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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	WYAT-0002.USD1
	Application Number	
Title of Invention	MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE	

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.
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☐ 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
	David		WYATT	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

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Postal Code	95131	Country i	US

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Application Information:

Title of the Invention	MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE		
Attorney Docket Number	WYAT-0002.USD1	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	7	Suggested Figure for Publication (if any)	

Filing By Reference :

GOOGLE EXHIBIT 1077
Google LLC v. Cardware Inc.
IPR2025-01361

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Only compete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

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☐ 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.

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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)
	Division of	14217261	2014-03-17
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
14217261	Claims benefit of provisional	61794891	2013-03-15

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	WYAT-0002.USD1
	Application Number	
Title of Invention	MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE	

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).

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Application Number	Country [i]	Filing Date (YYYY-MM-DD)	Access Code [i] (if applicable)

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Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	WYAT-0002.USD1
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If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 Remove

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. [X]

Organization Name	Virtual Electric Inc.		
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Address 2			
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Country [i]	US	Postal Code	95131
Phone Number		Fax Number	

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	WYAT-0002.USD1
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Signature	/Nicholas D. Lyford/			Date (YYYY-MM-DD)	2015-04-07
First Name	Nicholas	Last Name	Lyford	Registration Number	70686

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	Application Number	
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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.**

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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.

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MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE

RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Patent No. 61/794,891 (Attorney Docket No. WYAT-0002.A), entitled "Multi-Functional Credit Card Device," filed March 15, 2013 to inventor David Wyatt, and is a divisional of U.S. Patent Application No. 14/217,261 (Attorney Docket No. WYAT-0002.US), entitled "MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE," filed March 17, 2014 to inventor David Wyatt, the benefit of the earlier filing dates of which is hereby claimed and the contents of which are further incorporated by reference in their entirety.

FIELD OF THE INVENTION

[0002] Embodiments according to the present disclosure generally relate to electronic or smart credit card devices and, more specifically, to more secure, smart credit card devices.

BACKGROUND OF THE INVENTION

[0003] There are several different types of credit cards available in the marketplace at present. A first type of credit card is a conventional, standard piece of plastic with a magnetic strip, which is readily available and in wide commercial use. The advantage of this first type of credit card is that a large portion of the infrastructure for credit card transactions is built around this type of card, and

consequently such a card works in a wide array of vendors' credit card machines, automated teller machines (ATMs), and other devices that support the present credit card and banking infrastructure.

[0004] Another type of credit card device employs the use of a smart integrated circuit chip. These types of credit cards have a built in microprocessor with cryptographic capabilities. These microprocessors operate in a similar manner to a cell phone having a chip comprising a cryptographic processor. Such a smart card device requires contact with a reader in order to be read and to perform a transaction. The reader provides the manner in which a facility interacts with the built-in processor on the card, e.g., for purposes of performing verification on the authenticity of the card or for making a direct deposit on the card. These credit card devices also comprise a magnetic strip such that they are compatible with standard plastic credit card readers in wide use.

[0005] A different type of credit card device in circulation employs radio frequency identification ("RFID"). These cards essentially have a low-power RF antenna built into the card, and when the cardholder passes the antenna in front of a reader comprising an RF field, enough power is generated to enable the processor to interact wirelessly with the receiving device.

[0006] A concern with each of these types of credit cards presently available in the marketplace is that they can all be, in various ways, susceptible to theft and/or compromise. Therefore, these types of credit cards have security limitations. Further, cards employing smart integrated circuit chips and RF technology are not in wide use at present because they are incompatible with existing credit card infrastructure, which still predominantly supports conventional plastic credit cards.

SUMMARY OF THE INVENTION

[0007] This Summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This Summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used to limit the scope of the claimed subject matter.

[0008] An embodiment includes a credit card device capable of generating a programmed magnetic field of alternating polarity based on a speed of a card swipe, and methods for constructing the device for the purpose of emulating a standard credit card. An apparatus is described to allow said device to emulate behavior of a credit card when used in electronic credit card readers. Additionally methods are described to allow user control of said device for the purpose of authorizing or controlling use of said device in the application of credit, debit and cash transactions, including cryptocurrency and card-to-card transactions. Methods are also described for generating a limited-duration credit card number when performing a transaction for the purpose of creating a limited-use credit card number, which is limited in scope of use to a predetermined number of authorized transactions. Furthermore said device may interact with other similar devices in proximity for the purpose of funds or credit/debit transfers.

[0009] More specifically, an aspect of the present disclosure provides an apparatus comprising: a thin card shaped sized body; a memory operative to store a plurality of identification data; a processor coupled to the memory; a user interface for selecting a select identification data of said plurality of identification data; a magnetic card reader detection unit for determining if the body is adjacent to a standard magnetic card reader; and an inductor assembly coupled to the processor and integrated into

the body, the inductor assembly under processor control for generating a magnetic field of alternating polarity responsive to the body being detected as adjacent to a standard magnetic card reader, the magnetic field generated in a region substantially encompassing the standard magnetic card reader, wherein the magnetic field encodes said select identification data, and wherein the magnetic field is operable to be read by a magnetic read head of the standard magnetic card reader.

[0010] According to another aspect of the present disclosure, a credit card device comprises: a near-field communication (NFC) unit; a touch sensor array; a display; a motion rate detection array; a memory, storing a user data and a currency amount; and a processor operatively coupled to the NFC unit, the touch sensor array, the display, the motion rate detection array, and the memory; and wherein the processor initiates a card-to-card transaction between two credit card devices by a detected proximity of a first credit card device and a second credit card device and an input of information by a first user via said touch sensor array, and wherein the card-to-card transaction comprises an exchange of stored currency and said user data between the first credit card device and the second credit card device via the NFC unit.

[0011] According to yet another aspect of the present disclosure, a method of performing a transaction comprises: receiving an input signal at a credit card device from a user enabling operation of a near-field communication (NFC) unit of the credit card device; receiving an indication of an amount of currency for a transaction; generating at said credit card device a limited-duration credit card number; and transmitting said limited-duration credit card number from said credit card device to a recipient of the transaction.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Embodiments of the present disclosure are illustrated by way of example, and not by way of limitation, in the figures of the accompanying drawings and in which like reference numerals refer to similar elements.

[0013] Figure 1 is an illustration depicting an exemplary interaction between a credit card device and a standard magnetic card reader, according to an embodiment of the present disclosure.

[0014] Figures 2A-2B are block diagrams illustrating data flow between the magnetic coils on the credit card device and the microprocessor on the credit card according to an embodiment of the present disclosure.

[0015] Figure 2C depicts an exemplary process of selecting an account from a plurality of stored accounts according to an embodiment of the present disclosure.

[0016] Figure 3 is a flowchart illustrating an exemplary process of generating a magnetic field with an alternating polarity according to an embodiment of the present disclosure.

[0017] Figures 4A-4B illustrate a user interacting with a touch sensor of the credit card device, according to an embodiment of the present disclosure.

[0018] Figure 5 is an illustration of a credit card device connected with a computing system and operating according to an embodiment of the present disclosure.

[0019] Figure 6 is an illustration of two credit card devices performing a transaction according to an embodiment of the present disclosure.

[0020] Figure 7 depicts an exemplary process according to an embodiment of the present disclosure.

DETAILED DESCRIPTION OF THE INVENTION

[0021] Reference will now be made in detail to the various embodiments of the present disclosure, examples of which are illustrated in the accompanying drawings. While described in conjunction with these embodiments, it will be understood that they are not intended to limit the disclosure to these embodiments. On the contrary, the disclosure is intended to cover alternatives, modifications and equivalents, which may be included within the spirit and scope of the disclosure as defined by the appended claims. Furthermore, in the following detailed description of the present disclosure, numerous specific details are set forth in order to provide a thorough understanding of the present disclosure. However, it will be understood that the present disclosure may be practiced without these specific details. In other instances, well-known methods, procedures, components, and circuits have not been described in detail so as not to unnecessarily obscure aspects of the present disclosure.

[0022] Some portions of the detailed descriptions which follow are presented in terms of procedures, steps, logic blocks, processing, and other symbolic representations of operations on data bits that can be performed on computer memory. These descriptions and representations are the means used by those skilled in the data processing arts to most effectively convey the substance of their work to others skilled in the art. A procedure, computer generated step, logic block, process,

etc., is here, and generally, conceived to be a self-consistent sequence of steps or instructions leading to a desired result. The steps are those requiring physical manipulations of physical quantities. Usually, though not necessarily, these quantities take the form of electrical or magnetic signals capable of being stored, transferred, combined, compared, and otherwise manipulated in a computer system. It has proven convenient at times, principally for reasons of common usage, to refer to these signals as bits, values, elements, symbols, characters, terms, numbers, or the like.

[0023] It should be borne in mind, however, that all of these and similar terms are to be associated with the appropriate physical quantities and are merely convenient labels applied to these quantities. Unless specifically stated otherwise as apparent from the following discussions, it is appreciated that throughout the present claimed subject matter, discussions utilizing terms such as "storing," "creating," "protecting," "receiving," "encrypting," "decrypting," "destroying," or the like, refer to the action and processes of a computer system or integrated circuit, or similar electronic computing device, including an embedded system, that manipulates and transforms data represented as physical (electronic) quantities within the computer system's registers and memories into other data similarly represented as physical quantities within the computer system memories or registers or other such information storage, transmission or display devices.

ENCODING VIA AN ALTERNATING POLARITY OF A MAGNETIC FIELD

[0024] In one embodiment of the present disclosure, a smart credit card device comprises a dynamic magnetic region (strip) incorporating a main inductor assembly from which programmed magnetic field data symbols are dynamically generated. In one embodiment the inductor assembly may be a planar coil formed within the material that embodies the credit card. An advantage of using a planar coil is that it can dynamically produce a magnetic field in such a manner as to emulate the

interaction between a traditional magnetic strip and a conventional credit card reader. As the magnetic strip of a conventional credit card is passed through a magnetic reader head, stripes of alternating magnetic polarity embedded in the strip induce a magnetic field of alternating polarity at the reader head. The pattern formed by the alternating polarity of the magnetic field encodes information, which when transformed by a transducer to a current signal in the magnetic reader head, provides user information for a transaction.

[0025] Embodiments of the present disclosure provide a credit card device able to generate a programmed magnetic field, wherein data is encoded and represented by an alternating polarity of the generated magnetic field. In a similar manner to a conventional plastic credit card, the magnetic field produced by the planar coil is able to be read by a pickup (or "transducer") and to thereby transmit information to the magnetic card reader. Figure 1 illustrates a credit card transaction 100 performed between a credit card device 101 and a conventional magnetic reader 150. The credit card device 101 generates a magnetic field of alternating polarity 120 to be read by the conventional magnetic card reader 150, according to an embodiment of the present disclosure. The credit card device 101 is moved at a rate 130 relative to a magnetic reader head 155 of conventional magnetic card reader 150. The magnetic field 120 extends with sufficient distance and intensity from credit card 101 so as to be read by magnetic head reader 155. The magnetic head reader 155 responds to the magnetic field 120 by producing a current in the conventional fashion, which is then interpreted as encoded information by the magnetic reader 150. Therefore the magnetic field of alternating polarity 120 produced by the credit card device 101 has a substantially identical encoding effect as a traditional magnetic strip.

[0026] A characteristic of encoding information in a conventional magnetic card strip is that binary information is encoded by the pattern of alternating magnetic polarity formed by ferromagnetic

stripes embedded on the magnetic strip. As the conventional magnetic card strip has a standardized format, the encoding of information is provided at a specified data density (bits per inch), according to which conventional magnetic readers are designed for interpretation of encoded data. In order to most ably emulate a conventional credit card interaction with a conventional magnetic reader the credit card device 101 of the present disclosure is provided with a means of determining a substantially optimal rate for alternating the polarity of the generated magnetic field 120 in order to produce data at a rate which is able to be readily received and correctly interpreted by the conventional magnetic reader 150. Embodiments of the present disclosure provide several means of determining the relative movement rate 130 between the credit card device 101 and the magnetic reader head 155. These features, as well as other characteristics of the credit card device of the present disclosure, can be better appreciated by a description of the internal components and functions of credit card device 101.

[0027] Figures 2A and 2B depict exemplary embodiments of the smart credit card device, in a block diagram view. The components of the block diagram are illustrated according to functional connections, and their locations should not be construed as being limited to the respective locations as depicted in Figures 2A-2B. In Figure 2A, credit card device 201a is shown in a block diagram view. Credit card device 201a comprises a processor 205 and a memory unit 207, the processor 205 operatively coupled to the components of credit card device 201a. The memory 207 comprises a plurality of accounts 209, which may be credit card accounts, banking accounts, merchant accounts, online accounts, cryptocurrency accounts, and combinations thereof. A motion detection module 210 is coupled to the processor unit 205 and to a set of motion detection units, which comprise a rate detection assembly 225, an optical sensor array 230, and a set of accelerometers 235. The magnetic field is generated via a planar coil 220, which is controlled by the processor unit 205 via a coil

interface 215. The rate at which the magnetic field changes polarity to encode the user data depends on the rate of relative movement detected by the rate detector. The credit card device 201a further comprises a real-time clock 240, a touch-sensor array 245, and a display 250, each operatively coupled to the processor unit 205. A user input may be made via the touch sensor array 245, which may comprise a touch screen panel, a keypad, or a combination thereof. The display 250 is able to display an alphanumeric sequence, as well as graphical icons (such as a logo for a bank, or other images). Further, an optional backup power source 255 is depicted.

[0028] In one embodiment, the processor unit 205 is connected to the planar coil 220 and the motion detection units, via the motion detection module 210. The processor unit 205 is responsible for determining the appropriate rate with which to output data from the planar coil 220, wherein output data is encoded using alternating polarity of a generated magnetic field. The rate of the alternating polarity of the magnetic field is generated in accordance with the detected movement speed with which the card is swiped through the reader, in order for the reader to receive the encoded data at the appropriate rate. Magnetic card readers, which are designed to read conventional credit cards, are constructed to read data at specified input rates that correspond with the data density present in conventional magnetic card strips. The magnetic data symbols generated by the planar coil 220 are produced to align with the rate at which data is being read by the magnetic card reader. Accordingly, it is irrelevant if the credit card device 201a of the present disclosure is being swiped quickly or slowly, the planar coil 220 is controlled by the processor unit 205 to produce data at a substantially optimized rate, where the rate of data production is dependent on the rate at which the credit card device 201a is detected to be passing across the magnetic reader head.

[0029] Figure 2B depicts a credit card device 201b according to an embodiment of the present disclosure. Credit card device 201b comprises a processor 205 and a memory unit 207, the processor 205 operatively coupled to the components of credit card device 201b. The memory 207 comprises a plurality of accounts 209, which may be credit card accounts, banking accounts, merchant accounts, online accounts, cryptocurrency accounts, and combinations thereof. A motion detection module 210 is coupled to the processor unit 205 and to a set of motion detection units, which comprise a rate detection assembly 225, an optical sensor array 230, and a set of accelerometers 235. Additionally, a galvanic sensor 275 is coupled to processor unit 205. The magnetic field is generated via a planar coil 220, which is controlled by the processor unit 205 via a coil interface 215. The rate at which the magnetic field changes polarity to encode the user data depends on the rate of relative movement detected by the rate detector. The credit card device 201b further comprises a real-time clock 240, a touch-sensor array 245, and a display 250, each operatively coupled to the processor unit 205. A user input may be made via the touch sensor array 245, which may comprise a touch screen panel, a keypad, or a combination thereof. The display 250 is able to display an alphanumeric sequence, as well as graphical icons (such as a logo for a bank, or other images). Further, an optional backup power source 255 is depicted. Credit card device 201b further comprises a near-field communication (NFC) unit 260, as well as a radio frequency identification (RFID) unit 265, both of which are operatively coupled to the processor unit 205. In one embodiment the NFC and RFID may share the planar coil for use as a RF antennae, through the coil interface 215. In one embodiment one or both the NFC andthe RFID may have antennae dedicated to that individual sub-system. A universal serial bus (USB) connector 270 is coupled to the processor unit 205. The functionality of the components with regard to exemplary uses of credit card devices 201a and 201b is described in greater detail in the following description.

[0030] A further aspect of the present disclosure provides a single credit card device that can be used for multiple banks or financial institutions. For example, instead of carrying a separate credit card for each account of a variety of credit card companies, a customer need only to carry a single card according to embodiments of the present disclosure. The capability of the credit card device to generate a multitude of credit card numbers provides the ability of the credit card device to be associated with multiple accounts. Futhermore, inputs at the touch sensor array on the credit card device can be used to select the appropriate bank or credit provider account stored in the memory unit of the credit card device.

[0031] Figure 2C depicts a process of selecting an account from a plurality of stored accounts in order to perform a transaction with the selected account, according to an embodiment of the present disclosure. The process 280 begins at step 282, where a plurality of accounts stored by the credit card device memory is displayed. The plurality of accounts 209 are stored by memory 207, and are displayed using display 250. A user indicates an account selected from the plurality of accounts at step 284. The selection is able to be made by keypad or touch sensor array 245, and an indication of the selected account can be displayed via display 250. At step 286 the credit card device is configured according to account information associated with the selected account, which may include an account number, an expiration date, and other user information associated with the account (e.g. a username, PIN, password, email address, etc.). At step 288 the planar coil of the credit card device is encoded with a limited-duration credit card number that is associated with the selected account. The limited-duration credit card number is able to be generated according to the selected account, a timestamp, a transaction amount, an indicated merchant, user key or secrets, on-card unique hardware secrets,

credit card authority key or secrets, user input from the card interface, and other information associated with the transaction.

MOVEMENT RATE FEEDBACK

[0032] The relative movement rate of credit card device 201a is detected by one or more of the set of motion detection units, comprising the rate detection assembly 225, the optical sensor array 230, and the set of accelerometers 235. Each of the motion detection units detects the motion of the credit card 201a in a distinct manner. The rate detection assembly 225, which is positioned alongside (but independent of) the planar coil 220, is able to detect the location of a magnetic head reader as the rate detection assembly 220 is being passed through the credit card reader. The reader module of a conventional credit card reader comprises a metal head having a small gap at the tip of the head. A pickup armature resides in this gap, such that as the metal head passes over a credit card strip, an electric field is induced in the head reader pickup circuit. In one embodiment the rate detection assembly 225 is constructed of an array of auxiliary inductor coils and magnetic pickup coils. As the metal head of the card reader assembly passes over the arrangement of auxiliary inductor coils and magnetic pickup coils of the rate detection assembly 225, a disturbance in the magnetic field flowing between the two is induced, generating a change in current and producing a detected movement signal. The change in current is detected by the motion detection module 210, and is used to determine the rate of motion of the card reader head passing across the surface of the credit card device 201a (and therefore along the planar coil 220).

[0033] The optical sensor array 230 is also operable to detect a movement rate of the credit card device 201a with respect to a conventional magnetic card reader. The optical sensor array 230 is disposed nearby the planar coil 220, in order to accurately detect a movement rate in the region of the

planar coil 220. In an embodiment, the optical sensor array 230 is a thin strip parallel to, and extending along, the length of the planar coil 220. The optical sensor array 230 determines a location of a minimum of received light, which corresponds to the region of a surface in nearest proximity to the optical sensor array 230. The magnetic reader head of a conventional magnetic card reader extends furthest from the surface of the card reader, and therefore the detected minimum in received light at the optical sensor array 230 corresponds with the location of the reader head. By tracking over time the position of this minimum received light along the optical sensor array, a detected movement rate may be found.

[0034] The set of accelerometers 235 are also operable to detect a movement rate of the credit card device 201a. The set of accelerometers 235 are positioned in the credit card device 201a in order to effectively measure the position and acceleration of the credit card device 201a. In an embodiment, the set of accelerometers comprises groups of accelerometers, each group having one or more accelerometers disposed at orthogonal planes to each other, and each group capable of generating signals that allow for determination of the orientation, motion and acceleration of the credit card device 201a.

[0035] The detected movement signal is received by the motion detection module 210. The detected movement signal is generated by any one of the set of motion detection units, or any combination of motion detection units of the set. For example, the movement detection signal is able to be generated by the combination of the rate detection assembly 225 and the optical sensor array 230. In an embodiment, the movement detection module 210 is able to determine the movement rate of the credit card device 201a from the detected movement signals, and transmits the determined movement rate, and orientation to the processor unit 205. In an embodiment, the motion detection

module 210 sends the detected movement signal to the processor unit 205, and the processor unit 205 determines the relative movement rate.

[0036] In one embodiment, the generation of the magnetic field by the planar coil 220 at a specified rate of alternating polarity is accomplished according to the following description. One or more of the motion detection units in the set of motion detection units (rate detection assembly 225, optical sensor array 230, and set of accelerometers 235) detect a movement rate of the credit card device 201a with respect to a magnetic card reader, and signal the motion detection module 210. The movement rate is provided to the processor unit 205, which determines the appropriate rate for alternating the polarity of the magnetic field generated by the planar coil 220. The processor unit 205 outputs instructions or data to the coil interface 215 at the determined rate, which in an embodiment is a digital-to-analog converter (a DAC) and acts to translate the signal from digital to analog in order to drive the planar coil 220 and produce the magnetic field. The instructions from the processor unit 205 are comprise binary code, which are output through a shift register to the coil interface 215. The shift register outputs data at a rate proportional to the determined movement rate of the credit card device 201a – thus, a higher determined credit card device 201a movement rate has a corresponding higher output rate at the shift register, leading to a higher rate of alternating polarity at the generated magnetic field (i.e., encoded data symbols output more quickly). Conversely, a lower movement rate of credit card device 201a leads the processor unit 205 to control the shift register to output data at a lower rate, and consequently the rate of alternating polarity in the generated magnetic field is lower.

[0037] Figure 3 illustrates an exemplary process 300 for determining the rate to alternate the polarity of the generated magnetic field of the credit card device, according to an embodiment of the present disclosure. At step 301 the process determines if a standard magnetic card reader is detected

to be in proximity with the credit card device. If NO, the step repeats. If YES, the process moves to step 303. At step 303 a detection of a movement rate at which the body of the credit card device is moving relative to the standard magnetic card reader is made. The process continues at step 305, wherein a magnetic field is generated by an inductor assembly comprised by the credit card device, the magnetic field having a target rate of alternating polarity that is based on the detected movement rate from step 303. The process then repeats at step 301, determining if a standard magnetic card reader is (or remains) in proximity to the credit card device. In this manner, while a standard magnetic card reader is detected to be in proximity to the credit card device, the movement rate of the credit card device is determined and the polarity and orientation of the generated magnetic field is alternated at the appropriate rate, to recreate the data as described above, at the correct rate, in order to clock out the data to be conveyed to the magnetic strip reader, at a rate matching the action of an ordinary magnetic strip card through same said magnetic card reader.

SECURITY

[0038] Security is an area of concern for credit card holders, as the small form factor makes theft quite easy, and additionally there are many ways for a malicious third-party to record the account number of a credit card in order to later make fraudulent transactions on the account. Embodiments of the present disclosure address security concerns of a credit card owner on several fronts.

[0039] In one aspect, security of the credit card device is enhanced by providing a means of locking the credit card device in order to prevent use, until such time that a valid user input is entered. Embodiments of the present disclosure provide a credit card device having a region for receiving human input, e.g., touch sensors which are able to be formed by contacts that a user can press (e.g., the touch sensor array 245 of Figures 2A-2B). Figures 4A-4B illustrate a user interacting with a credit

card device 401 via a keypad or touch sensor array 445. In Figure 4A, the credit card device 401 is in a locked state. A display 450 is able to display a message to the user, for instance, the message "device locked" or "enter password," or question prompts which guide the user to respond with answers through said key-pad or said touch sensor, to certain preset questions, that confirm personal knowledge known only to the associated user. The touch sensor array 445 enables user interaction with the credit card device 401. An exemplary use of the touch sensor array 445 is an input of a currency amount to be used in a transaction. The touch sensor array 445 is able to include buttons, or a touch-sensitive pad, or a combination of the two. Other embodiments of the touch sensor array 445 allowing a user to input data to the credit card device 401 are consistent with the spirit and scope of the present disclosure.

[0040] In order to unlock the credit card device 401 and enable a transaction or other usage, the user inputs data via the touch sensor array 445. Figure 4B illustrates the user inputting a password via a gesture 470, which operates to unlock the credit card device 401. The display 450b is able to display a message indicating the credit card device 401 is unlocked and ready for use, for instance, display 450b may display the message "unlocked," or it may display an account number associated with the credit card device 401.

[0041] Embodiments of the present disclosure provide additional functionality for the touch sensor array 445. For example, there may be touch contact terminals that a user can press to wake up the credit card device 401, to cause the battery to supply power, or to place the credit card device 401 in a power reduction mode when it is not being used. In an embodiment, if any number other than the correct password is entered multiple times, or if there is an attempted usage of the credit card device

401 without entering in a password, an automatic phone call may be triggered to the appropriate fraud protection authorities.

[0042] In one embodiment of the present disclosure, the display 450 is a thin-film liquid crystal display ("LCD"). The display 450 is able to have multiple uses. In one embodiment, the display 450 can be used to cue the user for a security question upon input of an improper password. Or if fraud protection services need to contact a customer, they can verify the customer's identity by transmitting a security question to the display 450 of user's credit card device 401, to which the user would need to respond correctly using the input buttons of touch sensor 445 on the card.

LIMITED-DURATION CREDIT CARD NUMBER

[0043] A further security feature of the credit card device provided in the present disclosure is the capability of producing a limited-duration credit card number for performing transactions using accounts of the card. The credit card device comprises a real-time clock that is able to produce a cryptographically protected timestamp for each interaction. The power source is able to activate the processor unit such that a unique number may be generated by the credit card device and verified by the credit authority according to the timestamp and the transmitted user information. The limited-duration credit card number is able to be produced at the time the credit card device is performing a transaction, and is able to be generated according to the user's private information, a bank information, information regarding the facility performing the transaction, and the time of day. The limited-duration credit card number is able to be limited to only one transaction, a finite number of transactions, or may be limited to a specified period of time – e.g., 2 minutes, 10 minutes, 3 hours – after which time that particular limited-duration number would become invalid. As detailed above, if an expired limited-duration credit card is attempted to be used for a transaction, the transaction is

denied and an automatic notification is able to be made to a credit authority in order to notify the user and to prevent transactions on the account. The transaction count is able to be determined through the action of passing the card through magnetic reader, and the process of transmitting said card number to said card reader.

[0044] In one embodiment, the number on the front of the card is able to be a full or partial number. In an embodiment, the number displayed on the credit card device is a static number, but the number transmitted during a transaction is a limited-duration credit card number as described above. The number displayed on the credit card device may not necessarily be a static number. For example, the first four and last four digits of the credit card number are able to be fixed, while the remaining eight digits can be dynamically generated. As the credit card is read by the machine, part or all of the number may be dynamically produced at the time the card is read. As described above, the dynamic part of the limited-duration credit card number generated may be based on the user's private information, the user's bank information, the time of day or the facility that is reading the card. Further, the expiration date of the credit card device can also be dynamically generated.

[0045] Effectively, embodiments of the present disclosure provide a credit card device that has no fixed number, and therefore the account cannot be compromised. Only the number generated at the instant of the credit card transaction matters. Accordingly, unauthorized use of the credit card device is highly unlikely, because a transaction cannot be conducted with an expired limited-duration credit card number, or only the static portion of the credit card number. In one embodiment of the present disclosure, sufficient dynamically generated numbers are provided for on the credit card such that a unique credit card number can be generated for each transaction. In this embodiment, the credit card of the present disclosure effectively acts as a unique per-transaction credit card.

[0046] In one embodiment, the process steps enabling a card transaction are as follows. A credit card device (e.g., credit card device 201b) is connected to a computer system (e.g. computer system 590), via any of the connection means available to the credit card device (USB 270, NFC 260, and RFID 265). User data and other essential information, such as account information, are downloaded to the credit card device. For example, for an account designed for online transactions, user account information will likely include an account email and an account password. The account may be for example a bank account, a credit account, a merchant account, an online transaction account, or a cryptocurrency. In one embodiment a currency amount is also downloaded, which is made accessible to the credit card device 201b for transactions. In an alternative embodiment, rather than a currency amount being downloaded to the credit card device 201b, the user account information (e.g., username and password) is stored such that a subsequent authorized credit card device 201b transaction is automatically pre-authorized to deduct (or credit) the entered transaction amount at a stored account. In an embodiment, a user uses the touch sensor array 245 of the credit card device 201b in order to input the user information, including the amount of currency to be stored. The information entered by the user is able to include an account source of a transaction (e.g., bank account, credit account, merchant account, ATM, online payment service, or a cryptocurrency), as well as a type of transaction to be made (e.g., as a debit card, as a credit card, or as a user account). In another embodiment, the information is entered using the computing system to which the credit card device 201b is connected.

[0047] Transactions may be authenticated on the specified account by entry of the username and password for the account during the transaction, using the touch sensor array 245. In an embodiment, a password for an account is represented by a user input (such as a gesture, a swipe, and/or an unlock keycode) which is entered on credit card device 201b during a transaction for account authentication.

According to an embodiment of the present disclosure, a user that has "primed" the credit card device 201b for a transaction has already performed a security authentication on the card, and therefore a subsequent card transaction is able to be pre-authorized to perform the transaction without further user authentication steps. The priming action can be a tap of the credit card device 201b detected by accelerometers 235, or a gesture, swipe, or a key input received by touch sensor array 245.

[0048] A transaction is able to be communicated using the planar coil 220. In one embodiment, when the transaction is a credit card transaction, a limited-duration credit card number is generated. A user inputs an amount for the transaction using the touch sensor array 245, and the limited-duration credit card number is generated to correspond with the entered amount. The binary data corresponding to this limited-duration credit card number is sent from the processor unit 205 to the coil interface 215, where it is converted to an analog signal in order to drive the planar coil 220 to generate a magnetic field having an alternating polarity corresponding to the encoded data of the limited-duration credit card number.

ONLINE TRANSACTIONS

[0049] Figure 5 displays the credit card device 501 in connection with a computing device 590. In one embodiment, the credit card device 501 is able to be used to make online purchases. In one embodiment, the credit card device 501 is equipped with a means 570 for communicating with the USB port on a computer or other device in order to make online purchases. In one embodiment the credit card device 501 may have an area cut-out, such that contact terminals corresponding to a USB cable connector are contained within, enabling connection of a USB cable (e.g., a micro-USB connection). When performing online transactions, the credit card device 501 can uniquely generate a limited-duration credit card number (as described above) for online purchases. The credit card device 501 receives a user input indicating that a transaction is imminent, and an authorization. The user input is able to comprise a gesture, a swipe, a key input sequence, and combinations thereof. The limited-duration credit card number is able to be displayed on the front display of the credit card device 501. In one embodiment, the credit card device 501 is able to use RFID 265 or near field communication NFC 260 technology in order to connect to a personal computer 590. This enables a per-transaction, limited-use credit card number, enhancing the security of the credit account by substantially negating the possibility of a theft of the credit card number used to perform the transaction leading to account compromise.

[0050] According to an embodiment, the transaction is able to include information regarding a user account, such as an email address of the user, and upon reconnection of credit card device 201b to a computer system (for instance, computer system 590), the transaction information stored on credit card device 201b could be "replayed" by the computer system in order to finalize the transaction.

[0051] In one embodiment, a means of limiting an available credit amount are provided. According to the download process described above, the credit card device is able to have a total credit available. The credit card device is able to reference the total credit available in subsequent transactions, and will provide limited-duration credit card numbers corresponding to amounts up to, but not exceeding, the remaining credit available to the credit card device. An attempt to perform a transaction having an amount exceeding the remaining credit available will not result in a valid limited-duration credit card number, and therefore an authenticated transaction cannot proceed. In general, the credit card device will only successfully generate a limited-duration credit card number if the proper conditions for a transaction are determined to be present. The proper conditions for a transaction comprise a correct identification having been made by the user (via a gesture, swipe, and/or key input) and an amount for the transaction indicated to be less than the total credit available to the account indicated for the transaction.

CARD-TO-DEVICE TRANSACTIONS

[0052] In addition to transactions performed using conventional magnetic card readers (such as at point-of-sale locations, banks, and automated teller machines (ATMs)) and via cable connection with a computing device, transactions performed wirelessly between a card and a device (e.g., card-to-card, card-to-computer device having a reader dongle, card-to-ATM) are provided according to embodiments of the present disclosure. For simplicity, the following describes a card-to-card transaction, but it will be understood that card-to-device transactions are similarly provided.

[0053] Figure 6 illustrates a card-to-card transaction according to one embodiment. A first credit card device 601a comprises a display 650a, and is in contact with a second credit card device 601b. A contact interaction between the cards is indicated by interaction 680. In one embodiment, the contact

interaction is a tapping of credit card device 601a against credit card device 601b. In another embodiment, an optical sensor array at one or both of the cards detects interaction 680. In another embodiment, interaction 680 indicates a swipe of credit card device 601a across credit card device 601b. In one embodiment a user input through said key-pad initiates and enables a transaction from first card to second card. In one embodiment the presence of second card in preparation for card to card transaction is confirmed through "polling", the process of which involves transmission of data between cards, and confirmed receipt of transmitted data by response received from second card received at first card, including information confirming receipt of said information, by second card.

[0054] The planar coil comprised by each of credit card device 601a and credit card device 601b is able to be a means of transferring information for a transaction, e.g., such as an antenna. Once either, or both, of credit card device 601a and credit card device 601b detect interaction 680, a transaction is able to be completed via generation of a magnetic field at one card and reception of the magnetic field (i.e., reading) at the other card. In this manner, the card (e.g., credit card device 601a) receiving the transaction information operates its planar coil in an antenna mode. This enables credit card device 601a and credit card device 601b to authentically perform a transaction, and to transfer a currency between credit card device 601a and credit card device 601b. As described above, in an embodiment the transaction is able to use a limited-duration card number to encode the transaction.

[0055] In an embodiment, a set of accelerometers is used to detect the beginning of the transaction, for instance, a transaction performed by a swipe of credit card device 601a across credit card device 601b. Further, the set of accelerometers can detect a "priming" action for a credit card device, i.e., an indication for a credit card device that a transaction is imminent. The priming action

can be a tap of the credit card device 601a, or tapping the credit card device 601a against the credit card device 601b. In one embodiment, a touch sensor array is able to be used for the priming action.

[0056] In an embodiment of a card-to-card transaction, one card (e.g. 601a, the card of the user having a currency debit) generates the limited-duration credit card number, which is transmitted via the card's planar coil. The credit card device of the recipient (e.g., 601b, the card of the user receiving a currency credit) receives the encoded data via the planar coil, acting as an antenna, and the coil interface is able to convert the received signal into a digital signal understood by the processor to be the limited-duration credit card number, identifying both the correct account and the amount of the transaction.

[0057] In one embodiment, the credit card device 201b stores cryptocurrency information in processor unit 205. The cryptocurrency information stored is able to include a plurality of cryptocurrency addresses, a plurality of private keys, and a plurality of public keys. The credit card device 201b is able to perform a transaction, as described above, using a cryptocurrency as the specified account. In one embodiment, the credit card device 201b is able to hash a portion of the transaction, using the processor unit 205 and the real-time clock 240 along with user information pertinent to the cryptocurrency account and the transaction. A subsequent connection of the credit card 201b to a computing device provides a means of connecting to the cryptocurrency servers and finalizing the transaction. Further, the credit card device 201b is able to sign a cryptocurrency transaction by, for instance, receiving a prompt at the display 250 to input a dynamic PIN specific to the transaction, which is able to be entered by touch sensor array 245.

[0058] In a card-to-card cryptocurrency exchange, a record of the transaction can be made according to the following. A first card (e.g. 601a) making a deduction with an amount indicated via touch sensor array 245 is able to generate a record of the transaction and store the record in the card memory, while a second card (e.g. 601b) receiving the cryptocurrency is able to generate a confirmation of the received transaction amount. In one embodiment, the amount indicated is provided by the receiving card 601b. The hashed record of the transaction contains the unique information of each user, along with the transaction amount. The success or failure of the transaction is able to be displayed on the respective displays of credit cards 601a and 601b.

ACCOUNT THEFT AND UNINTENDED USE PREVENTION

[0059] A security concern for conventional credit cards utilizing wireless communication means is the ability of a thief to access and/or copy user information through un-detected interaction with the wireless communication means. Sensitive and confidential information can be gleaned via, for example, "listening-in" on an RFID interaction between a credit card and a contactless reader, recording the characteristics of the interaction, and replicating certain characteristics to fake an authorized transaction. While to a great extent security concerns are addressed by the usage of limited-duration credit card numbers and other security features provided for by the credit card of the present disclosure and previously described, a further security feature regarding the wireless communication means of the credit card device is described herein.

[0060] In one embodiment, wireless communication means of the credit card device 201b are in a powered-down, or disabled, state prior to receiving an authenticated activation signal from a user. Upon receiving the activation signal, the communication means (e.g., NFC 260, RFID 265, and planar coil 220) are activated, enabling the credit card device 201b to conduct a transaction. The activation

signal can originate from one (or a combination) of the set of motion detection units (rate detection 225, optical sensor array 230, and accelerometers 235), the touch sensor array 245, and the galvanic sensor 275. The galvanic sensor 275 is operable to detect a contact of human skin, via a current produced at the sensor 275 upon such contact. In an embodiment the galvanic sensor 275 is comprised of metallic contacts disposed on opposite sides of, and isolated by, the body of credit card device 201b. In one embodiment, the current produced by user contact with the galvanic sensor 275 contacts is sufficient to provide small amounts of energy in order to power components of the card. For example, energy produced is able to power the processor unit 205 and the RFID 265. In one embodiment the galvanic sensor 275 further comprises two conducting surfaces separated by a junction, and the galvanic sensor 275 is configured as a thermoelectric generator (e.g., via the Peltier effect, the Seebeck effect, or a combination). For example, heat applied at one surface of the credit card device 201b may lead to differential heating between the opposing, separated conducting surfaces of the galvanic sensor 275, generating an electric current and powering a subset of, or all of, the components of credit card device 201b (e.g., the processor unit 205, the NFC 260, and the RFID 265).

[0061] In an embodiment, the communication means are activated only so long as the activation signal continues to be detected. In another embodiment, the communication means are activated for a specified amount of time following detection of the activation signal. For example, if using the credit card device 201b in an ATM (or other device) preventing continuous human contact, the activation signal is able to be a swipe, gesture, or key input sequence entered via the touch sensor array 245, which activates the card for a specified duration (for instance, one minute). In an embodiment the detection of motion through accelerometer input indicates activation by a valid user. In one embodiment the specific motion detected through accelerometer input corresponding with a specific

user action, such as a "flick", "swipe", "spin", "wave", "tap," may be used to initiate activation, wherein said motion is not normally generated at idle and during periods of inactivity. For example said motion not being generated accidentally while said card is stored in a user's wallet, carried while the user is actively moving, or is being handed from user to a clerk at a point of transaction. In one embodiment the specific motion, or sequence of motions, may be associated with a user, and stored on said card memory, such that performing the correct sequence when prompted can confirm the possession of the card by the known owner, thus initiating activation and enabling usage.

[0062] Figure 7 depicts a process of selectively enabling the communication capability of the credit card device according to an embodiment of the present disclosure. The process 700 begins at step 701, where an input signal is received at the credit card device from a user. The input signal is able to be generated by any one, or combination, of a plurality of input means, where the input means comprise: a swipe gesture received at a touch sensor array; a key press sequence; an accelerometer sensor indication of credit card device motion; and a galvanic sensor indication that the credit card is in a user grasp. The input received from the user enables operation of a near-field communication (NFC) unit of the credit card device. In one embodiment, the NFC unit is disabled prior to receiving the input signal. In one embodiment, an RFID communication unit is disabled prior to receiving the input signal, and is activated by the input signal. In one embodiment, the planar coil is disabled prior to receiving the input signal, and is activated by the input signal.

[0063] The credit card device, following enablement of the NFC unit, receives an indication of an amount of currency for a transaction at step 703. At step 705, the credit card device generates a limited-duration credit card number, which at step 707 is transmitted to a recipient of the transaction.

In one embodiment, the limited-duration credit card number has a limited recurrence, and is limited in scope of use to a predetermined number of authorized transactions.

[0064] In the foregoing description of process 700, the ordering of the process steps is exemplary and should not be construed as limiting. Alternative ordering of the process steps is consistent with the present disclosure, as conceived by one skilled in the relevant art.

[0065] The foregoing description, for purpose of explanation, has been described with reference to specific embodiments. However, the illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the invention and its practical applications, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as may be suited to the particular use contemplated.

[0066] Embodiments according to the invention are thus described. While the present disclosure has been described in particular embodiments, it should be appreciated that the invention should not be construed as limited by such embodiments, but rather construed according to the below claims.

CLAIMS

What is claimed is:

1. A credit card device comprising:

a near-field communication (NFC) unit;

a touch sensor array;

a display;

a motion rate detection array;

a memory, storing a user data and a currency amount; and

a processor operatively coupled to the NFC unit, the touch sensor array, the display, the motion rate detection array, and the memory; and

wherein the processor initiates a card-to-card transaction between two credit card devices by a detected proximity of a first credit card device and a second credit card device and an input of information by a first user via said touch sensor array, and wherein the card-to-card transaction comprises an exchange of stored currency and said user data between the first credit card device and the second credit card device via the NFC unit.

2. The credit card of Claim 1, wherein the motion rate detection array comprises a set of motion rate detection units, wherein the set comprises: a plurality of inductor coils and companion magnetic-field pickup coils; an optical sensor array; and a plurality of accelerometers, and wherein the detected proximity is determined from at least one of the set of motion rate detection units.

3. The credit card device of Claim 2, wherein the plurality of accelerometers generate an indication of the detected proximity in response to a contact between the first and the second credit card devices.

4. The credit card device of Claim 1, wherein the input of information by the first user comprises one or more of:

an introduction of a transaction-specific identifier;

a confirmation or a denial of an indicated transaction; and

a lock/unlock command determining operation of the first credit card device according to an input sequence or a gesture across the plurality of touch sensors.

5. The credit card device of Claim 1, further comprising a real-time clock which generates a sequential parameter when the processor initiates a transaction, wherein the sequential parameter is combined with any of a user information, a transaction identifier, a user secret, and a credit card authority secret and the processor is operable to generate a limited-duration credit card number therefrom.

6. The credit card device of Claim 5, wherein the limited-duration credit card number has a limited recurrence, and is limited in scope of use to a predetermined number of authorized transactions.

7. The credit card device of Claim 5, wherein the display enables information to be displayed regarding the limited-duration credit card number, the time, a passcode, a sequence code, a

currency amount, and other credit card transaction information of the user, a merchant, a bank or a credit card authority.

8. The credit card device of Claim 5, wherein the card-to-card transaction comprises a cryptographic hash of the transaction unit, wherein the cryptographic hash is processed and stored by at least one of the first credit card device and the second credit card device.

9. The credit card device of Claim 1, further comprising a USB connector for connection to a standard computing device.

MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE

ABSTRACT

An embodiment includes a credit card device capable of generating a programmed magnetic field of alternating polarity based on a speed of a card swipe, and methods for constructing the device for the purpose of emulating a standard credit card. An apparatus is described to allow said device to emulate behavior of a credit card when used in electronic credit card readers. Additionally methods are described to allow user control of said device for the purpose of authorizing or controlling use of said device in the application of credit, debit and cash transactions, including cryptocurrency and card-to-card transactions. Methods are also described for generating a limited-duration credit card number when performing a transaction for the purpose of creating a limited-use credit card number, which is limited in scope of use to a predetermined number of authorized transactions. Furthermore said device may interact with other similar devices in proximity for the purpose of funds or credit/debit transfers.

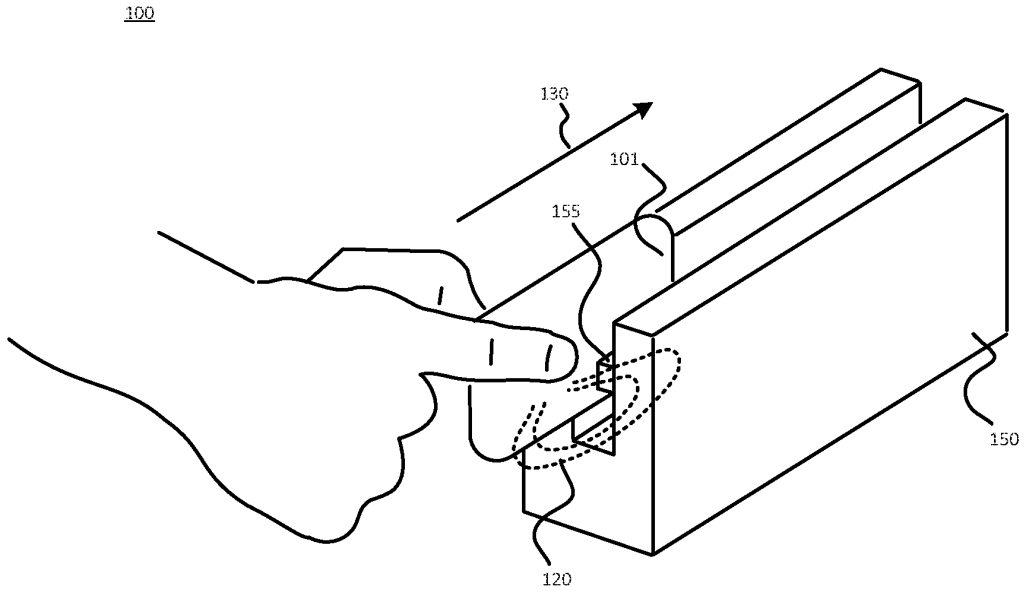


FIG. 1

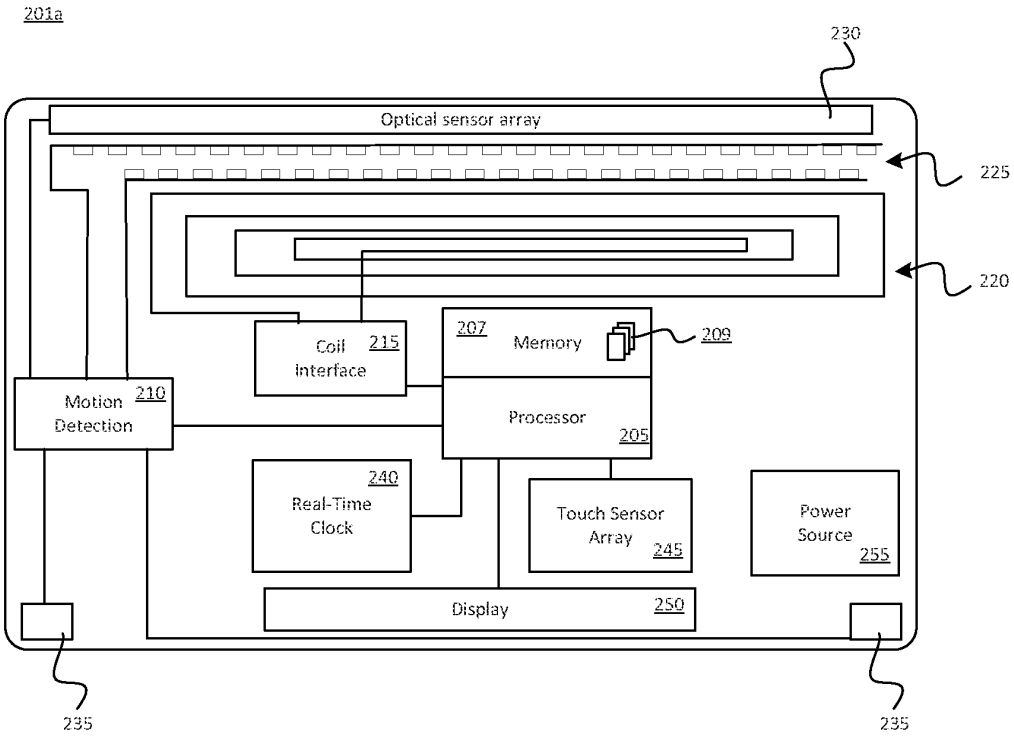

201a
230
Optical sensor array
225
220
Coil
Interface
215
207
Memory
209
Motion
Detection
210
Processor
205
240
Real-Time
Clock
Touch Sensor
Array
245
Power
Source
255
Display
250
235
235

FIG. 2A

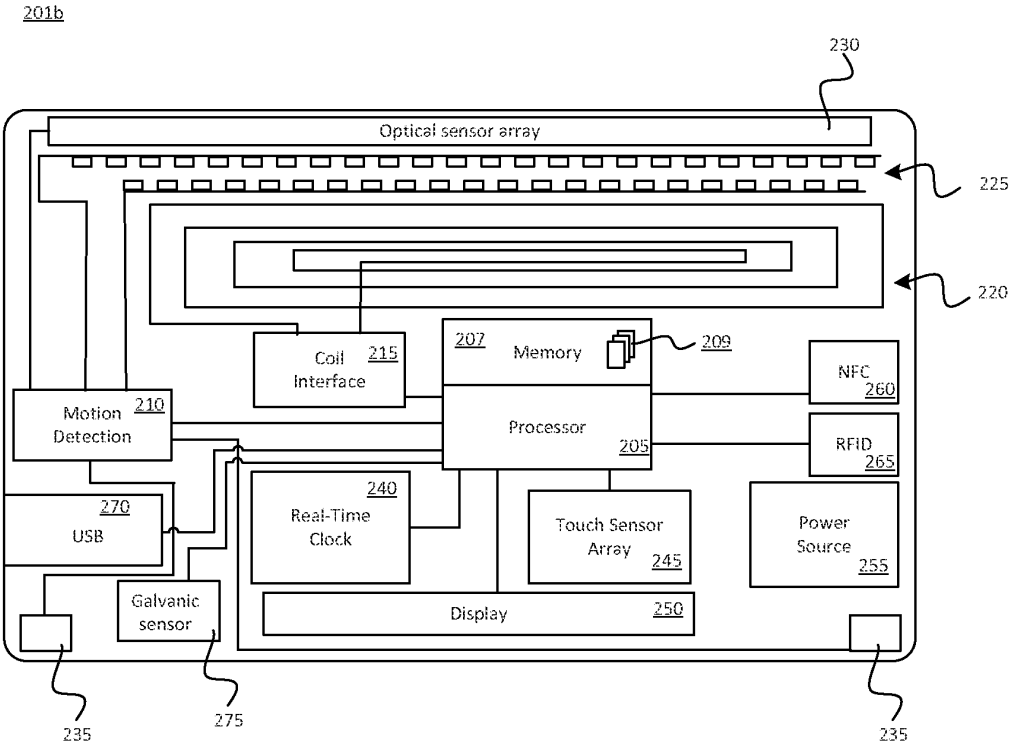

201b
230
Optical sensor array
225
220
Coil
Interface
215
207
Memory
209
NFC
260
Motion
Detection
210
Processor
205
RFID
265
270
USB
240
Real-Time
Clock
Touch Sensor
Array
245
Power
Source
255
Galvanic
sensor
275
Display
250
235
235

FIG. 2B

280

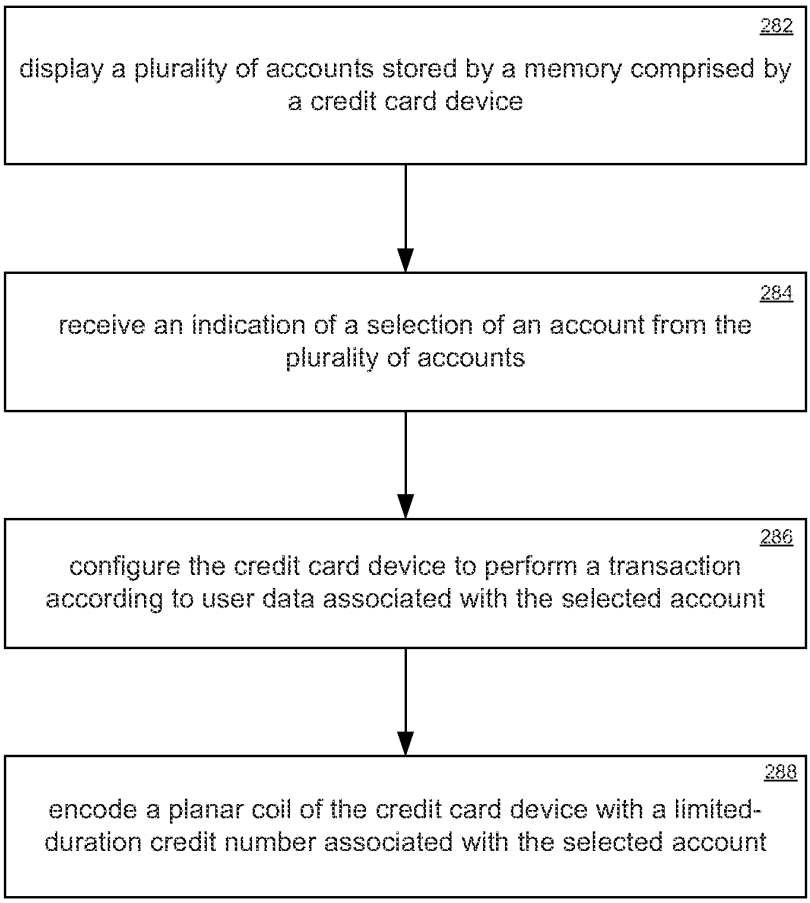

282
display a plurality of accounts stored by a memory comprised by a credit card device
284
receive an indication of a selection of an account from the plurality of accounts
286
configure the credit card device to perform a transaction according to user data associated with the selected account
288
encode a planar coil of the credit card device with a limited-duration credit number associated with the selected account

FIG. 2C

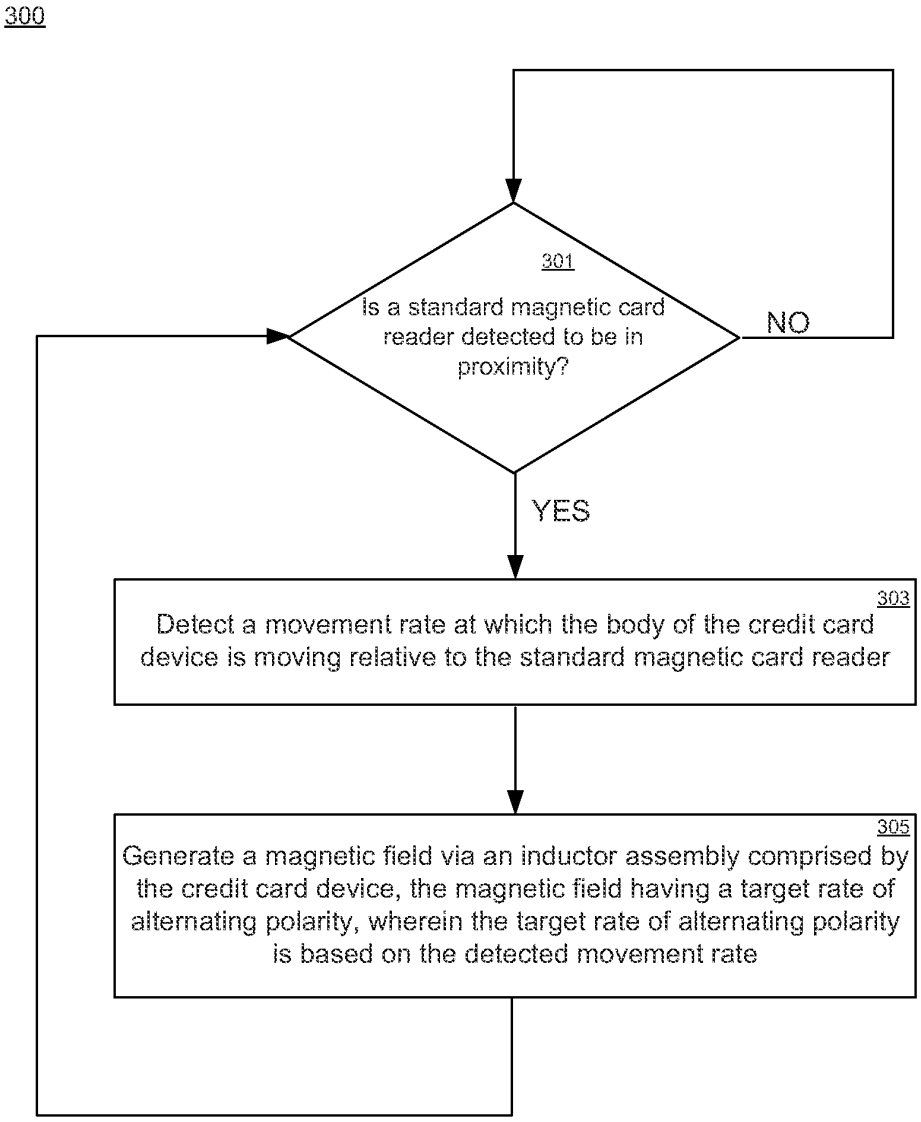

300
301
Is a standard magnetic card reader detected to be in proximity?
NO
YES
303
Detect a movement rate at which the body of the credit card device is moving relative to the standard magnetic card reader
305
Generate a magnetic field via an inductor assembly comprised by the credit card device, the magnetic field having a target rate of alternating polarity, wherein the target rate of alternating polarity is based on the detected movement rate

FIG. 3

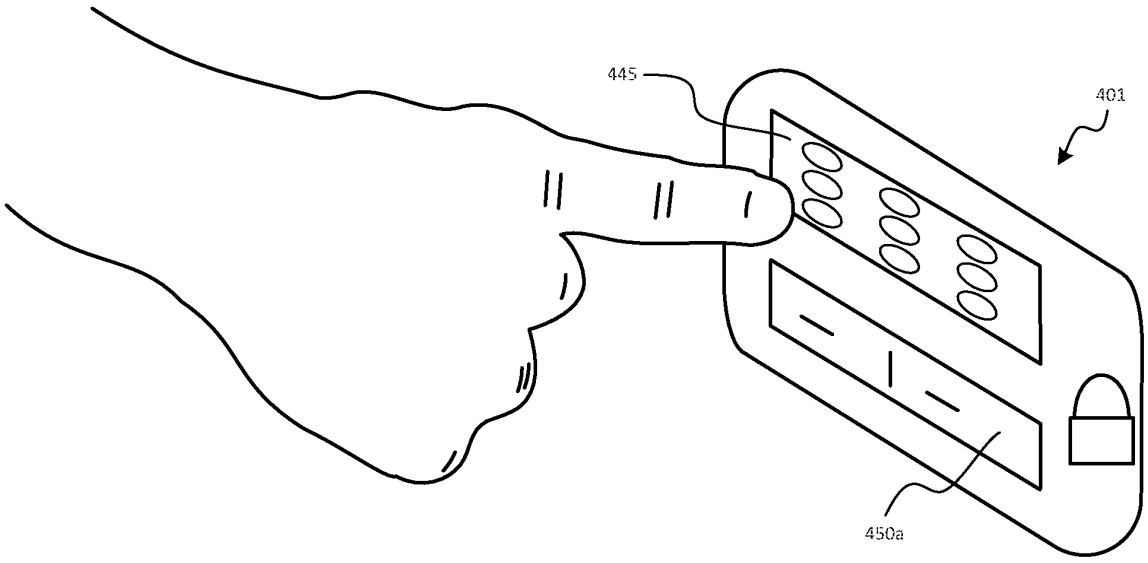


FIG. 4A

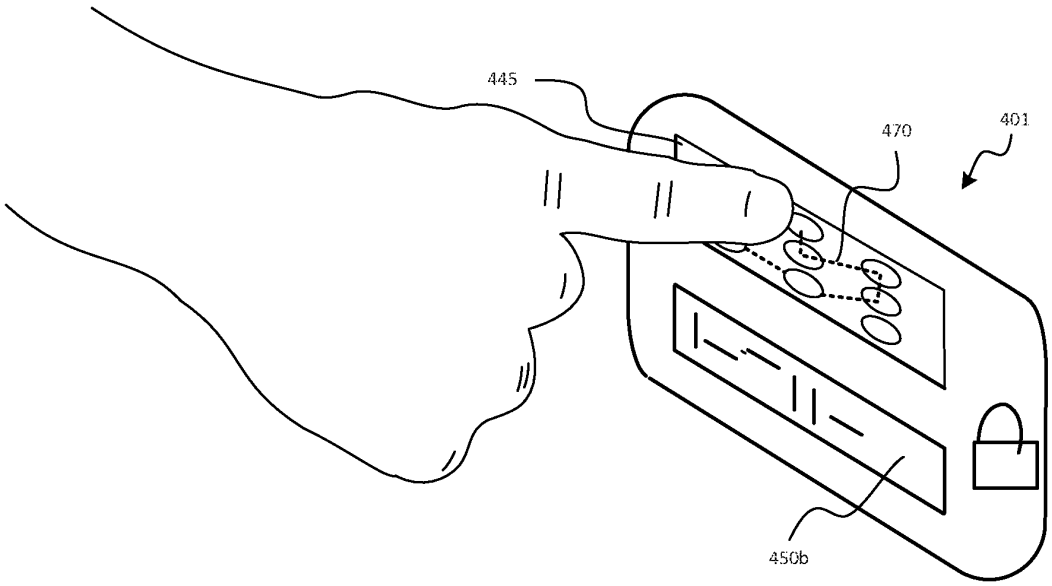


FIG. 4B

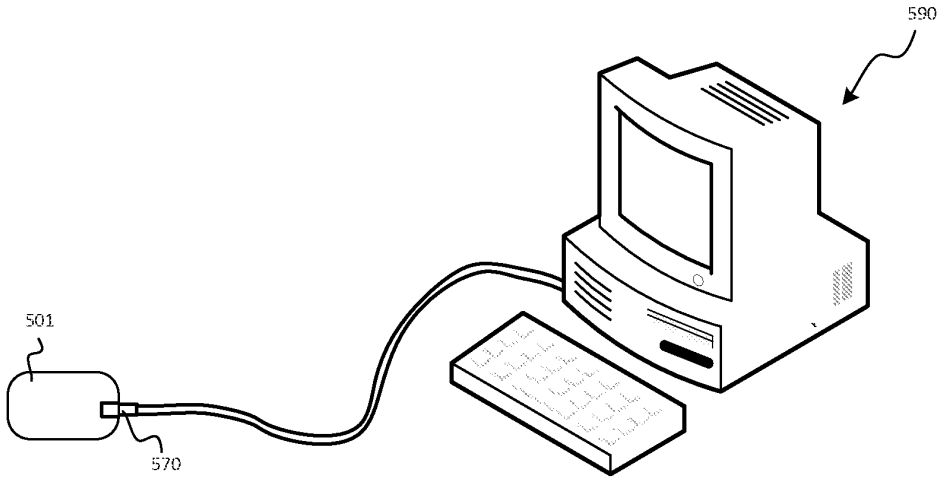


FIG. 5

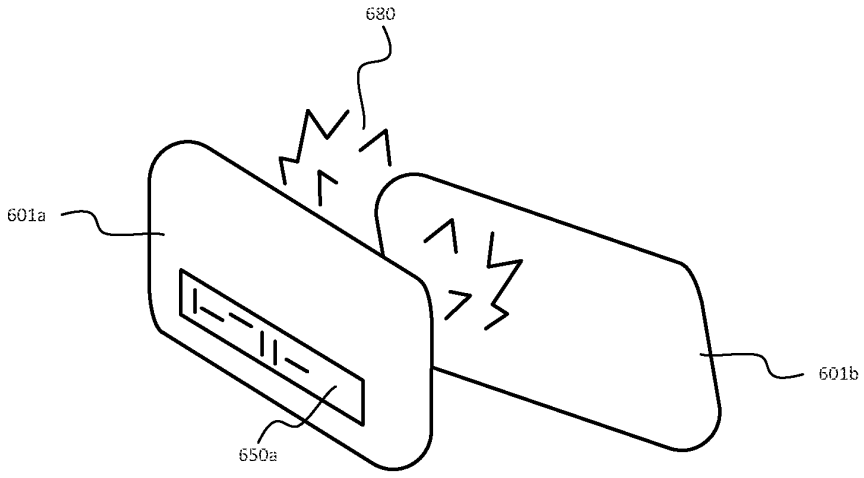


FIG. 6

700

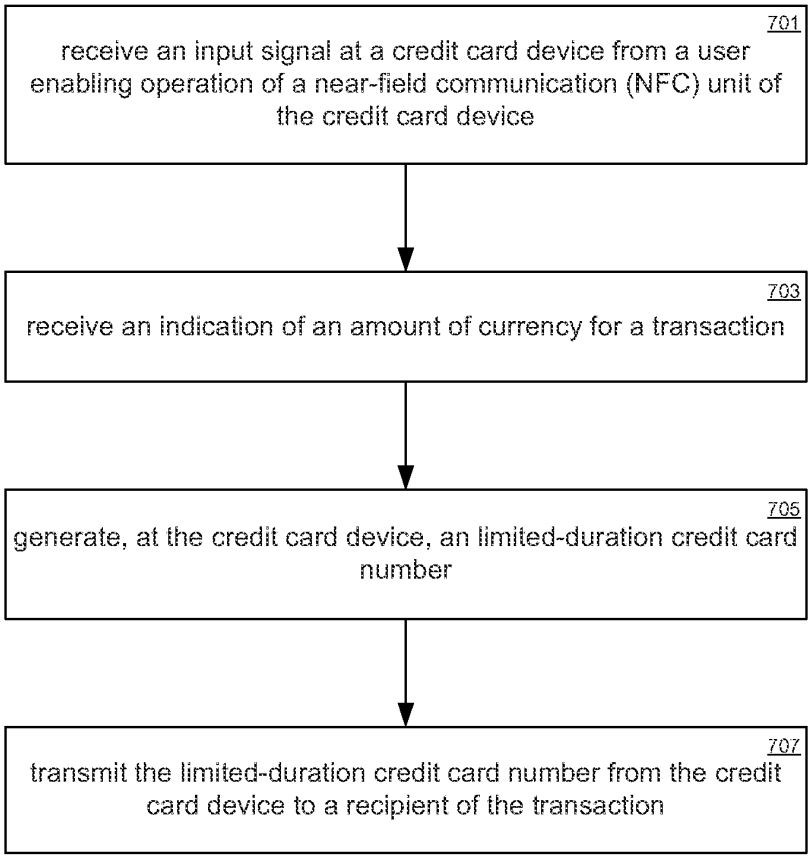

701
receive an input signal at a credit card device from a user enabling operation of a near-field communication (NFC) unit of the credit card device
703
receive an indication of an amount of currency for a transaction
705
generate, at the credit card device, an limited-duration credit card number
707
transmit the limited-duration credit card number from the credit card device to a recipient of the transaction

FIG. 7

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	David WYATT
Filer:	Nicholas David Lyford/Katie Smith
Attorney Docket Number:	WYAT-0002.USD1

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	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Pages:				
Claims:				
Miscellaneous-Filing:				
Late Filing Fee for Oath or Declaration	2051	1	70	70
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**800**

Electronic Acknowledgement Receipt	
EFS ID:	21997730
Application Number:	14680979
International Application Number:	
Confirmation Number:	9081
Title of Invention:	MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	David WYATT
Customer Number:	41066
Filer:	Nicholas David Lyford/Katie Smith
Filer Authorized By:	Nicholas David Lyford
Attorney Docket Number:	WYAT-0002.USD1
Receipt Date:	07-APR-2015
Filing Date:	
Time Stamp:	19:59:30
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Electronic Funds Transfer
Payment was successfully received in RAM	$800
RAM confirmation Number	5844
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	WYAT-0002USD1_ADS_04-07-2015.pdf	1561284 65e2ef73094a50147b9e7c8ea43b6da35c714abf	no	7
Warnings:					
Information:					
2		WYAT-0002USD1_Specification_04-07-2015.pdf	163707 6cb2684693c14f8991d0d724de0fc175efe346c4	yes	33

Multipart Description/PDF files in .zip description

Document Description	Start	End
Specification	1	29
Claims	30	32
Abstract	33	33

Warnings:					
Information:					
3	Drawings-only black and white line drawings	WYAT-0002USD1_Figures_uspto.pdf	47158 2bd229c0a277973050f201fddfe1925dc486d950	no	7
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	36818 36151bea83bf1b8c699a754ae903102f4cb38077	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1808967		

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New International Application Filed with the USPTO as a Receiving Office
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 14/680,979

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	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	9 minus 20 =	*	x 40 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*	x 210 =	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	730		TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT A

	(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($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
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	

AMENDMENT B

	(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($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
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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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
14/680,979	04/07/2015	2876	800	WYAT-0002.USD1	9	1

CONFIRMATION NO. 9081

41066
MURABITO, HAO & BARNES LLP
TWO NORTH MARKET STREET
THIRD FLOOR
SAN JOSE, CA 95113

FILING RECEIPT

OC000000074692438

Date Mailed: 04/21/2015

Receipt is acknowledged of this non-provisional 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 APPLICANT, 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 Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections 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**

Inventor(s)

David WYATT, San Jose, CA;

Applicant(s)

Virtual Electric Inc., San Jose, CA

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a DIV of 14/217,261 03/17/2014 PAT 9022286
which claims benefit of 61/794,891 03/15/2013

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.

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/680,979**
Projected Publication Date: 07/30/2015
Non-Publication Request: No
Early Publication Request: No
** **SMALL ENTITY** **

Title

MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE

Preliminary Class

235

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/680,979	04/07/2015	David WYATT	WYAT-0002.USD1

CONFIRMATION NO. 9081

41066
MURABITO, HAO & BARNES LLP
TWO NORTH MARKET STREET
THIRD FLOOR
SAN JOSE, CA 95113

PUBLICATION NOTICE



Title:MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE

Publication No.US-2015-0213437-A1
Publication Date:07/30/2015

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/.

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NOTICE OF ALLOWANCE AND FEE(S) DUE

41066 7590 10/09/2015
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EXAMINER
LEE, SEUNG H

ART UNIT	PAPER NUMBER
2887	

DATE MAILED: 10/09/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/680,979	04/07/2015	David WYATT	WYAT-0002.USD1	9081

TITLE OF INVENTION: MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	01/11/2016

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 and an extra copy of the form should be submitted. 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: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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)

41066 7590 10/09/2015
MURABITO, HAO & BARNES LLP
TWO NORTH MARKET STREET
THIRD FLOOR
SAN JOSE, CA 95113

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/680,979	04/07/2015	David WYATT	WYAT-0002.USD1	9081

TITLE OF INVENTION: MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	01/11/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
LEE, SEUNG H	2887	235-380000

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/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form 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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(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. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — 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.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — 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.
- ❑ Applicant changing to regular undiscounted fee 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. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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.
14/680,979	04/07/2015	David WYATT	WYAT-0002.USD1	9081

41066 7590 10/09/2015

MURABITO, HAO & BARNES LLP
TWO NORTH MARKET STREET
THIRD FLOOR
SAN JOSE, CA 95113

EXAMINER	
LEE, SEUNG H	

ART UNIT	PAPER NUMBER
2887	

DATE MAILED: 10/09/2015

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.

Notice Requiring Inventor's Oath or Declaration	Application No. 14/680,979	Applicant(s) David WYATT	
	Examiner LEE, SEUNG H	Art Unit 2887	

This notice is an attachment to the Notice of Allowability (PTOL-37), or the Notice of Allowability For A Design Application (PTOL-37D).

An inventor's oath or declaration in compliance with 37 CFR 1.63 or 1.64 executed by or with respect to each inventor has not yet been submitted.

An oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each inventor (for any inventor for which a compliant oath, declaration, or substitute statement has not yet been submitted) MUST be filed no later than the date on which the issue fee is paid. See 35 U.S.C. 115(f). Failure to timely comply will result in ABANDONMENT of this application.

A properly executed inventor's oath to declaration has not been received for the following inventor(s):

If applicant previously filed one or more oaths, declarations, or substitute statements, applicant may have received an informational notice regarding deficiencies therein.

The following deficiencies are noted:

INFORMAL ACTION PROBLEMS

- A properly executed inventor's oath or declaration has not been received for the following inventor(s): **David WYATT**.
  Applicant may submit the inventor's oath or declaration at any time before the Notice of Allowance and Fee(s) Due, PTOL-85, is mailed.

Questions relating to this Notice should be directed to the Application Assistance Unit at 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 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, 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. 14/680,979	Applicant(s) WYATT, DAVID	
	Examiner SEUNG LEE	Art Unit 2887	AIA (First Inventor to File) Status No

-- 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 *4/07/2015*.
   ☐ 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 *1-9*. 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 _____
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 _____.

1. The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Allowable Subject Matter

2. Claims 1-9 are allowed.

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

Galloway (US 2014/0052632) teaches a method for transfer funds.

However none of prior art teaches a credit card device comprising a near-field communication (NFC) unit, a touch sensor array, a motion rate detection array, a processor operatively coupled to the NFC unit, the touch sensor array, the motion rate detection array, and wherein the processor initiates a card-to-card transaction between two credit card devices by a detected proximity of a first credit card device and a second credit card device and an input of information by a first user via said touch sensor array, and wherein the card-to-card transaction comprises an exchange of stored currency and said user data between the first credit card device and the second credit card device via the NFC unit as set forth in the claims.

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

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEUNG LEE whose telephone number is (571)272-2401. The examiner can normally be reached on Monday-Friday, 7:30 AM- 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven S. Paik can be reached on (571) 272-2404. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SEUNG LEE/
Primary Examiner, Art Unit 2887

Notice of References Cited	Application/Control No. 14/680,979	Applicant(s)/Patent Under Reexamination WYATT, DAVID	
	Examiner SEUNG LEE	Art Unit 2887	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2014/0052632 A1	02-2014	Galloway; Ivason J.	G06Q20/3223	705/43
	B	US-				
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	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.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L20	0	("2014/0052632").URPN.	USPAT	OR	ON	2015/09/24 16:56
L21	9296	235/380.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:10
L22	8416	235/492.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:10
L23	1842	235/493.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:10
L24	17411	L21 L22 L23	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:10
L25	126	24 and (transfer same card same (value monetary currency) same first same second)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:11
L26	5	25 and (sensor with touch)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:12
L27	10	25 and (nfc (near$1field near20 communciaiton))	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:20
L28	2028	(transfer$4 same card same (value monetary currency) same first same second)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:26

L29	16	28 same (nfc (near$1field near20 communciaiton))	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:26
L30	1	"20140052632"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:36
L31	11909	((G06K19/0718 OR G06Q20/105 OR G06Q20/223 OR G06Q20/3223 OR G06Q20/341 OR G06Q20/3563 OR G06Q20/40145 OR G07F7/0833 OR G07F7/0846 OR G07F7/10).CPC.)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:37
L32	168	31 and (transfer same card same (value monetary currency) same first same second)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:37
L33	45	31 and (transfer same card same (value monetary currency) same first same second).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 17:38
S1	40	"217261"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/11/28 19:31
S2	9031	235/380.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/11/28 19:53
S3	2123	235/449.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/11/28 19:53
S4	1108	235/439.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/11/28 19:54
S5	1725	235/493.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/11/28 19:54
S6	12807	S2 S3 S4 S5	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/11/28 19:54

S8	900	S6 and (generat$4 same (magnetic near20 field))	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/11/28 19:55
S9	267	S6 and (generat$4 same (magnetic near20 field) same card same reader)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/11/28 19:56
S10	25	S6 and (generat$4 same (magnetic near20 field) same card same reader same inductor)	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/11/28 19:57
S11	7973	235/492.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/12/13 15:39
S12	124	S11 and (card same display same tempora$6)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/12/13 15:39
S13	0	S11 and (card same display same tempora$6 same inductor)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/12/13 15:40
S14	6	("7841539").URPN.	USPAT	OR	OFF	2014/12/13 16:03
S15	226906	((credit ic smart) adj5 card)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/12/13 16:14
S16	3536	S15 same nfc	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/12/13 16:15
S17	50	S16 same (generat$4 with number)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/12/13 16:15
S18	52	("7128274").URPN.	USPAT	OR	OFF	2014/12/13 16:20
S19	28	("20030011868" | "20030052168" | "20030085286" | "20050231490" | "20060242698" | "20060282330" | "20060287964" | "20070235539" | "20070241183" | "20080011833" | "20080149734" | "20080223937" | "20090255996" | "4667087" | "5478994" | "5485520" | "5585787" | "5590038" | "5838059" | "5945652" | "6202927" | "6247129" | "6595342" | "6641050" | "6769607" | "6863219" | "7128274" |	US-PGPUB; USPAT; USOCR	OR	OFF	2014/12/13 16:28

		"7530495").PN.				
S20	7	S19 and (random near60 number)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/12/13 16:30
S21	164	("4667087").URPN.	USPAT	OR	OFF	2014/12/13 16:33
S22	21	S21 and (random near60 number)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/12/13 16:33
S23	226906	((credit ic smart) adj5 card)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/12/13 20:13
S24	848	S23 same display same charg$4 same amount	US-PGPUB; USPAT; USOCR	OR	OFF	2014/12/13 20:13
S25	99	S24 same (antenna wireless$4 contactless$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/12/13 20:14
S26	45	S25 same (button keypad key input$4 activat$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/12/13 20:14
S27	179	("20010034702" | "20010047335" | "20020059114" | "20020082989" | "20020096570" | "20020120583" | "20030034388" | "20030052168" | "20030057278" | "20030105964" | "20030116635" | "20030152253" | "20030173409" | "20030179909" | "20030179910" | "20030226899" | "20040035942" | "20040133787" | "20040162732" | "20040172535" | "20040177045" | "20050043997" | "20050080747" | "20050086160" | "20050086177" | "20050116026" | "20050119940" | "20050154643" | "20050228959" | "20060000900" | "20060037073" | "20060041759" | "20060085328" | "20060091223" | "20060161435" | "20060163353" | "20060174104" | "20060186209" | "20060256961" | "20070114274" | "20070174614" | "20070192249" | "20070241201" | "20080040271" | "20080096326" | "20090108064" | "20090255996" | "4353064" | "4394654" | "4614861" | "4667087" | "4701601" | "4720860" | "4786791" | "4791283" | "4797542" | "5038251" | "5168520" | "5237614" | "5276311" | "5347580" | "5361062" | "5412199" | "5434398" | "5434405" | "5478994" | "5479512" | "5484997" | "5485519" | "5585787" | "5591949" | "5608203" | "5657388" | "5834756" | "5856661" | "5864623" |	US-PGPUB; USPAT; USOCR	OR	OFF	2014/12/13 20:24

		"5907142" | "5913203" | "5937394" | "5955021" | "5956699" | "6025054" | "6045043" | "6076163" | "6085320" | "6095416" | "6130621" | "6145079" | "6157920" | "6161181" | "6163771" | "6176430" | "6182894" | "6189098" | "6199052" | "6206293" | "6240184" | "6241153" | "6256873" | "6269163" | "6286022" | "6313724" | "6389442" | "6393447" | "6411715" | "6446052" | "6460141" | "6592044" | "6607127").PN. OR ("6609654" | "6631849" | "6655585" | "6681988" | "6705520" | "6755341" | "6769618" | "6776332" | "6805288" | "6811082" | "6813354" | "6817532" | "6873974" | "6902116" | "6970070" | "6980969" | "6985583" | "6991155" | "7013030" | "7035443" | "7039223" | "7044394" | "7051929" | "7100049" | "7100821" | "7111172" | "7114652" | "7136514" | "7140550" | "7163153" | "7195154" | "7197639" | "7219368" | "7225537" | "7225994" | "7246752" | "7298243" | "7337326" | "7346775" | "7356696" | "7357319" | "7359507" | "7360688" | "7363494" | "7380710" | "7398253" | "7404087" | "7424570" | "7427033" | "7454349" | "7461250" | "7461399" | "7472093" | "7472829" | "7494055" | "7502467" | "7502933" | "7503485" | "7516492" | "7523301" | "7532104" | "7543739" | "7562222" | "7580898" | "7584153" | "7591426" | "7591427" | "7602904" | "7641124" | "7660902").PN.				
S28	241	S23 same (motion adj10 sensor)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/12/13 20:39
S29	9	S28 same (antenna inductor)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/12/13 21:27
S30	9043	235/380.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/12/13 21:37
S31	2129	235/449.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/12/13 21:37
S32	1118	235/439.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/12/13 21:37
S33	1725	235/493.ccls.	US-PGPUB;	OR	ON	2014/12/13 21:37

			USPAT; EPO; JPO			
S34	12831	S30 S31 S32 S33	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/12/13 21:37
S35	58	S34 and S24	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/12/13 22:13
S36	7973	235/492.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/12/13 23:10
S37	15	S36 and S24	US-PGPUB; USPAT; EPO; JPO	OR	ON	2014/12/13 23:11
S38	27	S24.clm.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/12/13 23:11
S39	1	("9022286").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2015/08/15 09:55
S40	22	"680979"	US-PGPUB; USPAT; EPO; JPO	OR	ON	2015/09/24 09:46
S41	5	"9022286"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 09:48
S42	9296	235/380.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:13
S44	8416	235/492.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:13
S45	1842	235/493.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/24 10:13

			EPO; JPO			
S46	17411	S42 S44 S45	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:13
S48	448	S46 and ((transfer$4 trasnaction) same (first adj20 card) same (second adj20 card))	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:14
S49	26	S48 and (nfc (near$1field near20 communciaiton))	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:15
S50	9514	card same (nfc (near$1field near20 communciaiton))	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:21
S51	4039	((transfer$4 trasnaction) same (first adj20 card) same (second adj20 card))	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:21
S52	21	S51 same (nfc (near$1field near20 communciaiton))	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:21
S53	0	S51 same proximity same touch	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:24
S54	55	S51 same touch	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:25
S55	4	S54 same exchang$4	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:25
S56	1109	((transfer$4 trasnaction) same (first adj20 card) same (second adj20 card)).clm.	US-PGPUB; USPAT; USOCR;	OR	ON	2015/09/24 10:47

			EPO; JPO			
S57	37	S56 and (touch same sensor)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2015/09/24 10:48

9/24/2015 5:42:07 PM
C:\Users\slee5\Documents\EAST\Workspaces\14-680979.wsp

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14680979	WYATT, DAVID
	Examiner	**Art Unit**
	SEUNG LEE	2887

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

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

CLAIM		DATE								
Final	Original	09/24/2015								
	1	=								
	2	=								
	3	=								
	4	=								
	5	=								
	6	=								
	7	=								
	8	=								
	9	=								

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14680979	WYATT, DAVID
	Examiner	**Art Unit**
	SEUNG LEE	2887

CPC						
Symbol					**Type**	**Version**
G06K		19	/	06206	F	2013-01-01
G07F		19	/	00	I	2013-01-01
G06Q		20	/	06	I	2013-01-01
G06Q		20	/	223	I	2013-01-01
G06Q		20	/	347	I	2013-01-01
G06Q		20	/	385	I	2013-01-01
G07F		7	/	0873	I	2013-01-01
G06Q		20	/	341	I	2013-01-01
G06K		19	/	0716	I	2013-01-01
G06K		19	/	07749	I	2013-01-01
			/			
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CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	9	
/SEUNG LEE/ Primary Examiner.Art Unit 2887	09/24/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	6

U.S. Patent and Trademark Office — Part of Paper No. 20150924

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14680979	WYATT, DAVID
	Examiner	**Art Unit**
	SEUNG LEE	2887

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
235	380	G	0	6	K	5 / 00 (2006.01.01)						

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	9	
/SEUNG LEE/ Primary Examiner.Art Unit 2887	09/24/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	6

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14680979	WYATT, DAVID
	Examiner	**Art Unit**
	SEUNG LEE	2887

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1														
	2														
	3														
	4														
	5														
	6														
	7														
	8														
	9														

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 9	
/SEUNG LEE/ Primary Examiner.Art Unit 2887 (Primary Examiner)	09/24/2015 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 6

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14680979	WYATT, DAVID
	Examiner	Art Unit
	SEUNG LEE	2887

CPC- SEARCHED		
Symbol	Date	Examiner
G06K19/0718, G06Q20/105, G06Q20/223, G06Q20/3223, G06Q20/341, G06Q20/3563, G06Q20/40145, G07F7/0833, G07F7/0846, G07F7/10	9/24/15	sl

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
235	380, 492, 493	9/24/15	sl

SEARCH NOTES		
Search Notes	Date	Examiner
EAST	9/24/15	sl

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	same as above	9/24/15	sl

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BIB DATA SHEET

CONFIRMATION NO. 9081

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
14/680,979	04/07/2015	235	2887	WYAT-0002.USD1

APPLICANTS
Virtual Electric Inc., San Jose, CA;

INVENTORS
David WYATT, San Jose, CA;

**** CONTINUING DATA ***************************
This application is a DIV of 14/217,261 03/17/2014 PAT 9022286
which claims benefit of 61/794,891 03/15/2013

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
04/17/2015

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /SEUNG H LEE/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		CA	7	9	1

ADDRESS

MURABITO, HAO & BARNES LLP
TWO NORTH MARKET STREET
THIRD FLOOR
SAN JOSE, CA 95113
UNITED STATES

TITLE

MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE

FILING FEE RECEIVED		
800	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
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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)

MURABITO, HAO & BARNES LLP
2 N. MARKET STREET
3RD FLOOR
SAN JOSE, CA 95113

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.

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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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Donna Petford	(Depositor's name)
/Donna Petford/	(Signature)
11/20/2015	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/680,979	04-07-2015	David WYATT	WYAT-0002.USD1	9081

TITLE OF INVENTION:

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$960	$0	$0	$960	01/11/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS

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/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form 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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(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. The following fee(s) are submitted:

☑ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

☐ A check is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 504160 (enclose an extra copy of this form).

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

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Anthony C. Murabito/ Date 11/20/2015

Typed or printed name Anthony C. Murabito Registration No. 35295

This collection of information 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 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, 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.

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

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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.

Electronic Patent Application Fee Transmittal

Application Number:	14680979
Filing Date:	07-Apr-2015
Title of Invention:	MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	David WYATT
Filer:	Anthony C. Murabito/Donna Petford
Attorney Docket Number:	WYAT-0002.USD1

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	1501	1	960	960

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**960**

Electronic Acknowledgement Receipt	
EFS ID:	24153808
Application Number:	14680979
International Application Number:	
Confirmation Number:	9081
Title of Invention:	MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	David WYATT
Customer Number:	41066
Filer:	Anthony C. Murabito/Donna Petford
Filer Authorized By:	Anthony C. Murabito
Attorney Docket Number:	WYAT-0002.USD1
Receipt Date:	20-NOV-2015
Filing Date:	07-APR-2015
Time Stamp:	19:43:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

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Payment Type	Electronic Funds Transfer
Payment was successfully received in RAM	$960
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Deposit Account	
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Oath or Declaration filed	WYAT-0002USD1_DECLAR_11-20-2015.pdf	56273 aef33f0cc5d9d60ef8fd1a11e3256ddcb23c21d0	no	1
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
2	Issue Fee Payment (PTO-85B)	WYAT-0002USD1_ISSUEFEE_11-20-2015.pdf	75131 285f82f99925618b1bb6f3d6a71b9d8a72a3e56a	no	2
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30718 dd13a1a37967ccf593daee4fb2c71a5241d68fcf	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	162122		

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<u>New Applications Under 35 U.S.C. 111</u>
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.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
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.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
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.

PTO/AIA/01 (06-12)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

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

Title of Invention	MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE

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 14/680,979

filed on 04-07-2015.

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 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 (see 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: David Wyatt Date (Optional): 11/17/15

Signature: D. Wyatt

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1.11 and 1.14. This collection is estimated to take 1 minute 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.

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.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/680,979	12/29/2015	9224083	WYAT-0002.USD1	9081

41066 7590 12/09/2015

MURABITO, HAO & BARNES LLP
TWO NORTH MARKET STREET
THIRD FLOOR
SAN JOSE, CA 95113

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 0 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 Data Management (ODM) at (571)-272-4200.

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

David WYATT, San Jose, CA;
Virtual Electric Inc., San Jose, CA;

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

PTO/AIA/80 (07-17)
Approved for use through 03/31/2021. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

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:

[X] Practitioners associated with Customer Number: 136197

OR

[ ] Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

[X] The address associated with Customer Number: 136197

OR

[ ]

Firm or individual name		
Address		
City	State	Zip
Country		
Telephone	Email	

Assignee name and address: CARDWARE, INC
2470 CAMROSE AVE.
SAN JOSE, CALIFORNIA 95130

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

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

Signature D. Wyatt	Date March 29th, 2022
Name David Wyatt	Telephone 408-892-4421
Title CEO/CTO/President	

This collection of information is required by 37 CFR 1.31, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public, which is to update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 18 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.

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.

PTO/AIA/96 (08-12)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: CARDWARE, INC

Application No./Patent No.: 9,224,083 Filed/Issue Date: 12/29/2015

Titled: MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE

CARDWARE, INC, a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☑ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: DAVID WYATT To: CARDWARE, INC

   The document was recorded in the United States Patent and Trademark Office at

   Reel 058891, Frame 0137, or for which a copy thereof is attached.

2. From: _____ To: _____

   The document was recorded in the United States Patent and Trademark Office at

   Reel _____, Frame _____, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). 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 1.11 and 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.

PTO/AIA/96 (08-12)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☑ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

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

/Jose S. Garcia/	4-8-2022
Signature	Date
Jose S. Garcia	43628
Printed or Typed Name	Title or Registration Number

[Page 2 of 2]

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.

Electronic Acknowledgement Receipt	
EFS ID:	45435700
Application Number:	14680979
International Application Number:	
Confirmation Number:	9081
Title of Invention:	MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	David WYATT
Customer Number:	41066
Filer:	Jose S. Garcia
Filer Authorized By:	
Attorney Docket Number:	WYAT-0002.USD1
Receipt Date:	08-APR-2022
Filing Date:	07-APR-2015
Time Stamp:	20:24:31
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	Power of Attorney	WYAT-0002USD1_AIA_80_POA_to_MHB_Signed.pdf	170922 5e2119e9f430d371f87d7dc705baf305bcf98a34	no	2

Warnings:

Information:					
2	Assignee showing of ownership per 37 CFR 3.73	WYAT-0002USD1_aia0096_Statement_under_3_73c.pdf	211230 df814ad9784f8fc8a2b12ac2a229d965be99d9d0	no	3
Warnings:					
Information:					
			Total Files Size (in bytes):	382152	

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
14/680,979	04/07/2015	David WYATT	

CONFIRMATION NO. 9081

136197
David Wyatt c/o Murabito, Hao & Barnes
111 North Market Street
Suite 700
San Jose, CA 95113

POA ACCEPTANCE LETTER



Date Mailed: 04/12/2022

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/08/2022.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

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**.

/nrhayden/

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
14/680,979	04/07/2015	David WYATT	WYAT-0002.USD1

CONFIRMATION NO. 9081

41066
MURABITO, HAO & BARNES LLP
111 NORTH MARKET STREET
SUITE 700
SAN JOSE, CA 95113

POWER OF ATTORNEY NOTICE

OC000000133087558

Date Mailed: 04/12/2022

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/08/2022.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

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**.

/nrhayden/

PTO/SB/26a (02-14)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

TERMINAL DISCLAIMER IN A PATENT OR PROCEEDING IN VIEW OF ANOTHER PATENT

Docket Number (Optional)

WYAT-0002USD1

Application/Control Number: 14/680,979
Filing Date: 04-07-2015
First Named Inventor: DAVID WYATT
Title: MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE
Patent No.: 9224083

The patentee, CARDWARE, INC, owner of 100 percent interest in the instant patent hereby disclaims, except as provided below, the terminal part of the statutory term of the instant patent which would extend beyond the expiration date of the full statutory term of patent No. 9022286 (the "**reference** patent"), as the term of said **reference** patent is presently shortened by any terminal disclaimer. The patentee hereby agrees that the instant patent shall be enforceable only for and during such period that the instant patent and the **reference** patent are commonly owned. This agreement runs with the instant patent and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the patentee does not disclaim the terminal part of the instant patent that would extend to the expiration date of the full statutory term of the **reference** patent, "as the term of said **reference patent** is presently shortened by any terminal disclaimer," in the event that said **reference** 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 shortened by any terminal disclaimer.

I. Check either box 1, 2, or 3 below, as appropriate, if there is an assignment:

1. ☐ The current ownership was established by the filing of a statement under 37 CFR 3.73 during prosecution of the application that issued as the instant patent.

2. ☐ The instant patent was issued from an application filed on or after September 16, 2012, and the current patent owner was the applicant under 37 CFR 1.46.

3. ☑ A statement under 37 CFR 3.73 is attached herewith. Form PTO/SB/96 or PTO/AIA/96, as appropriate, may be used.

II. Authorization for Terminal Disclaimer - Check either box 1 or 2 below, if appropriate:

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

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 43628

/Jose S. Garcia/	4-14-2022
Signature	Date
Jose S. Garcia	408-938-9060
Typed or printed name	Telephone number

☑ The terminal disclaimer fee under 37 CFR 1.20(d) is included.

NOTE: Submit multiple forms if more than one signature is required, see below.*

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

☐ *Total of _____ forms are submitted.

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

Privacy Act Statement

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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.
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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.

PTO/SB/26a (02-14)
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TERMINAL DISCLAIMER IN A PATENT OR PROCEEDING IN VIEW OF ANOTHER PATENT

Docket Number (Optional)

WYAT-0002USD1

Application/Control Number: 14/680,979
Filing Date: 04-07-2015
First Named Inventor: DAVID WYATT
Title: MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE
Patent No.: 9224083

The patentee, CARDWARE, INC, owner of 100 percent interest in the instant patent hereby disclaims, except as provided below, the terminal part of the statutory term of the instant patent which would extend beyond the expiration date of the full statutory term of patent No. 9430765 (the "**reference** patent"), as the term of said **reference** patent is presently shortened by any terminal disclaimer. The patentee hereby agrees that the instant patent shall be enforceable only for and during such period that the instant patent and the **reference** patent are commonly owned. This agreement runs with the instant patent and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the patentee does not disclaim the terminal part of the instant patent that would extend to the expiration date of the full statutory term of the **reference** patent, "as the term of said **reference patent** is presently shortened by any terminal disclaimer," in the event that said **reference** 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 shortened by any terminal disclaimer.

I. Check either box 1, 2, or 3 below, as appropriate, if there is an assignment:

1. ☐ The current ownership was established by the filing of a statement under 37 CFR 3.73 during prosecution of the application that issued as the instant patent.

2. ☐ The instant patent was issued from an application filed on or after September 16, 2012, and the current patent owner was the applicant under 37 CFR 1.46.

3. ☑ A statement under 37 CFR 3.73 is attached herewith. Form PTO/SB/96 or PTO/AIA/96, as appropriate, may be used.

II. Authorization for Terminal Disclaimer - Check either box 1 or 2 below, if appropriate:

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

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 43628

/Jose S. Garcia/	4-14-2022
Signature	Date
Jose S. Garcia	408-938-9060
Typed or printed name	Telephone number

☑ The terminal disclaimer fee under 37 CFR 1.20(d) is included.

NOTE: Submit multiple forms if more than one signature is required, see below.*

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PTO/AIA/96 (08-12)
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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: CARDWARE, INC

Application No./Patent No.: 9,224,083 Filed/Issue Date: 12/29/2015

Titled: MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE

CARDWARE, INC, a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☑ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: DAVID WYATT To: CARDWARE, INC

The document was recorded in the United States Patent and Trademark Office at

Reel 058891, Frame 0137, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). 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 1.11 and 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**.

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☑ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

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

/Jose S. Garcia/	4-14-2022
Signature	Date
Jose S. Garcia	43628
Printed or Typed Name	Title or Registration Number

[Page 2 of 2]

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Electronic Patent Application Fee Transmittal					
Application Number:	14680979				
Filing Date:	07-Apr-2015				
Title of Invention:	MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE				
First Named Inventor/Applicant Name:	David WYATT				
Filer:	Jose S. Garcia				
Attorney Docket Number:					
Filed as Small Entity					
Filing Fees for **Utility under 35 USC 111(a)**					
Description		**Fee Code**	**Quantity**	**Amount**	**Sub-Total in USD($)**
Basic Filing:					
Pages:					
Claims:					
Miscellaneous-Filing:					
Petition:					
Patent-Appeals-and-Interference:					
Post-Allowance-and-Post-Issuance:					
Extension-of-Time:					

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
STATUTORY OR TERMINAL DISCLAIMER	2814	2	170	340
		Total in USD ($)		**340**

Electronic Acknowledgement Receipt	
EFS ID:	45479356
Application Number:	14680979
International Application Number:	
Confirmation Number:	9081
Title of Invention:	MULTI-FUNCTIONAL CREDIT CARD TYPE PORTABLE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	David WYATT
Customer Number:	136197
Filer:	Jose S. Garcia
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	14-APR-2022
Filing Date:	07-APR-2015
Time Stamp:	17:23:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$340
RAM confirmation Number	E20224DH23384959
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer Filed	WYAT-0002USD1_sb0026a_TD_1_of_2.pdf	182255 82a1540c5f08c0dc32e240b1e8c94308c8bf8f8a	no	2
Warnings:					
Information:					
2	Terminal Disclaimer Filed	WYAT-0002USD1_sb0026a_TD_2_of_2.pdf	175847 c449a6f62ac8f20f9c30b3105c0992ae98ceb e8f	no	2
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73	WYAT-0002USD1_aia0096_Statement_under_3_73c.pdf	220893 e98634bdcd3096f15c6d728b7ce63f45965654bb	no	3
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	38008 da19616330e0db3bdd806b7c2be0e7fc58c4b3a7	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	617003		

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

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

ACKNOWLEDGEMENT OF LOSS OF ENTITLEMENT TO ENTITY STATUS DISCOUNT

APPLICATION #	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET #	REQUEST ID
14/680,979	04/07/2015	David WYATT		267377

The entity status change request below filed through Patent Center on 08/29/2024 has been accepted.

Certifications

APPLICANT CHANGING TO REGULAR UNDISCOUNTED FEE STATUS

Signature

I certify, in accordance with 37 CFR 1.4(d)(4), that I am one of the signatories making the entity status change.

Signature	Name	Registration #
/Anthony C. Murabito/	Anthony Murabito	35295