priority date *(day/month/year)* 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. 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 44*bis*.3(c) and 93*bis*.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*bis* .2).

	Date of issuance of this report 21 August 2018 (21.08.2018)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Kihwan Moon e-mail: pct.team1@wipo.int

Form PCT/IB/373 (January 2004)

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.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2017/018194	16.02.2017	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
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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 notifed 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:	Date of completion of this opinion	Authorized Officer
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Fax: +49 89 2399 - 4465	see form PCT/ISA/210	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).

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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	1-21
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-21
Industrial applicability (IA)	Yes:	Claims	1-21
	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 *(day/month/year)* 11 November 2019 (11.11.2019)	Priority date *(day/month/year)* 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 *bis*.1(a).

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

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☐	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 44*bis*.3(c) and 93*bis*.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*bis* .2).

	Date of issuance of this report 11 May 2021 (11.05.2021)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Athina Nickitas-Etienne e-mail pct.team4@wipo.int

Form PCT/IB/373 (revised January 2020)

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.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2019/060777	11.11.2019	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
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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 notifed 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:	Date of completion of this opinion	Authorized Officer
European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Fax: +31 70 340 - 3016	see form PCT/ISA/210	Breugelmans, 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.

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      ☐ 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	1-14
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-14
Industrial applicability (IA)	Yes:	Claims	1-14
	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 <u>includes one or more of a name, logo, picture, address, phone, or email of the first merchant</u> and in that the method comprises <u>receiving from a user of the consumer device selection of the first merchant identification information, whereby</u> 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	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
104402-5001WO		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/US2014/071284	18 December 2014 (18-12-2014)	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.

[X] 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:
      [X] 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,**
   [X] 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,**
   [X] 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
      [X] 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	WO 2013/132995 A1 (SONY CORP [JP]) 12 September 2013 (2013-09-12) page 7, paragraph 18 - page 36, paragraph 122 figure 1	1-26

	-/--	

[X] Further documents are listed in the continuation of Box C.

[X] 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	Date of mailing of the international search report
16 March 2015	25/03/2015

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Rachkov, Vassil

1

Form PCT/ISA/210 (second sheet) (April 2005)

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

1

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

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.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2014/071284	18.12.2014	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 notifed 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:	Date of completion of this opinion	Authorized Officer
European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Fax: +31 70 340 - 3016	see form PCT/ISA/210	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 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	2-17, 19-26
	No:	Claims	1, 18
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-26
Industrial applicability (IA)	Yes:	Claims	1-26
	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	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
104402-5015WO		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/US2016/015763	29 January 2016 (29-01-2016)	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.

[X] 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:
      [X] 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,**
   [X] 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,**
   [X] 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
      [X] 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	Date of mailing of the international search report
30 March 2016	08/04/2016

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Moser, Raimund

1

Form PCT/ISA/210 (second sheet) (April 2005)

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

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.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2016/015763	29.01.2016	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
- ☐ 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 notifed 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:	Date of completion of this opinion	Authorized Officer
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Fax: +49 89 2399 - 4465	see form PCT/ISA/210	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	1-12
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-12
Industrial applicability (IA)	Yes:	Claims	1-12
	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 promotion 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	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
104402-5026WO		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/US2017/015676	30 January 2017 (30-01-2017)	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.

[X] 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:
      [X] 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,**
   [X] 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,**
   [X] 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
      [X] 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	Date of mailing of the international search report
4 April 2017	18/04/2017

Name and mailing address of the ISA/
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
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Authorized officer
Honat, David

Petitioner Kiosoft Exhibit 1002
245

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

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.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2017/015676	30.01.2017	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 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:	Date of completion of this opinion	Authorized Officer
European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas	see form PCT/ISA/210	Horat, David

Petitioner Kiosoft Exhibit 1002
247

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	1-20
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-20
Industrial applicability (IA)	Yes:	Claims	1-20
	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	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
104402-5027WO		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/US2017/018194	16 February 2017 (16-02-2017)	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.

[X] 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:
      [X] 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,**
   [X] 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,**
   [X] 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
      [X] 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

-/--

[X] Further documents are listed in the continuation of Box C.

[X] 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	Date of mailing of the international search report
5 April 2017	12/04/2017

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040,	Cabniol, Christiaan

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

Petitioner Kiosoft Exhibit 1002
257

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.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2017/018194	16.02.2017	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 notifed 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:	Date of completion of this opinion	Authorized Officer
European Patent Office D-80298 Munich	see form PCT/ISA/210	Gabriel, Christian

Petitioner Kiosoft Exh. 1002
259

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	1-21
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-21
Industrial applicability (IA)	Yes:	Claims	1-21
	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	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
104402-5038WO		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/US2019/060777	11 November 2019 (11-11-2019)	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.

[X] 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:

[X] 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,**

[X] 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,**

[X] 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

[X] 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

-/--

[X] Further documents are listed in the continuation of Box C.

[X] 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	Date of mailing of the international search report
30 January 2020	06/02/2020

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040,	Breugelmans, Jan

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

Petitioner Kiosoft Exhibit 1002
267

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
		EP 2198400 A1	23-06-2010
		US 2009076896 A1	19-03-2009
		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 2018322522 A1	08-11-2018

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
		WO 2016123545 A1	04-08-2016

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.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2019/060777	11.11.2019	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 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 notifed 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:	Date of completion of this opinion	Authorized Officer
European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas	see form PCT/ISA/210	Breugelmans, Jan

Petitioner Kiosoft Exhibit 1002
270

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	1-14
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-14
Industrial applicability (IA)	Yes:	Claims	1-14
	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	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
104402-5041WO		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/US2021/042632	21 July 2021 (21-07-2021)	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.

[X] 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:
      [X] 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,**
   [X] 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,**
   [X] 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
      [X] 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

[X] Further documents are listed in the continuation of Box C. [X] 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	Date of mailing of the international search report
9 November 2021	17/11/2021

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040,	Mavrikan Maunice

Petitioner Kiosoft Exhibit 1002
277

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

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.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2021/042632	21.07.2021	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 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:	Date of completion of this opinion	Authorized Officer
European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas	see form PCT/ISA/210	Moynihan, Martin

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	1-30
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-30
Industrial applicability (IA)	Yes:	Claims	1-30
	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 rspect 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 request .....The 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 are 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 subejct 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).

Electronically filed August 17, 2022

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel	Confirmation No.:	8393
Serial No.:	17/147,305	Art Unit:	OPAP
Filed:	January 12, 2021	Examiner:	Docket Central
For:	Method and System for Presenting Representations of Payment Accepting Unit Events	Attorney Docket No.:	104402-5046-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. 104402-5046-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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 30, 2022	
				Application Number	17/147,305
				Filing Date	January 12, 2021
				First Named Inventor	Paresh K. Patel
				Art Unit	3698
				Examiner Name	Frantzy Poinvil
Sheet	1	of	1	Attorney Docket Number	104402-5046-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	08-2019	Lin et al.	
		11,227,275 B2	01-2022	Van Heerden et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document Country Code – Number - Kind Code *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Figures Appear	T

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	

DB2/ 43950334.1

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/147,305	**08/30/2022 01:25:54 PM ET**	**104402-5046-US**

Title of Invention

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8393	FILED BY	Karka Sagastume
PATENT CENTER #	60920925	FILING DATE	01/12/2021
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)	166 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

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)

1449.pdf	A9142246F0F2BD60F0068A2C0EAF7C3C7716FDA42AD56338B F4836CB8E157F7F706079AA8817641A50C407B18B88B4AF265 69F3F4F5E5EB3931EC8051BBD11D2
IDS.pdf	0410A514C765E5047C3572F8E6C0D623FF1E24928E2A9EC797 AF71A649E5BF7F7E3B7FDBA2D4E9359FBD8D9D16B529946A C2227D7DF48701D02820C12B48FB41

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.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/147,305	08/30/2022 01:25:54 PM ET	104402-5046-US

Title of Invention

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8393	FILED BY	Karka Sagastume
PATENT CENTER #	60920925	AUTHORIZED BY	Douglas Crisman
CUSTOMER #	24341	FILING DATE	01/12/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Paresh K. Patel

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 0446	E20228TD26492860	Karka Sagastume

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2806	SUBMISSION OF AN INFORMATION DISCLOSURE STATEMENT	130.00	1	130.00
			TOTAL AMOUNT:	$130.00

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Electronically filed August 30, 2022

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel	Confirmation No.:	8393
Serial No.:	17/147,305	Art Unit:	3698
Filed:	January 12, 2021	Examiner:	Frantzy Poinvil
For:	Method and system for presenting representations of payment accepting unit events	Attorney Docket No.:	104402-5046-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.

Petitioner Kiosoft Exhibit 1002
296

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)

Petitioner Kiosoft Exhibit 1002
297

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. 104402-5046-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 30, 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

DB2/ 43950130.2

Notice of References Cited	Application/Control No. 17/147,305	Applicant(s)/Patent Under Reexamination Patel, Paresh K.	
	Examiner FRANTZY POINVIL	Art Unit 3698	Page 1 of 1

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*	E	US-5854994-A	12-1998	Canada; Ronald G.	G07C3/00	702/56
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*		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	
	V	
	W	
	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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 17, 2022	
				Application Number	17/147,305
				Filing Date	January 12, 2021
				First Named Inventor	Paresh K. Patel
				Art Unit	OPAP
				Examiner Name	Docket Central
Sheet	1	of	11	Attorney Docket Number	104402-5046-US

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Examiner Signature	/FRANTZY POINVIL/	Date Considered	08/23/2022

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /F.P/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 17, 2022	
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				First Named Inventor	Paresh K. Patel
				Art Unit	OPAP
				Examiner Name	Docket Central
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Examiner Signature	/FRANTZY POINVIL/	Date Considered	08/23/2022

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				Examiner Name	Docket Central
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Examiner Signature	/FRANTZY POINVIL/	Date Considered	08/23/2022

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /F.P/

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		PayRange Inc., IPRP, PCT/US2017/015676, 31JUL2018, 9 pgs
		PayRange Inc., IPRP, PCT/US2017/018194, 21AUG2018, 17 pgs
		PayRange Inc., IPRP, PCT/US2019/060777, 11MAY2021, 7 pgs
		PayRange Inc., ISR/WO, PCT/US2014/071284, 25MAR2015, 9 pgs
		PayRange Inc., ISR/WO, PCT/US2016/015763, 08APR2016, 9 pgs
		PayRange Inc., ISR/WO, PCT/US2017/015676, 18APR2017, 11 pgs
		PayRange Inc., ISR/WO, PCT/US2017/018194, 12APR2017, 10 pgs
		PayRange Inc., ISR/WO, PCT/US2019/060777, 06FEB2020, 11 pgs
		PayRange Inc., ISR/WO, PCT/US2021/042632, 17NOV2021, 11 pgs
		PayRange Inc., Notice of Reasons for Rejection, JP 2017-527886, 29AUG2019, 10 pgs
		PayRange Inc., Notice of Reasons for Rejection, JP 2018-543707, 04SEP2020, 4 pgs
		PayRange Inc., Notice of Reasons for Rejection, JP 2020-101558, 07OCT2021, 2 pgs
		PayRange Inc., Summons to Attend Oral Proceedings, EP 14828617.2, 02APR2020, 12 pgs
		PayRange New Product Launch, posted at youtube.com 27JUN2015, © 2016 YouTube, LLC, [online], [site visited 02MAR2016]. Available from Internet, <URL: https://www.youtube.com/watch?v=NTvvV03XFeg., 1 pg.
		Raja, A Stochastic Game Theoretic Model for Expanding ATM Services. Https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7395687, 2015, 8 pgs
		Smart Vending Machine Demo at TechCrunch Disrupt 2013, posted at youtube.com 03DEC2013, © 2016 YouTube, LLC, [online], [site visited 02MAR2016]. Available from internet, ,URL: https://www.youtube.com/watch?v=XEz1H-gxLj8>
		Square Mobile Credit Card Processing for iPhone, iPod, iPad, posted at youtube.com, posting date 30APR2011, © 2016 YouTube, LLC, [online], [site visited 02MAR2016]. Available from internet, <URL: https://www.youtube.com/watch?v=v6sKb3CFSKw>

Examiner Signature	/FRANTZY POINVIL/	Date Considered	08/23/2022

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /F.P/

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/147,305	01/12/2021	Paresh K. Patel	104402-5046-US	8393

24341 7590 08/31/2022

Morgan, Lewis & Bockius LLP (PA)
1400 Page Mill Road
Palo Alto, CA 94304-1124

EXAMINER	
POINVIL, FRANTZY	

ART UNIT	PAPER NUMBER
3698	

NOTIFICATION DATE	DELIVERY MODE
08/31/2022	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

Office Action Summary	Application No. 17/147,305	Applicant(s) Patel, Paresh K.	
	Examiner FRANTZY POINVIL	Art Unit 3698	AIA (FITF) Status Yes

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 1/12/2021.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ 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.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 2-29 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 2-29 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, 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.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 1/12/2021 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ 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)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date 8/17/2022.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

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.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 2-29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 9,659,296. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 2-29 of the instant application are directed to a similar subject matter contained in claims 1-23 of the '296 patent. The only difference between the instant application and the '296 patent is merely

a labeling difference. It is noted that all the features of claims 2-29 are contained in claims 1-23 of the '296 patent.

Claims 2-29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of U.S. Patent No. 10,891,614. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 2-29 of the instant application are directed to a similar subject matter contained in claims 1-25 of the '614 patent. The only difference between the instant application and the '614 patent is merely a labeling difference. It is noted that all the features of claims 2-29 are contained in claims 1-25 of the '614 patent.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANTZY POINVIL whose telephone number is (571)272-6797. The examiner can normally be reached M-Th 7:00AM to 5:30PM.

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, Alexander Kalinowski can be reached on 571-272-6762. 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.

/fp/

/FRANTZY POINVIL/
Primary Examiner, Art Unit 3698

August 16, 2022

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/147,305	Patel, Paresh K.
	Examiner	Art Unit
	FRANTZY POINVIL	3698

✓	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	08/16/2022								
	1	-								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
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	26	✓								
	27	✓								
	28	✓								
	29	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/147,305	Patel, Paresh K.
	Examiner	Art Unit
	FRANTZY POINVIL	3698

CPC - Searched*		
Symbol	Date	Examiner
G06Q20/40; G06Q20/18; G06Q20/322; G06Q20/3226; G06Q20/327; G06Q20/3278; G07F7/0893; G07F9/023	08/16/2022	FP

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
705	3-44	08/16/2022	FP

* 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
See the attached DAV and Proquest searches.	08/16/2022	FP

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
705	44	08/16/2022	FP

/FRANTZY POINVIL/ Primary Examiner, Art Unit 3698	

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Search Strategy from Dialog

August 16 2022 15:10

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 & Geoastrophysical 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, Prous Science Daily Essentials, Prous Science Drug Data Report, Prous 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	((mobile or cell* or device*) pre/15 (nearby or close or proximity or next)) pre/15 (merchant[*1] or vend* or machine* or kiosk[*1])	13740*
S2	(((Bluetooth or wireless) near/40 (send* or sent or transmi*)) near/40 transcei*) near/40 (machine* or kiosk[*1] or vending)	924°
S3	((sense[*1] or sensing or detect* or monitor*) pre/15 (presence[*1] or nearby or close or proximity or next)) pre/15 (merchant[*1] or vending or machine[*1] or kiosk[*1])	7516*
S4	s1 and s3	212°
S5	s2 and s4	0°
S6	s1 and s2	1°
S7	s2 and s3	7°
S8	s4 and (portable or mobile) and payment[*1]	15°

* Duplicates are removed from the search, but included in the result count.

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

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321

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322

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	44901192	(mobile OR cell$ OR device$) ADJ "15" (nearby OR close OR proximity OR next) ADJ "15" (merchant$1 OR vend$ OR machine$ OR kiosk$1)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/16 12:04 PM
L2	67294	(Bluetooth OR wireless) SAME (send$ OR sent OR transmi$) SAME transcei$ SAME (machine$ OR kiosk$1 OR vending)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/16 12:14 PM
L3	54466	(sense$1 OR sensing OR detect$ OR monitor$) adj15(presence$1 OR nearby OR close OR proximity OR next) adj15 (merchant$1 OR vending OR machine$1 OR kiosk$1)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/16 12:18 PM
L4	67294	L1 AND l2	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/16 12:18 PM
L5	550	L3 AND l4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/16 12:18 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/147,305	Filing Date 01/12/2021	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $240 =	
☐ 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).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	09/15/2022	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 28	Minus	** 28	= 0		x $50 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $240 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/TARA A WASHINGTON/
*** 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 number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. 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 12 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, 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.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronically filed September 15, 2022

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel	Confirmation No.:	8393
Serial No.:	17/147,305	Art Unit:	3698
Filed:	January 12, 2021	Examiner:	Poinvil, Frantzy
For:	*Method and System for Presenting Representations of Payment Accepting Unit Events*	Atty. Docket No.:	104402-5046-US

AMENDMENT AND INTERVIEW SUMMARY

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The enclosed Amendment is in response to the Office Action dated August 31, 2022 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. 104402-5046-US).

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325

IN THE CLAIMS:

Rewrite the pending claims and add new claims as follows:

1. (Canceled)

2. (Previously Presented) A method of executing payment accepting unit events, comprising:

at a mobile device with one or more processors, memory, one or more output devices including a display, and one or more radio transceivers:

detecting one or more payment accepting units in proximity to the mobile device, including detecting predefined radio transmissions broadcast by the one or more payment accepting units, wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services;

displaying a user interface of a mobile payment application on the display of the mobile device, the user interface being configured to display a visual indication of the one or more payment accepting units and accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units and (ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units;

establishing via the one or more radio transceivers a wireless connection between the mobile device and the available payment accepting unit of the one or more payment accepting units;

after establishing the wireless connection, enabling user interaction with the user interface of the mobile payment application to complete the transaction;

exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the transaction; and

in response to receiving the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.

3. (Previously Presented) The method of claim 2, wherein the updated user interface of the mobile payment application includes at least one of:

a message displayed on the display of the mobile device;

a banner notification displayed on a display of the mobile device; and/or

Petitioner Kiosoft Exhibit 1002
326

a visual alert from one or more LEDs of the mobile device.

4. (Previously Presented) The method of claim 2, wherein the information indicates completion of the transaction between the user of the mobile device and the available payment accepting unit.

5. (Previously Presented) The method of claim 3, wherein the mobile device includes a long-range transceiver and the information at least includes an amount of the completed transaction, and the method further comprises:

sending at least the amount of the completed transaction to a server via the long-range transceiver.

6. (Previously Presented) The method of claim 2, wherein the information indicates abortion of the transaction initiated by the user of the mobile device.

7. (Previously Presented) The method of claim 2, wherein the information indicates failure of the transaction initiated by the user of the mobile device or a malfunction associated with the available payment accepting unit.

8. (Previously Presented) The method of claim 2, wherein the mobile device includes an accelerometer and the method further comprises:

based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit; and

in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless connection.

9. (Previously Presented) The method of claim 2, wherein the information reflects a status of the transaction for a product stocked by the available payment accepting unit.

10. (Previously Presented) The method of claim 2, further comprising:

in addition to exchanging the information, receiving, via the one or more radio transceivers, a coupon that is targeted to the user of the mobile device based on the transaction.

11. (Previously Presented) The method of claim 2, wherein the user interface of the mobile payment application presented after establishing via the wireless connection indicates that the wireless connection has been established with the available payment accepting unit.

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327

12. (Previously Presented) The method of claim 2, wherein the user interface of the mobile payment application presented after establishing via the wireless connection includes:

a visual representation of available payment accepting unit;

an indication of a prepared balance; and

an affordance that when slid, indicates the initiation of the transaction.

13. (Previously Presented) The method of claim 12, wherein the affordance is slid in response to receiving a user input of swipe on the affordance displayed on the display of the mobile device.

14. (Previously Presented) The method of claim 2, wherein the predefined radio transmissions are broadcasted by the one or more payment accepting units indicating status of the one or more payment accepting units.

15. (Currently Amended) The method of claim 2, wherein the one or more payment operated machines include a laundromat washer or dryer, a vending machine, a parking meter, a toll booth, an arcade game, a kiosk, a photo booth, a toll booth, or a ticket dispensing machine.

16. (Previously Presented) A mobile device, comprising:

one or more radio transceivers;

one or more output devices including a display;

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:

detecting one or more payment accepting units in proximity to the mobile device, including detecting predefined radio transmissions broadcast by the one or more payment accepting units, wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services;

displaying a user interface of a mobile payment application on the display of the mobile device, the user interface being configured to display a visual indication of the one or more payment accepting units and accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units and (ii) trigger payment by the mobile payment application for a transaction initiated by

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328

the user of the mobile device with the available payment accepting unit of the one or more payment accepting units;

establishing via the one or more radio transceivers a wireless connection between the mobile device and the available payment accepting unit of the one or more payment accepting units;

after establishing the wireless connection, enabling user interaction with the user interface of the mobile payment application to complete the transaction;

exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the transaction; and

in response to receiving the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.

17. (Previously Presented) The mobile device of claim 16, wherein the one or more output devices of the mobile device include at least one of: one or more speakers, one or more light emitting diodes (LEDs), and a vibration mechanism.

18. (Previously Presented) The mobile device of claim 16, wherein:

the mobile payment application on the mobile device is configured to communicate with a payment module coupled with an internal interface of the available payment accepting unit;

the mobile device sends a transmission to the payment module via the one or more radio transceivers of the mobile device in conjunction with the transaction;

the available payment accepting unit sends the transmission to the payment module in conjunction with the transaction; and

the mobile device obtains, via the one or more radio transceivers, the information from the payment module based on the transmission.

19. (Previously Presented) The mobile device of claim 16, wherein:

the wireless connection is established via a first transceiver of the one or more transceivers;

the information is exchanged via a second transceiver of the one or more transceivers; and

the first transceiver is different from the second transceiver.

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329

20. (Previously Presented) The mobile device of claim 16, wherein the one or more payment accepting units further comprise one or more of: parking meters, toll booths, laundromat washers, laundromat dryers, arcade games, kiosks, photo booths, toll booths, and/or transit ticket dispensing machines.

21. (Previously Presented) The mobile device of claim 16, wherein the wireless connection between the mobile device and the available payment accepting unit is a Bluetooth connection, a Bluetooth Smart connection, a Bluetooth Low Energy connection, a near-field communication connection, an Ultra Wideband connection, a radio frequency identification connection, an infrared wireless connection, and/or an induction wireless connection.

22. (Currently Amended) The mobile device of claim 16, wherein the one or more payment operated machines include a laundromat washer or dryer, a vending machine, a parking meter, a toll booth, an arcade game, a kiosk, a photo booth, a toll booth, or a ticket dispensing machine.

23. (Previously Presented) 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, one or more output devices including a display, and one or more radio transceivers, cause the mobile device to perform operations comprising:

detecting one or more payment accepting units in proximity to the mobile device, including detecting predefined radio transmissions broadcast by the one or more payment accepting units, wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services;

displaying a user interface of a mobile payment application on the display of the mobile device, the user interface being configured to display a visual indication of the one or more payment accepting units and accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units and (ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units;

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330

establishing via the one or more radio transceivers a wireless connection between the mobile device and the available payment accepting unit of the one or more payment accepting units;

after establishing the wireless connection, enabling user interaction with the user interface of the mobile payment application to complete the transaction;

exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the transaction; and

in response to receiving the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.

24. (Previously Presented) The non-transitory computer readable storage medium of claim 23, wherein the updated user interface of the mobile payment application includes at least one of:

a message displayed on the display of the mobile device;

a banner notification displayed on a display of the mobile device; and/or

a visual alert from one or more LEDs of the mobile device.

25. (Previously Presented) The non-transitory computer readable storage medium of claim 23, wherein the information indicates completion of the transaction between the user of the mobile device and the available payment accepting unit.

26. (Previously Presented) The non-transitory computer readable storage medium of claim 25, wherein the information at least includes an amount of the completed transaction, and the instructions further cause the mobile device to send at least the amount of the completed transaction to a server.

27. (Previously Presented) The non-transitory computer readable storage medium of claim 23, wherein the information indicates abortion of the transaction initiated by the user of the mobile device.

28. (Previously Presented) The non-transitory computer readable storage medium of claim 23, wherein the information indicates failure of the transaction initiated by the user of the mobile device or a malfunction associated with the available payment accepting unit.

29. (Previously Presented) The non-transitory computer readable storage medium of claim 23, wherein the one or more payment operated machines include a laundromat washer

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331

or dryer, a vending machine, a parking meter, a toll booth, an arcade game, a kiosk, a photo booth, a toll booth, or a ticket dispensing machine.

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332

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United States Patent and Trademark Office
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APPROVAL LETTER

APPLICATION #	FILING DATE	APPLICANT/PATENT UNDER REEXAMINATION
17/147,305	01/12/2021	Paresh Patel

Title of Invention

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Electronic terminal disclaimer filed on 09/15/2022

☑ Approved

This patent is subject to a Terminal Disclaimer

Approved / Disapproved by: Electronic Terminal Disclaimer automatically approved

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

APPLICATION #	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET #
17147305	01/12/2021	Paresh Patel	104402-5046-US

Title of Invention

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

☑ 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 #
9659296
10891614

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:
Small

I hereby declare that all statements made herein of my own knowledge are true and that all statemnts 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.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/147,305	09/15/2022 03:32:59 PM ET	104402-5046-US

Title of Invention

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8393	FILED BY	Benjamin Pezzner
PATENT CENTER #	60972209	AUTHORIZED BY	-
CUSTOMER #	24341	FILING DATE	01/12/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Paresh K. Patel

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 8177	E20229EF33142364	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.

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.

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/147,305	**09/15/2022 03:37:48 PM ET**	**104402-5046-US**

Title of Invention

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8393	FILED BY	Benjamin Pezzner
PATENT CENTER #	60972225	FILING DATE	01/12/2021
CUSTOMER #	24341	FIRST NAMED INVENTOR	Paresh K. Patel
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 3

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
104402-5046-US Response to OA.pdf		11	-	171 KB
104402-5046-US Response to OA-A....pdf	(1-1)	1	Amendment/Request for Reconsideration-After Non-Final Rejection	83 KB
104402-5046-US Response to OA-CLM.pdf	(2-8)	7	Claims	90 KB
104402-5046-US Response to OA-REM.pdf	(9-11)	3	Applicant Arguments/Remarks Made in an Amendment	142 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
104402-5046-US Response to OA.pdf	0FF77B0A5821637DC8C2B6878E42830BDA1E8D8C1D4C0FCF F1961491E504AF5B482681140A3DC9FB53FB3CD6C7FC56F72 FFEDB8DE667AC40D2C815B5F6CBD2C2
104402-5046-US Response to OA-A....pdf	5AF12BD3FBDE2259A22866DF9D7C1EE03624D6C51DF701176 853C0AEBDFE61C5CD0916D45E32D9B77279E4907FED042586 943FF12B4D24EEAD8C4EB8BBAF0CFF
104402-5046-US Response to OA-CLM.pdf	D409A1399D696D69C9211DCBFE44E2F4FC0C6F0D43EB0FEC A9B492AD60552742726885A8B125131A24A14887B5C29505BF 559EF8932CC22CD04647651FB0372C
104402-5046-US Response to OA-REM.pdf	97D686438CD1B0C11898CE9FDA0AB30ECF99FC5F33A224C6 F859EA14A540A60BAE9A902DD055C5DF3241B22D171F161FC 367D84BB5B24A976E9C8020EB7537CD

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/147,305	**09/15/2022 03:32:59 PM ET**	**104402-5046-US**

Title of Invention

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8393	FILED BY	Benjamin Pezzner
PATENT CENTER #	60972209	FILING DATE	01/12/2021
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	EB1B7D7D18096A197635D6B6537A56199CAAC8E89793586878 02486D2527576845E8F55B16E960F259660A8D5D736A739C97

D83027232C49907D5177CAA74E8A

grantLetter.pdf

B03B130B32F39341159AFC5883D69B8B52B514E9BB7431EEC
DD25FDE3A7607A55A6685070233409CACA1FBF7A35B479EB2
711C508846B19B062076567032C34A

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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

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REMARKS

This amendment responds to the office action mailed August 31, 2022. In the office action the Examiner:

- rejected claims 2-29 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 9,659,296; and
- rejected claims 2-29 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of U.S. Patent No. 10,891,614.

REMARKS CONCERNING CLAIMS

Claims 15 and 22 have been amended for punctuation. No new matter has been added. After entry of this amendment, claims 2-29 are pending.

MCKESSON STATEMENT

In view of *McKesson Information Solutions v. Bridge Medical* (Fed. Cir. 2007), Applicant wishes to inform the Examiner that the prosecution history of the following US Patent Applications may contain information relevant to the pending application:

14/214644, 14/320534, 14/335762, 14/611065, 14/641236, 14/321717, 14/321724, 14/321733, 14/456683, 14/968703, 14/614336, 14/458192, 14/458199, 15/893514, 15/435228, 15/878352, 15/603400, 15/406492, 16/029483, 15/956741, 16/681673, 16/748727, 16/750477, 16/934933, 17/529111, 17/147305, 16/934392, 17/216399, 17/443802, 17/654732

The Examiner is encouraged to review the art made of record, office actions, and notices of allowance, if any, in the above-mentioned applications.

AMENDMENTS TO THE CLAIMS

Claims 15 and 22 have been amended to add a period at the end of each claim.

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343

REMARKS CONCERNING DOUBLE PATENTING REJECTIONS

I. REJECTION OF CLAIMS 2-29 ON THE GROUND OF NONSTATUTORY OBVIOUSNESS-TYPE DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 1-23 OF U.S. PATENT NO. 9,659,296.

A terminal disclaimer is being filed concurrently with this response to address this nonstatutory double patenting rejection. Applicant respectfully requests that this rejection be withdrawn.

II. REJECTION OF CLAIMS 2-29 ON THE GROUND OF NONSTATUTORY OBVIOUSNESS-TYPE DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 1-25 OF U.S. PATENT NO. 10,891,614

A terminal disclaimer is being filed concurrently with this response to address this nonstatutory double patenting rejection. Applicant respectfully requests that this rejection be withdrawn.

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CONCLUDING REMARKS

By responding in the foregoing remarks only to particular positions asserted by the Examiner, the Applicants do not necessarily acquiesce in other positions that have not been explicitly addressed. In addition, the Applicants' arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist.

In light of the above amendments and remarks, the Applicants respectfully request that the Examiner reconsider 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: September 15, 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

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345

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed September 22, 2022	
				Application Number	17/147,305
				Filing Date	January 12, 2021
				First Named Inventor	Paresh K. Patel
				Art Unit	3698
				Examiner Name	Frantzy Poinvil
Sheet	1	of	1	Attorney Docket Number	104402-5046-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
		2008/0010193 A1	01-10-2008	Rackley III. et al.	
		2012/0203666 A1	08-09-2012	Torossian et al.	
		2013/0282590 A1	10-24-2013	Rajarethnam et al.	
		2014/0337235 A1	11-13-2014	Van Heerden et al.	
		2015/0220381 A1	08-06-2015	Horagan et al.	
		2016/0132870 A1	05-12-2016	Xu et al.	
		2017/0330164 A1	11-16-2017	Suelberg et al.	
		2018/0276674 A1	09-27-2018	Ramatchandirane et al.	
		10,217,151 B1	02-26-2019	Greiner et al.	
		11,074577 B1	07-27-2021	Soccorsy et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document Country Code – Number - Kind Code *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Figures Appear	T

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
		Hoffman et al., "New options in Wireless payments", Internet World 7.7:37 Penton Media Inc., Penton Business Media, Inc. and their subsidiaries . (Year: 2001).
		Carton et al., "Framework for Mobile Payments Integration', Electronic Journal of Information Systems Evaluation, 15.1: 14-24, Academic Conferences International Limited, January. (Year: 2012).
		Apriva LLC Awarded Patent for System and Method for Facilitating a Purchase Transaction using a Customer Device Beacon, June 7, 2017, Global IP News (Year: 2017)

DB2/ 44166429.1

Examiner Signature		Date Considered	

DB2/ 43950334.1

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/147,305	**09/22/2022 08:40:12 PM ET**	**104402-5046-US**

Title of Invention

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8393	FILED BY	Karka Sagastume
PATENT CENTER #	60995839	FILING DATE	01/12/2021
CUSTOMER #	24341	FIRST NAMED INVENTOR	Paresh K. Patel
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Douglas Crisman

Documents

TOTAL DOCUMENTS: 5

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
1449_22SEP2022.pdf	1	Information Disclosure Statement (IDS) Form (SB08)	169 KB
Warning: This is not a USPTO supplied IDS fillable form. Data in the form cannot be automatically loaded to other USPTO systems.			
IDS _22SEP2022.pdf	4	Transmittal Letter	188 KB
NPL_New Options in Wireless Payments.PDF	5	Non Patent Literature	425 KB
NPL_Framework for Mobile Payments Integration.PDF	14	Non Patent Literature	1408 KB

NPL_Apriva LLC Awarded.pdf	5	Non Patent Literature	95 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
1449_22SEP2022.pdf	9AA7FD81300855B5C6D9B00CC10F5EAE77949661C13421690 AEDE60635A49D4BF1AC4208A7BCEF76AC523161CED0FC9FB 34B0303AE95B1898B18ECA7267F0891
IDS _22SEP2022.pdf	508DBAF07AB74FEA90E808718D265975CBFD1FED9DC05568 C818A4E897B187FA223C83E243CF06C84729F960212FC37544 18A21180CDAC849BE2BD7D432B9BC3
NPL_New Options in Wireless Payments.PDF	77F325A7B162A33DBA86550441EF0060EE3C74581A8A115C06 F0E97040AEFA6FDC6E1D8A105BD968DC44E4D7F5042405693 58BBAFBC223E434BF4C924653D53E
NPL_Framework for Mobile Payments Integration.PDF	2EF73B8D6C742A35373C6C7868766AB7963D304229734DDF42 12FD21E28E3CFD726DF0AAEDDDECE021C5D6B74A5008ACB 2A9E85ACC886AF635EBBECFBA21FA9E
NPL_Apriva LLC Awarded.pdf	273A34E183D469FC8FFB95D998B61767A22D9BC8EE941A90D 8941DB268F2E36EBDA79C4F9EFDC42A17925F57AE54849BC7 784C53BA88EE3C3764097119B9D4BF

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.

Electronically filed September 22, 2022

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	Paresh K. Patel	Confirmation No.:	8393
Serial No.:	17/147,305	Art Unit:	3698
Filed:	January 12, 2021	Examiner:	Frantzy Poinvil
For:	Method and system for presenting representations of payment accepting unit events	Attorney Docket No.:	104402-5046-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. 15/603,400 filed May 23, 2017; 14/458,199, filed August 12, 2014; 14/456,683, filed August 11, 2014; 14/335,762, filed July 18, 2014; 14/214,644, filed March 14, 2014; 29/477,025, filed December 18, 2013, 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. 104402-5046-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 22, 2022

/Douglas J. Crisman/ 39,951
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DB2/ 44166432.1

Notice of References Cited	Application/Control No. 17/147,305	Applicant(s)/Patent Under Reexamination Patel, Paresh K.	
	Examiner FRANTZY POINVIL	Art Unit 3698	Page 1 of 1

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	N					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Kumar, "Amazon gets Indian patent for auto authentication of mobile transactions", ProQuest document Id: 2433007646, Financial Express, !3 August (Year: 2020).
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*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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 30, 2022	
				Application Number	17/147,305
				Filing Date	January 12, 2021
				First Named Inventor	Paresh K. Patel
				Art Unit	3698
				Examiner Name	Frantzy Poinvil
Sheet	1	of	1	Attorney Docket Number	104402-5046-US

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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	/FRANTZY POINVIL/	Date Considered	09/21/2022

DB2/ 43950334.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /F.P/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 17, 2022	
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				Art Unit	OPAP
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Sheet	1	of	11	Attorney Docket Number	104402-5046-US

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Examiner Signature	/FRANTZY POINVIL/	Date Considered	08/23/2022

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Examiner Signature	/FRANTZY POINVIL/	Date Considered	08/23/2022

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed August 17, 2022	
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				Art Unit	OPAP
				Examiner Name	Docket Central
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Examiner Signature	/FRANTZY POINVIL/	Date Considered	08/23/2022

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /F.P/

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				Art Unit	OPAP
				Examiner Name	Docket Central
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		PayRange Inc., Notice of Reasons for Rejection, JP 2018-543707, 04SEP2020, 4 pgs
		PayRange Inc., Notice of Reasons for Rejection, JP 2020-101558, 07OCT2021, 2 pgs
		PayRange Inc., Summons to Attend Oral Proceedings, EP 14828617.2, 02APR2020, 12 pgs
		PayRange New Product Launch, posted at youtube.com 27JUN2015, © 2016 YouTube, LLC, [online], [site visited 02MAR2016]. Available from Internet, <URL: https://www.youtube.com/watch?v=NTvvV03XFeg., 1 pg.
		Raja, A Stochastic Game Theoretic Model for Expanding ATM Services. Https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7395687, 2015, 8 pgs
		Smart Vending Machine Demo at TechCrunch Disrupt 2013, posted at youtube.com 03DEC2013, © 2016 YouTube, LLC, [online], [site visited 02MAR2016]. Available from internet, ,URL: https://www.youtube.com/watch?v=XEz1H-gxLj8>
		Square Mobile Credit Card Processing for iPhone, iPod, iPad, posted at youtube.com, posting date 30APR2011, © 2016 YouTube, LLC, [online], [site visited 02MAR2016]. Available from internet, <URL: https://www.youtube.com/watch?v=v6sKb3CFSKw>

Examiner Signature	/FRANTZY POINVIL/	Date Considered	08/23/2022

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /F.P/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Substitute for Form 1449-PTO				Electronically filed September 22, 2022	
				Application Number	17/147,305
				Filing Date	January 12, 2021
				First Named Inventor	Paresh K. Patel
				Art Unit	3698
				Examiner Name	Frantzy Poinvil
Sheet	1	of	1	Attorney Docket Number	104402-5046-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
		2008/0010193 A1	01-10-2008	Rackley III. et al.	
		2012/0203666 A1	08-09-2012	Torossian et al.	
		2013/0282590 A1	10-24-2013	Rajarethnam et al.	
		2014/0337235 A1	11-13-2014	Van Heerden et al.	
		2015/0220381 A1	08-06-2015	Horagan et al.	
		2016/0132870 A1	05-12-2016	Xu et al.	
		2017/0330164 A1	11-16-2017	Suelberg et al.	
		2018/0276674 A1	09-27-2018	Ramatchandirane et al.	
		10,217,151 B1	02-26-2019	Greiner et al.	
		11,074577 B1	07-27-2021	Soccorsy et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document Country Code – Number - Kind Code *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Figures Appear	T

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
		Hoffman et al., "New options in Wireless payments", Internet World 7.7:37 Penton Media Inc., Penton Business Media, Inc. and their subsidiaries . (Year: 2001).
		Carton et al., "Framework for Mobile Payments Integration', Electronic Journal of Information Systems Evaluation, 15.1: 14-24, Academic Conferences International Limited, January. (Year: 2012).
		Apriva LLC Awarded Patent for System and Method for Facilitating a Purchase Transaction using a Customer Device Beacon, June 7, 2017, Global IP News (Year: 2017)

DB2/ 44166429.1

Examiner Signature	/FRANTZY POINVIL/	Date Considered	09/30/2022

DB2/ 43950334.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /F.P/

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/147,305	Patel, Paresh K.
	Examiner	**Art Unit**
	FRANTZY POINVIL	3698

✓	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	08/16/2022	09/30/2022							
	1	-	-							
1	2	✓	=							
2	3	✓	=							
3	4	✓	=							
4	5	✓	=							
5	6	✓	=							
6	7	✓	=							
7	8	✓	=							
8	9	✓	=							
9	10	✓	=							
10	11	✓	=							
11	12	✓	=							
12	13	✓	=							
13	14	✓	=							
14	15	✓	=							
15	16	✓	=							
16	17	✓	=							
17	18	✓	=							
18	19	✓	=							
19	20	✓	=							
20	21	✓	=							
21	22	✓	=							
22	23	✓	=							
23	24	✓	=							
24	25	✓	=							
25	26	✓	=							
26	27	✓	=							
27	28	✓	=							
28	29	✓	=							

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/147,305	Patel, Paresh K.
	Examiner	**Art Unit**
	FRANTZY POINVIL	3698

CPC						
Symbol					**Type**	**Version**
G06Q	/	20	/	40	F	2013-01-01
G06Q	/	20	/	327	I	2013-01-01
G06Q	/	20	/	18	I	2013-01-01
G06Q	/	20	/	322	I	2013-01-01
G06Q	/	20	/	3226	I	2013-01-01
G06Q	/	20	/	3278	I	2013-01-01
G07F	/	7	/	0893	I	2013-01-01
G07F	/	9	/	023	I	2013-01-01

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	28	
/FRANTZY POINVIL/ Primary Examiner, Art Unit 3698	30 September 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	7

U.S. Patent and Trademark Office

Part of Paper No.: 20220919

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/147,305	Patel, Paresh K.
	Examiner	**Art Unit**
	FRANTZY POINVIL	3698

INTERNATIONAL CLASSIFICATION				
CLAIMED				
G06Q	/	20	/	40

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
705	44

CROSS REFERENCES(S)							
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**						
705	44						

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	28	
/FRANTZY POINVIL/ Primary Examiner, Art Unit 3698	30 September 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	7

U.S. Patent and Trademark Office — Part of Paper No.: 20220919

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/147,305	Patel, Paresh K.
	Examiner	**Art Unit**
	FRANTZY POINVIL	3698

☑ 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
	1	9	10	18	19	27	28								
1	2	10	11	19	20	28	29								
2	3	11	12	20	21										
3	4	12	13	21	22										
4	5	13	14	22	23										
5	6	14	15	23	24										
6	7	15	16	24	25										
7	8	16	17	25	26										
8	9	17	18	26	27										

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	28	
/FRANTZY POINVIL/ Primary Examiner, Art Unit 3698	30 September 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	7

U.S. Patent and Trademark Office

Part of Paper No.: 20220919

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

24341 7590 10/06/2022

Morgan, Lewis & Bockius LLP (PA)
1400 Page Mill Road
Palo Alto, CA 94304-1124

EXAMINER
POINVIL, FRANTZY

ART UNIT	PAPER NUMBER
3698	

DATE MAILED: 10/06/2022

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/147,305	01/12/2021	Paresh K. Patel	104402-5046-US	8393

TITLE OF INVENTION: METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

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	01/06/2023

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)

24341 7590 10/06/2022
Morgan, Lewis & Bockius LLP (PA)
1400 Page Mill Road
Palo Alto, CA 94304-1124

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.

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.
17/147,305	01/12/2021	Paresh K. Patel	104402-5046-US	8393

TITLE OF INVENTION: METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

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	01/06/2023

EXAMINER	ART UNIT	CLASS-SUBCLASS
POINVIL, FRANTZY	3698	705-044000

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,
(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.

1 _____
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. _____

Petitioner Kiosoft Exhibit 1002
373

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 NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/147,305	01/12/2021	Paresh K. Patel	104402-5046-US	8393

24341 7590 10/06/2022

Morgan, Lewis & Bockius LLP (PA)
1400 Page Mill Road
Palo Alto, CA 94304-1124

EXAMINER	
POINVIL, FRANTZY	
ART UNIT	PAPER NUMBER
3698	

DATE MAILED: 10/06/2022

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); (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. 17/147,305	Applicant(s) Patel, Paresh K.	
	Examiner FRANTZY POINVIL	Art Unit 3698	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 the response filed 9/15/2022.
   ☐ 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 2-29 . 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 8/30/2022; 9/22/2022.
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 IDS 8/17/2022.

/FRANTZY POINVIL/
Primary Examiner, Art Unit 3698

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.

Allowable Subject Matter

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

Claims 2-29 are allowable over the art of record.

The prior art taken alone or in combination failed to teach or suggest:

"detecting one or more payment accepting units in proximity to the mobile device, including detecting predefined radio transmissions broadcast by the one or more payment accepting units, wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services, and displaying a user interface of a mobile payment application on the display of the mobile device, the user interface being configured to display a visual indication of the one or more payment accepting units and accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units and (ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units" as recited in independent claims 2, 16 and 23.

The above recited limitations provide meaningful limitations that transforms the abstract idea into patent eligible. Each of the independent claims as a whole effects an improvement to

another technology or technical field. These limitations in combination provide meaningful limitations beyond generally linking the use of the abstract idea to a practical application.

Aument (US Patent No. 11182794 B1) discloses a payment reader and a POS terminal to communicate over a wireless connection. The methods and systems include monitoring one or more parameters corresponding to a payment reader and another device in proximity to the payment reader. The first device, through a set of customized instructions, determines whether behavior of the second device substantially corresponds to the first device, in order to detect suspected hardware or software intrusion associated with the secure first device. On successful detection of a suspected intrusion, the first device generates an alert for a user of the first device if illegal intrusion is suspected by the processor.

Silva et al (US 20160098690 A1) disclose a wireless-enabled kiosk system and associated method for recycling and performing other processes with mobile phones and other electronic devices are described herein. In various embodiments, the present technology includes systems and methods for wirelessly connecting a consumer-operated kiosk with an electronic device to facilitate processing (e.g., purchasing) the device. In some embodiments, the present technology includes using a wireless link to identify a device, evaluate a device, resolve device issues to enable purchase of the device, locate a device, etc. Various other aspects of the present technology are described herein.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANTZY POINVIL whose telephone number is (571)272-6797. The examiner can normally be reached M-Th 7:00AM to 5:30PM.

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, Michael Anderson can be reached on 571-270-0508. 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.

/fp/

/FRANTZY POINVIL/
Primary Examiner, Art Unit 3698

September 20, 2022

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/147,305	Patel, Paresh K.
	Examiner	Art Unit
	FRANTZY POINVIL	3698

CPC - Searched*		
Symbol	Date	Examiner
G06Q20/40; G06Q20/18; G06Q20/322; G06Q20/3226; G06Q20/327; G06Q20/3278; G07F7/0893; G07F9/023	08/16/2022	FP
G06Q20/40; G06Q20/18; G06Q20/322; G06Q20/3226; G06Q20/327; G06Q20/3278; G07F7/0893; G07F9/023	09/20/2022	FP

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
705	3-44	08/16/2022	FP
705	3-44	09/20/2022	FP

* 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
See the attached DAV and Proquest searches.	08/16/2022	FP
See the attached DAV and Proquest searches.	09/20/2022	FP

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
705	44	08/16/2022	FP

/FRANTZY POINVIL/ Primary Examiner, Art Unit 3698	

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	44901192	(mobile OR cell$ OR device$) ADJ "15" (nearby OR close OR proximity OR next) ADJ "15" (merchant$1 OR vend$ OR machine$ OR kiosk$1)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/16 12:04 PM
L2	67294	(Bluetooth OR wireless) SAME (send$ OR sent OR transmi$) SAME transcei$ SAME (machine$ OR kiosk$1 OR vending)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/16 12:14 PM
L3	54466	(sense$1 OR sensing OR detect$ OR monitor$) adj15(presence$1 OR nearby OR close OR proximity OR next) adj15 (merchant$1 OR vending OR machine$1 OR kiosk$1)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/16 12:18 PM
L4	67294	L1 AND l2	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/16 12:18 PM
L5	550	L3 AND l4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/16 12:18 PM
L6	550	L2 AND l3	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/16 12:54 PM
L7	45408546	(mobile OR cell$ OR device$) ADJ "15"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/20 07:17 AM

		(nearby OR close OR proximity OR next) ADJ "15" (merchant$1 OR vend$ OR machine$ OR kiosk$1)	AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L8	68001	(Bluetooth OR wireless) SAME (send$ OR sent OR transmi$) SAME transcei$ SAME (machine$ OR kiosk$1 OR vending)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 07:17 AM
L9	55051	(sense$1 OR sensing OR detect$ OR monitor$) adj15(presence$1 OR nearby OR close OR proximity OR next) adj15 (merchant$1 OR vending OR machine$1 OR kiosk$1)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 07:17 AM
L10	68001	L1 AND l2	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 07:17 AM
L11	558	L3 AND l4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 07:17 AM
L12	558	L2 AND l3	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 07:17 AM
L13	0	L12 AND proxmi$ AND ((select$ OR accept$ OR choos$ OR chosen) adj10 (device$1 OR mobile OR unit$1 OR cellphone$1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 07:24 AM

L14	2	L10 AND proxmi$ AND ((select$ OR accept$ OR choos$ OR chosen) adj10 (device$1 OR mobile OR unit$1 OR cellphone$1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 07:24 AM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

PE2E SEARCH - Search History (Prior Art)

There are no Prior Art searches to show.

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	2	(mobile AND radio AND transceiver AND payment AND application AND unit AND dispens$ AND products AND wireless AND connection AND interface).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 03:41 PM

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STIC
Scientific and Technical Information Center

Search Strategy from Dialog

September 20 2022 10:28

ProQuest
Petitioner Kiosoft Exhibit 1002

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 & Geoastrophysical 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, Prous Science Daily Essentials, Prous Science Drug Data Report, Prous 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	((mobile or cell* or device*) pre/15 (nearby or close or proximity or next)) pre/15 (merchant[*1] or vend* or machine* or kiosk[*1])	13984
S2	((sense[*1] or sensing or detect* or monitor*) pre/15 (presence[*1] or nearby or close or proximity or next)) pre/15 (merchant[*1] or vending or machine[*1] or kiosk[*1])	7593
S3	S1 and S2	241
S4	S3 and (portable or mobile) and payment[*1]	15°

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

Petitioner Kiosoft Exhibit 1002
386

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Petitioner Kiosoft Exhibit 1002
387

UNITED STATES
PATENT AND TRADEMARK OFFICE

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

ISSUE FEE TRANSMITTAL FORM

APPLICATION #	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET #
17147305	01/12/2021	Paresh Patel	104402-5046-US

Title of Invention

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Application Information

APPLICATION TYPE	Nonprovisional Application under 35 USC 111(a)	DATE DUE	01/06/2023
CONFIRMATION #	8393	ISSUE FEE DUE	$ 600
EXAMINER	FRANTZY POINVIL	PUBLICATION DUE	$ 0
GROUP ART UNIT	3698	TOTAL FEES DUE	$600
CLASS - SUBCLASS	705/044000	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

CURRENT ADDRESS

Maintenance Fee Address

CURRENT ADDRESS

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

☐ Fee address indication requested, system generatedSB/47-PC form attached

2. ENTITY STATUS

Change in Entity Status

NEW STATUS

3. THE FOLLOWING FEES ARE SUBMITTED

- [x] Issue Fee
- [x] 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 herby authorized to apply my previously paid issue fee to the current fee due and to charge deficient fees to Deposit Account Number:
- [x] If in addition to the payment of the issue fee amount submitted with this form, there are any discrepencies 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 susbstitute 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	10/07/2022

Petitioner Kiosoft Exhibit 1002
390

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/147,305	**10/07/2022 06:39:57 AM ET**	**104402-5046-US**

Title of Invention

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8393	FILED BY	Benjamin Pezzner
PATENT CENTER #	61043303	FILING DATE	01/12/2021
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	C7524A925779AB92730E375A5A37EA159945A74D8DA51FA70A AD79FF85699908E042D873F1038121894B1A8F00AE125E47FB 2D7F29EFBEFFA86231F25CB90D15

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.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/147,305	10/07/2022 06:39:57 AM ET	104402-5046-US

Title of Invention

METHOD AND SYSTEM FOR PRESENTING REPRESENTATIONS OF PAYMENT ACCEPTING UNIT EVENTS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8393	FILED BY	Benjamin Pezzner
PATENT CENTER #	61043303	AUTHORIZED BY	-
CUSTOMER #	24341	FILING DATE	01/12/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Paresh K. Patel

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 8177	E202207740180093	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

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.

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/147,305	11/15/2022	11501296	104402-5046-US	8393

24341 7590 10/26/2022

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 135 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

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